NATURAL AND TECHNOLOGICAL WONDERS:

EMBRACING MODERNITY AT CARLSBAD

CAVERNS NATIONAL PARK

A dissertation submitted to the Caspersen School of Graduate Studies

Drew University in partial fulfillment of

the requirements for the degree,

Doctor of Philosophy

Emily Marlowe

Drew University

Madison, New Jersey

May 2016

ABSTRACT

Natural and Technological Wonders: Embracing Modernity
at Carlsbad Caverns National Park

Doctor of Philosophy Dissertation by

Emily Marlowe

The Caspersen School of Graduate Studies
Drew University May 2016

This study addresses the intersection between nature and technology through the case of Carlsbad Caverns National Park, predominantly in the 1920s and 1930s. In this case, the National Park Service, along with private actors, attempted to develop the caves along modern lines and advertised the developments through publicity materials. Visitors accepted the modern developments enthusiastically, and some sources even show a conflation between the natural features and technological developments at Carlsbad Caverns. With the installation of a 750-foot elevator in 1931, the National Park Service reached an indisputable level of modernity at this park, which visitors embraced heartily. The acceptance of technological and modern features at this particular National Park demonstrates compatibility between Americans' perceptions of nature and technology in the 1920s and 1930s. This study traces this perspective of compatibility through to the end of the twentieth century, and into the twenty-first century, to show a continuation of ideas relating to the value of modernity within a natural space, focusing particularly on the Underground Lunchroom.

CONTENTS

ILLUSTRATIONS

INTRODUCTION

In 1903 President Theodore Roosevelt spoke about nature's beauty on the rim of the Grand Canyon, proclaiming, "Keep this great wonder of nature as it is now. You cannot improve on it; not a bit. The ages have been at work on it, and man can only mar it." In 1994, David J. Simon, Southwest Regional Director for the National Parks and Conservation Association quoted this speech in a letter supporting the removal of an underground lunchroom from the floor of Carlsbad Caverns National Park.[1] Yet, between the time Roosevelt spoke these words and the time Simon quoted them, tourists took on a different perspective of man's alterations of nature, instead arguing man's work could, in fact, improve that of nature. In particular, visitors to Carlsbad Caverns National Park in the early era of its development, from the 1920s to the 1930s, enthusiastically embraced man's improvements upon this particular natural wonder, and indeed viewed them as improvements upon nature's work. As the present work will show, not only did tourists in the 1920s and 1930s appreciate the convenience and luxury of developed sites, they also viewed modern, technological introductions as fully compatible with the nature they toured the country to see.

The example of the development of Carlsbad Caverns National Park in southeastern New Mexico illustrates a case in which touring Americans viewed nature and technology as compatible and complimentary. During the 1920s and 1930s, the fascination with modernity and large-scale, innovative technology overshadowed concerns of conservation and scenic purity. The present case will show the National Park Service officials who worked on the development of the caverns, along with private

[1] David J. Simon, "Carlsbad Cave, Concessions, and National Parks," Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 38: Underground Lunch Removal Correspondence Oct. 1993-Mar. 1994.

citizens who visited, commented upon, and published articles and guidebooks about Carlsbad Caverns did not resist or protest the introduction of tourist accommodations and technology, but rather embraced them and incorporated them into their perceptions of the environment at Carlsbad Caverns. The intellectual incorporation of nature and technology at this site emphasizes perceived fluidity between the two entities and helps explain the development of American cultural thought regarding each.

The transformation of Carlsbad Caverns from a little-known guano-mining site at the turn of the twentieth century to a national monument in 1923, and then to a national park in 1931, required numerous developments to make the scenic caves accessible to visitors. The developments included smoothly graded trails, electric lighting, an underground lunchroom, and eventually a 750-foot passenger elevator in 1931. As a policy, the National Park Service generally worked to reduce visibility of any physical alterations to natural sites (as will be discussed below), but an underground national park required developments beyond what even skilled professionals could conceal. In this instance, however, the public welcomed such interventions. The evidence clearly and overwhelmingly reflects the acceptance and enthusiastic embrace of technology within the natural landscape of Carlsbad Caverns. Additionally, National Park Service correspondence, news articles, and visitor responses all show an ideological conflation of natural and technological wonders. Those writing about Carlsbad Caverns in this period described the natural features in terms of technology, and the technological additions in terms of their role in nature.

While physical differences between the natural characteristics of an underground cave and those of an above ground park may account for the degree of enthusiasm

expressed for development at Carlsbad to some extent, the examination of this period at Carlsbad Caverns functions as a case study to explicate the broader currents of cultural thought regarding the environment and technology in the 1920s and 1930s. The enthusiasm with which Americans embraced technological modifications in this national park demonstrates that in this period, Americans viewed nature and technology as compatible, rather than antagonistic. While the examination of this particular case provides only a small window into American thought, it showcases the example in which development of a natural feature took on perhaps the largest scale. The acceptance in this case demonstrates the capability of American tourists to intellectually harmonize modern, technological features with natural features in a national park.

Chapter One provides historiographical context for the present work, including an overview of American perspectives of interactions between nature and technology in the field of environmental history and history of technology. It also provides an overview of the scholarly works on American cultural perspectives of the National Park System, as well as a review of the literature to date that deals specifically with Carlsbad Caverns.

To provide historical context important to understanding the relationship between nature and technology at Carlsbad Caverns, Chapter Two provides an overview of the founding of the National Park Service, the history of the region of Southeastern New Mexico in which Carlsbad Caverns is located, and the discovery history of Carlsbad Caverns. This chapter explains how the tension between commercial development and preservation motivated the federal government to set aside preserved land and eventually form an organized system for the management and development of the national parks. The explanation of the early years of the National Park System also helps provide an

understanding of the tensions between preservation and development for recreational use, and the boundaries the early members of the service set up regarding this delicate issue. The history of the region in which Carlsbad Caverns is located provides context as to why Carlsbad Caverns entered the National Park System when it did, and the context regarding the discovery and earliest development of Carlsbad Caverns explains the foundations of the manner in which Americans interpreted the caves as a unique attraction.

As Chapter Three will show, rudimentary modifications in the 1920s first elicited perceptions of technology as compatible with the natural surroundings at Carlsbad Caverns (then called Carlsbad Cave), and set the precedent for the public's later enthusiastic embrace of more significant development. This chapter covers the modifications in Carlsbad Caverns from 1922, when low levels of tourist visitation began, through 1930, the year Congress declared Carlsbad Caverns a national park. The modifications in this period included electric lighting, graded trails, stairways, and an underground lunchroom. Internal correspondence and public reactions to these modifications show the necessity of significant development in making the cave accessible to visitors, but also show the degree to which the National Park Service intentionally constructed an image of the caves as modern.

Chapter Four focuses on the role of publicity and advertisement in creating the perception of Carlsbad Caverns as a modern entity. Since the National Park Service possessed almost no advertising budget, Superintendent Thomas Boles of Carlsbad Caverns relied on good relationships with visiting advertising professionals and newspaper editors and authors. This chapter shows the intentional bent towards

modernity in these advertisements and press coverage. While Boles often shaped the information these men published, through personal meetings and tours, the independent press coverage proves diverse members of the media took on the idea of Carlsbad Caverns as a site in which modernity and nature could exist harmoniously. Since the National Park Service did not directly produce any of this material, the repetitive claims of the modernity of Carlsbad Caverns show a permeation of the idea into American culture. This chapter also examines the reach of the advertisement, to show the significance of these perspectives to the broader public.

Chapter Five addresses the installation of the 750-foot passenger elevator in Carlsbad Caverns in 1931, as well as the agitation for the elevator preceding its actual existence. Correspondence surrounding the installation of the elevator clearly evinces the perspective of nature and technology as compatible. While initial demands for the elevator focused on increased accessibility, which would lead to additional attendance, the elevator's status as a technological feat immediately became evident during and after its installation through news articles and response of visitors. The symbolic transformation of the elevator from a necessity to a technological wonder demonstrates the importance it held in Americans' perceptions of Carlsbad Caverns. Visitors' acceptance and enthusiasm for such a large-scale technology in a natural setting conveys their willingness to enthusiastically integrate nature and technology, describing both as wonders, attractions, and thrills.

The final chapter, Chapter Six, traces the developments at Carlsbad Caverns into the late twentieth and early twenty-first centuries. While no resistance to the elevator's use emerged by the twenty-first century, the Underground Lunch Room, first constructed

in 1926, became the topic of a major controversy from the 1980s onwards. Scientific studies showed decaying food matter in the caves, lighting, and an overconcentration of tourist activity all potentially caused harm to the cave environment. The National Park Service eventually determined these potential threats necessitated removal of the Underground Lunch Room and its relocation to the surface, but this decision spurred massive backlash. Tourists and residents from Carlsbad desired to keep the Lunch Room in place for many reasons, but most interestingly, some maintained the environmental notions demonstrated in the 1920s and 1930s, claiming the modernity at the bottom of an otherwise "primitive" location enhanced visitors' enjoyment, as they were able to see the great works of man contrast with the great works of nature. "The Battle for the Lunch Room" illustrates how the value of technology and nature demonstrated in the early years of development of Carlsbad Caverns continues to exist as an undercurrent in modern environmental thought.

Through this work, it will become clear Americans in the 1920s and 1930s, and to a limited degree beyond this period, appreciated technological introductions at Carlsbad Caverns not only for their convenience, but also as complementary factors to the impressive geological features they sought in visits to Carlsbad Caverns. The enthusiastic reactions to the technological and modern features of this particular national park provide insight into the manner in which American tourists perceived and valued natural and technological wonders harmoniously.

CHAPTER 1:

HISTORIOGRAPHY

The present work interrogates American perceptions of the environment and of technology at a particular time, and therefore, the scholarly literature of environmental history and technological history provide the foundation for this work, and will be reviewed here. This work also contributes to the historical study of the American national parks generally, and Carlsbad Caverns National Park specifically, and overviews of the works in those fields to date will provide historiographical context for the present work.

The study of changing perceptions of the environment has been an important component of scholarship in American environmental history since the founding of the field. Scholars assert humans create ideas of what nature encompasses, and these perspectives change constantly and dictate what policies are put in place to protect nature, wilderness, or the environment. Roderick Fraizer Nash, a pioneering scholar in environmental history was the first to seriously consider American perceptions of the environment, focusing on the theme of "wilderness" in his 1965 work, *Wilderness and the American Mind.* As Nash noted in the preface to the fourth edition of his work, previous to his study, scholars considered "wilderness" a topic for the geology or biology department, or a concrete object or location that could be studied objectively for its material content. Nash redefined the concept as an intellectual category that has changed over time.[2]

[2] Roderick Fraizer Nash, *Wilderness and the American Mind*, New Haven: Yale University Press, 2001, Fourth Edition, vii.

Nash traced the evolution of the idea of wilderness throughout American history, as it transformed from something feared and despised into a sacred ideal to be revered and protected. From the biblical roots of "wilderness" as an uninhabitable land eliciting distrust and disdain, Nash showed how the experience of pioneers transformed wilderness into a space to be subdued and conquered.[3] With the rise of Romanticism, Americans began to find beauty in the "sublimity" of unsettled lands, and early in the nineteenth century, Nash argued, Americans took pride in the peculiarities of their landscape, which led to the beginning of the establishment of national parks.[4] Nash showed a more extensive shift towards preservation occurring as more Americans moved into cities and unsettled land became scarcer at the end of the nineteenth century. This fueled wilderness protection activism, which Nash described as beginning with the efforts to preserve the Hetch Hetchy Valley of Yosemite National Park and culminating with the passage of the Wilderness Act of 1964.[5] In addition to providing the earliest analysis of cultural shifts of American perceptions of nature, Nash provided the groundwork to consider these perceptions as subjective and constantly changing ideas, separating environmental history from the natural sciences and activism.

In a more contemporary analysis of the meanings of nature and wilderness, William Cronon and other contributors to *Uncommon Ground: Rethinking the Human Place in Nature* interrogated the meanings humans ascribed to nature historically and in modern times. The authors contended "'nature' is a human idea, with a long and complicated cultural history which has led different human beings to conceive of the

[3] Ibid., 40.
[4] Ibid., 45, 67.
[5] Ibid., 96, 147.

natural world in very different ways."[6] Cronon asserted no version of nature is inherently "natural," as any current features of the natural environment are "cultural constructions that reflect human judgments, human values, human choices."[7] Since, as Cronon showed, there is no objectively accurate perception of nature, the beliefs of compatibility between nature and technology in the period of development at Carlsbad Caverns, as well as the impact of these beliefs on continuing interactions with nature, deserve examination.

Alfred Runte's *National Parks: American Experience*, first published in 1979, focused specifically on the ways in which the national parks reflect American valuation of the natural world. Runte examined the type of park Americans created at various points in history to explicate the type of nature Americans valued at that point in time. He argued the park system evolved to reflect changing cultural needs, rather than static environmental needs. In the early history of the national parks, Runte claimed, the American government deemed spaces worthy of preservation based on "monumentalism," to preserve unusual features, provide a distinct visual experience, and provide a sense of national pride in the peculiarities of the American landscape.[8] After the damming of the Hetch Hetchy Valley, completed in 1923, Runte argued, preservationists realized a need to make parks profitable in order to prevent destruction

---

[6] William Cronon, "Foreword to the Paperback Edition," *Uncommon Ground: Rethinking the Human Place in Nature*, Edited by William Cronon (New York: W. W. Norton & Company, Inc., 1996), 20; Also see William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983); In Cronon's earlier work, he undertakes an ecological and cultural history of colonial New England, in which he shows the ways in which colonists, American Indians, and the natural world interacted with one another in this period. This is one of the early works showing the interaction between humans and nature, as human actions altered the landscapes viewed as "natural," and as features of the natural world influenced the course of human history.

[7] William Cronon, "Introduction," *Uncommon Ground: Rethinking the Human Place in Nature*, Edited by William Cronon (New York: W.W. Norton & Company, Inc., 1996), 34.

[8] Alfred Runte, *National Parks: American Experience* (Lincoln: University of Nebraska, 1997), Third Edition, 1, 5, 11.

by private interests. To this ends, they promoted the parks as destinations for tourism and outdoor recreation.[9]

Runte showed another change in environmental thought by the 1930s, as Americans became increasingly committed to creating a version of nature that included no signs of human interference. The designation of Everglades National Park in 1934, Runte claimed, provides evidence of this rising value, as well as a decline of monumentalism; Everglades National Park represented the first park designated for the preservation of a "total landscape," rather than particular geological features.[10] This suggests the 1930s as a period of increasing concern with exclusion of humans from natural landscapes, a characterization the case of Carlsbad Caverns National Park complicates. In addition to Runte's contribution of explaining the national parks as iterations of American perceptions of nature, he also showed how changing ideas of nature directly influenced the physical landscapes Americans choose to preserve, and thus, those that continue to exist in America.

Other scholars explored the impacts of technology on human perceptions of nature in several capacities. Richard Grusin first claimed national parks themselves function as technologies, and thus frame the ways Americans view and appreciate nature. In line with Cronon's denial of the existence of pure, unaltered nature, Grusin categorized parks as human-created reproductions of an imagined version of nature, rather than preservations of authentic nature. Additionally, he claimed national park technology played a role in American consumer culture, making nature into a desirable, consumable product the public seeks to experience, rather than a reaction to consumer culture, as park

[9] Ibid., 81-84.
[10] Ibid., 137, 159.

visitors and scholars alike have claimed.[11] Grusin's work functions to reaffirm that humans necessarily influenced the version of nature they perceived and experienced, and his scholarship on this topic helps explain why and how American tourists at Carlsbad chose to view the man-made developments of the park as complementary to the natural features.

Historian of tourism Marguarite Shaffer supported Grusin's perspective of the national parks as an iteration of consumer culture, suggesting Americans visited national landscapes in the period between 1880 and 1940 as a way of combining elements of the modern world with an imagined escape from the modern world. Shaffer argued tourism alleviated tensions between the desire to get away from urban environments and the simultaneous embrace of progress and societal development by providing an escape from "the routines of work and the demands of the city without rejecting the possibilities of modern society."[12] This understanding is integral to the present argument; Americans looking to escape from city-life, work, pollution, and any other negative aspects of modern life sought escape in nature, yet, remained unwilling to fully extricate themselves from new technologies and modernity.[13]

Shaffer addressed the duality of desire in Western tourism, as Americans wanted an escape from modern industrialized life, without leaving the "comforts and conveniences, along with the established social structure of eastern civility."[14] Shaffer found this value present not only in terms of perceptions of nature, but in cultural

---

[11] Richard Grusin, *Culture, Technology, and the Creation of the National Park* (New York: Cambridge University Press, 2004), 8.
[12] Marguarite Shaffer, *See America First: Tourism and National Identity, 1880-1940* (Washington, D.C.: Smithsonian Institution, 2001), 192.
[13] See Chapter 4 for an explanation of how the dual desires for authenticity and civility played out in other tourist attractions in the Southwest.
[14] Shaffer, *See America First*, 68-71.

tourism, as well, through the ways in which Euro-Americans interacted with and viewed American Indians as part of tourist attractions in the West. For example, Glacier Park Hotel employed numerous Blackfeet Indians to camp outside the hotel, allowing tourists to experience the "authentic" culture of the West in a non-threatening, controlled situation.[15] Shaffer's perspective ties the history of the developments at Carlsbad into the larger culture of tourism of the period, as the dualistic desires for nature and modernity functioned as a mediation between familiar, civilized life and seemingly authentic nature.

While Grusin and Shaffer asserted the national park system and tourism functioned as a mediation between authentic experience and modern society, Paul S. Sutter addressed the role of tangible machine-based technology in natural spaces. He argued the modern wilderness movement formed in the interwar years directly in response to automobile traffic and other tourist accommodations in natural areas. While he described the automobile as central to American ideas of nature tourism at the time, he did so mostly to set up the opposition to the use of automobiles in such areas. Sutter defined the wilderness ideal as primarily a "minority" desire in the interwar era, forming in contrast to mass public opinion.[16] He admitted, "roads altered the physical experiences of those who stuck to them," and the automobile "had wrought, in a very brief period, a qualitative transformation in the national parks and how Americans experienced them."[17] In fact, he referred to automobiles, from the perspective of many Americans, as "technological capsules to be launched into the natural world" and claimed they served as

---

[15] Ibid.; The tendency to view American Indians in similar terms as the natural world has been analyzed by several scholars including: Donald J. Hughes, *American Indian Ecology* (El Paso: Texas Western Press, 1983); Shepard Krech III, *The Ecological Indian: Myth and History* (New York: W. W. Norton & Co., 1999); Michael E. Harkin and David Rich Lewis, eds., *Native Americans and the Environment: Perspectives on the Ecological Indian* (Lincoln: University of Nebraska Press, 2007).
[16] Paul S. Sutter, *Driven Wild: How the Fight Against the Automobile Launched the Modern Wilderness Movement* (Seattle: University of Washington Press, 2002), 70, 84.
[17] Ibid., 128-129.

a "key part" of Americans' experience with the natural world, suggesting the technological influence on Americans' perceptions of nature in this period.[18] Rather than focusing on this idea as integral to American cultural understandings of nature in the interwar years, as the present work will, he instead showed how this cultural phenomenon became a point of contention for a limited number of Americans.

Sutter focused on the ways in which the increase of roads and automobiles in natural areas led to activism against the roads, particularly through the experiences of four founding members of the Wilderness Society. While the present work does not intend to dispute Sutter's findings, as he convincingly makes a case that the ideals of the "modern" wilderness movement began in opposition to tourist attractions, it will more closely look at the mainstream environmental perceptions to which the Wilderness Society reacted. This work examines the opinions of those for whom the roads leading to and through the national parks were not blasphemous or inappropriate, but rather became a factor in the way they interpreted nature and the environment. Sutter chose to focus on the roots of a particular current of environmental thought, which did not become prevalent for three decades after his narrative takes place. This choice seems to suggest the widespread perceptions of the general American public in the interwar years regarding the environment held less significance than the narrowly based opposition of the formative members of the Wilderness Society, which conformed more to modern standards of environmental protection. The balance of Americans, as Sutter's book suggests, viewed nature and technology as fully compatible during the interwar years. The case of Carlsbad Caverns will help demonstrate the connection between

[18] Ibid., 33.

environmental and technological thought for a limited time during the early twentieth century.

David Louter's *Windshield Wilderness: Cars, Roads, and Nature in Washington's National Parks* characterized automobile use in the national parks not as an opposition-generating factor, but rather as an element shaping and reflecting Americans' perceptions of nature. Using Washington's national parks as an example, Louter argued while the relationship between automobiles and nature changed over time, cars consistently affected the way Americans perceived nature. Louter described the beginning years of the twentieth century as a period of optimism, during which those involved in planning the parks believed nature and technology could enhance one another.[19] The park service, especially with Stephen Mather at its helm, extended this perception through the first third of the twentieth century and continued to portray nature and technology as unified. The park service accomplished this particularly through the practice of landscape architecture, or the process of naturalizing buildings and roads, so they appeared as part of the natural scenery, rather than a disruption of it.[20] Even as Americans became more ecologically conscious in the 1960s, Louter asserted, technology continued to shape American perceptions of nature. In the case of Northern Cascades National Park, created in 1968, which forbade the use of automobiles within the wilderness area of the park, technology continued to mediate wilderness experiences. The park included a recreation area as a transition into the protected wilderness area, and as Louter noted, some visitors never entered the park proper, where they would have had to depart from their automobiles. The roads surrounding and framing Northern Cascades in the recreation

[19] David Louter, *Windshield Wilderness: Cars, Roads, and Nature in Washington's National Parks* (Seattle: University of Washington Press, 2006), 35.
[20] Ibid., 59-60.

zone, as well as film technology depicting the wilderness areas at a visitor center, added a technological dimension to the act of viewing nature.[21] Louter presented Americans' use of automobile technology in reaching and viewing the National Parks as an added technological dimension to their nature-based experiences and claimed the experience of the majority of Americans who toured the parks in this way due to financial and time constraints firmly connected the ideas of nature and technology throughout the twentieth century.[22]

Louter's evidence definitively showed the National Park Service endorsed the use of technology in the national parks. However, his evidence of average Americans' acceptance of the Park Service's integration of nature and technology rests mostly on the growing numbers of tourists who visited the parks by road. While this certainly suggests tourists willingly embraced the use of automobiles, this data does not give insight into whether tourists used automobiles merely for convenience, or whether their ideas of nature and technology's compatibility penetrated further into their intellectual understanding. The present work relies heavily on Louter's explanation of the technological mediation of nature, but diverges to further interrogate the perceptions of Americans who visited the parks. Through the inclusion of media coverage and visitors' communications with the National Park Service after completing visits, the present work seeks to more fully analyze the motivations for accepting technological introductions. The addition of media and visitor response in the case of Carlsbad Caverns shows the ideas of nature and technology's compatibility also resonated strongly with broad

[21] Ibid., 107-108, 134-136.
[22] Ibid.

sections of the American public and became part of their understanding of the natural world.

The unique scale of development required to make Carlsbad Caverns accessible forced visitors to grapple with the idea of technology's place in nature, where more limited developments allowed tourists to overlook the man-made character of the accommodations. All parks necessarily included some degree of man-made alterations, in order to fulfill the National Park Service Organic Act's directive to provide for public enjoyment of the scenic features of the parks.[23] However, the National Park Service hired landscape architects to integrate man-made alterations seamlessly into the parks, and therefore made visitors less cognizant of the altered character of the sites they visited. Studies of this profession have illuminated the interactions between technology and nature in the national parks, as well as the reasons Americans did not always recognize the influence of technology on their perceptions of nature. Anne Whiston Spirn assessed landscape architecture in relation to the legacy of Frederick Law Olmsted in a chapter within *Uncommon Ground*. Spirn claimed Olmsted's many works of landscape architecture helped shape the American landscape, and therefore the ways Americans viewed nature at his time and into the present.[24] Olmsted's works of landscape architecture, including designs at Yosemite National Park and Niagara Falls, intended to diminish evidence of artificial structures, which marred the seemingly natural view. In minimizing views of any distractions, Olmsted added his own artificial constructions and shaped the views of nature tourists saw, but he attempted to do so in the most unobtrusive

---

[23] The National Park Service Organic Act (16 U.S.C. sec. 3), 25 August, 1916, http://www.nps.gov/grba/parkmgmt/organic-act-of-1916.htm.

[24] Anne Whiston Spirn, "Constructing Nature: The Legacy of Frederick Law Olmsted," *Uncommon Ground: Rethinking the Human Place in Nature*, Edited by William Cronon (New York: W.W. Norton & Company, Inc., 1996), 91-92.

manner possible.[25] Spirn argued Olmsted's designs appeared so convincingly natural, people mistook them for preserved areas of nature, without acknowledging a skilled landscape architect constructed them. Spirn claimed Olmsted's attempt to integrate his man-made introductions seamlessly into nature was "so successful that it backfired," in instances such as when Olmsted "planted trees to look like 'natural scenery' and then felt frustrated when people, accepting the scenery as 'natural,' objected to cutting the trees he had planned to cull."[26] Spirn used the example of Olmsted to prove rigid separation between "natural" and "artificial" or "cultural" landscapes inaccurately describes reality, as this dichotomy fails to take into account the consistent influence humans and nature exert upon one another and the inability of humans to visit or perceive a location without influencing it in some way.[27] Spirn's example of Olmsted's work showed a connection between nature and technology in the mid- to late nineteenth century and showed American perceptions of nature and artificial introductions influenced one another in this period without average Americans being aware of the interaction.

Linda Flint McClelland supported Spirn's assertion, also claiming successful landscape architects often went unnoticed as they focused on assuring landscapes appeared unaltered.[28] In McClelland's comprehensive work on landscape architecture in the national parks, she characterized the practice of landscape architecture as a "cohesive style," which "subordinated all built features to the natural, and often cultural, influences of the environment in which they were placed."[29] The attention landscape architects put

---

[25] Ibid., 93, 96.
[26] Ibid, 104, 111.
[27] Ibid., 111.
[28] Linda Flint McClelland, *Building the National Parks: Historic Landscape Design and Construction* (Baltimore: The John Hopkins University Press, 1997), 6.
[29] Ibid., 1.

into harmonizing and naturalizing their designs meant their work often "became inseparable from the park's natural identity."[30] McClelland also presented an overview of the design principles landscape architects used in the national parks to create their unique style, including details of the specific materials and techniques they employed. She looked into influences on landscape architecture, including design aesthetics from English gardens and the design work of Gustav Stickley of the American Arts and Crafts movement. McClelland claimed Stickley's ideas, particularly relating to the use of local materials, influenced landscape designers in the national and state parks.[31]

McClelland's work showed the effort park designers put into minimizing roads, trails, buildings, and other accommodations, and their attempts to make their work as invisible as possible. By describing the organized and exceedingly technical design of the national park landscapes, McClelland further solidified the claim Americans ignored cultural factors influencing landscape designs, while choosing to view the parks as inherently natural. Therefore, without many Americans realizing, professional landscape architects undoubtedly shaped and directed the public's perceptions of nature.

Ethan Carr, in *Wilderness by Design: Landscape Architecture and the National Park Service*, focused on landscape architecture in the interwar years, explaining the significance of this practice in shaping American perceptions of nature. According to Carr, landscape architecture influenced Americans' interactions with nature in two ways. First, by helping to ascribe cultural values onto natural spaces and therefore making the spaces more popular, landscape architecture improved the chances the Park Service

[30] Ibid.,
[31] Ibid., 70.

would succeed in preserving parks against more intrusive forms of development.[32] Additionally, landscape architects created what Carr referred to as a "middle ground" in the national parks, providing mediation between preservation of scenery and tourist access. By building roads and other accommodations, landscape architects necessarily altered the national parks, but attempted to create the appearance of natural settings to the visiting public, through the use of local materials and native plants.[33] Carr referred to landscape architecture as a way to reduce the tensions between Americans' simultaneous desires for progress and wilderness, especially in the interwar years of Carr's focus.[34]

Carr outlined the tension between nature and technological introductions in the 1920s and 1930s, and suggested landscape architecture successfully synthesized these two factors and allowed Americans to experience them harmoniously. As a key feature of landscape architecture, the professionals attempted to allow Americans to experience a technologically-mediated version of nature without noticing the inauthenticity of the supposed wilderness they viewed. As Carr wrote, "The significance of landscape architecture… lies in how and where these natural features are appreciated, not in the creation of alternative attractions."[35] This means Americans experienced an altered version of nature, but did not knowingly incorporate the modifications into their understanding of nature in most cases. The case of Carlsbad Caverns demonstrates the same dualistic desires for technological modernity and a return to primitive nature, but tourists could not ignore the scale of the developments at Carlsbad Caverns.

---

[32] Ethan Carr, *Wilderness by Design: Landscape Architecture and the National Park Service* (Lincoln: University of Nebraska Press, 1998), 9.
[33] Ibid., 92, 310, 107, 123.
[34] Ibid., 9.
[35] Ibid., 1.

The present case study diverges from previous scholarship on landscape architecture, because, although the National Park Service utilized landscape architects to harmonize many of the features, no amount of concealment could render cavern lighting, a 750-foot elevator, or an underground lunch room invisible. Therefore, instead of complete concealment, the National Park Service focused on making these attractions desirable to the public, and for this purpose emphasized the modernity and impressiveness of these features. Analysis of these developments provides an example in which man-made developments not only altered Americans' understandings of nature, but the degree of these developments forced Americans to intellectually confront the connections between nature and technology. In this case, Americans chose to integrate technology and modernity into their ideas of what nature could appropriately encompass.

While scholars of landscape architecture depicted the development of the parks as carefully orchestrated action to leave the parks as natural as possible while integrating tourist accommodations, in other cases, scholars argued less noble-minded reasons existed for the development of American perceptions of nature as related to the national parks. Mark Daniel Barringer claimed railroad companies and concessionaires shaped nature into what would be most profitable at Yellowstone National Park. The marketing of attractions, development of facilities, and structure of tours, all orchestrated by commercial entities, influenced and reflected Americans' changing perceptions of nature. The accommodations companies built and the position of those accommodations largely directed which scenic attractions tourists chose to visit.[36] As Barringer proved,

---

[36] Mark Daniel Barringer, *Selling Yellowstone: Capitalism and the Construction of Nature* (Lawrence: University Press of Kansas, 2002), 33; In *Desert Solitaire*, Edward Abbey similarly claimed the buildup of the national parks occurred for commercial reasons; in discussing "Industrial Tourism," Abbey argued the National Park Service consistently panders to "old folks, fat folks, pale-faced office clerks… and even

expectations of tourists also contributed to the versions of nature concessionaires portrayed to them. Myths of the Old West and ideas of nationalistic pride contributed to expectations, and in order to keep pace with demand, concessionaires at Yellowstone participated in a "drastic repackaging of Yellowstone." This led to a self-fulfilling prophecy; the "nature" tourists desired and expected became the version the companies presented for them to visit and view.[37]

Barringer also provided an overview of the shift in environmental thought in the 1960s towards scientific and ecologically-minded preservation and landscape restoration. He commented on the Leopold report of 1963, which asserted the need to preserve national parks like Yellowstone as ecological representations of European's first contact with America. While influential groups of scientists and advocates of the growing wilderness movement favored this unreachable ideal, Barringer noted, the general population of Americans by no means agreed. Into the 1960s, average, park-going Americans continued to desire recreation areas, picturesque scenery, and to experience the frontier past.[38] In Barringer's estimation, the history of capitalist influences, which led to the development and recreational use of the national parks, influenced Americans in the 1960s more than the rising values of ecology or the pristine ideal.[39]

The history of technology has developed in a similar manner to the field of environmental history; historians of technology likewise study the ways in which

---

children," who "expect and demand paved highways to lead them in comfort, ease and safety into every nook and corner of the national parks"; Additionally, he blamed the corporate greed of the oil industry for much of the build-up of the roads within the parks, and in particular, he referred to scenic loops as orchestrated by the oil industry, in an effort to return tourists to the same gas station at the end of the journey as they used at the beginning; Edward Abbey, *Desert Solitaire* (Tucson: The University of Arizona Press, 1988, Third Edition), 47-48.

[37] Barringer, *Selling Yellowstone*, 58.

[38] Ibid.,162-164.

[39] Ibid.

Americans have interpreted technology over time and how understandings of technological developments shift based on the cultural context. David Nye's *Electrifying America: Social Meanings of a New Technology, 1880-1940* rejected the conception of technology in general, and electricity in particular, as a concrete object to be studied only in terms of the physical developments of inventions and systems leading to their existence. This mirrors Nash's assertions regarding the study of wilderness. Instead, Nye asserted, "electrification is a series of choices based only partly on technical considerations, and its meaning must be looked for in the many contexts in which Americans decided how to use it."[40] He argued electricity represented not only a technical change, but also a symbol of "novelty, excitement, modernity, and heightened awareness."[41] Nye demonstrated the enthusiasm and hope for the future with which Americans embraced the new technology of electricity and the minimal opposition to widespread electrification. As he wrote, "anxiety over electrification's possible effects never surfaced in any sustained opposition to it."[42]

The place of technology within nature has also been a major subject of scholarly debate, beginning with Leo Marx's *The Machine in the Garden: Technology and the Pastoral Ideal in America*, first published in 1964. While Marx looked at the topic almost entirely through literary analysis, he showed the repetitive theme of mechanical entities within pastoral settings as prevalent in American culture from the early Republic through the mid-nineteenth century. Marx sensed his readers might anticipate a natural antipathy between technology and the pastoral landscape, but he noted, "It is impossible

---

[40] David Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940* (Cambridge, MA: The MIT Press, 1990), x.
[41] Ibid.
[42] Ibid., 150.

to appreciate the dominant American attitude toward technology if we project this sense of contradiction too far into the past."[43] In historicizing American perceptions of nature and technology, Marx provided groundwork for studies such as the present work.

Marx paid particular attention to the development of the literary pastoral ideal, in opposition to scholars who focused on the theme of wilderness. While this theme dominated literature, Marx explained many of these pastoral works also had a technological "counterforce," in the form of images of manufacturing and railroad technologies.[44] While many writers set up the counterforce as a tension, Marx found the prevalence of the technological ideal within pastoral writings to provide significant insight into American perceptions of nature and technology. He found particular resonance of the compatibility of new technologies and the pastoral landscape in the writings of Tench Coxe, an assistant of Alexander Hamilton, in his 1791 *Report on Manufactures*. Marx noted, "Coxe had no difficulty blending factories and machines into the rural scene," as he "understands that it is wise to represent the machine to Americans as another natural 'means of happiness' decreed by the Creator in his design of the continent."[45] Marx found this early integration of technology into the perception of the natural world repeated by Daniel Webster in his use of the "technological sublime to neutralize the dissonance generated by industrialization."[46] Outside of the field of literature, Marx identified a harmonious integration of the machine and nature in George Inness's painting *The Lackawanna Valley* (1855), where the artist presented machine

---

[43] Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America*, 35th Anniversary Edition (New York: Oxford University Press, 2000), 162.
[44] Ibid., 26.
[45] Ibid., 160.
[46] Ibid., 217.

technology as "a proper part of the landscape."[47] Marx's study of technology's place in nature demonstrates the tension and resolution between Americans' nostalgia for pastoral landscapes and their fascination and hopefulness for technological developments. The prevalence of this theme in literature and the acceptance and integration of the machine into nature in certain instances shows the historically complex and significant interaction of environmental and technological thought.

David Nye built off Marx's work in addressing the role of technology in nature by utilizing and expanding Marx's idea of the technological sublime. Nye claimed nature and technology could enhance one another, as evinced through the electrical illumination of Niagara Falls. Nye wrote,

> The searchlights heightened the sublime landscape's power by isolating it from the surroundings, and by improving upon its natural appearance through the imposition of dramatic shadows and brilliant colors. This recontextualization and revisualization of the object impressed visitors simultaneously with the awesomeness and the beauty of a natural scene and with the skill and power of those who had 'recreated' it. The illumination was at once a marvelous tourist attraction, an advertisement for electrification, and a new form of the technological sublime, one in which a technology did not displace or conquer nature, but rather intensified it.[48]

Nye's characterization of the technological sublime as the use of technology to reframe and enhance natural tourist attractions provides the theoretical framework for understanding the perceptions of nature and technology at Carlsbad Caverns. As Nye explained, viewers of Niagara Falls, observing both the waterfall and the electric lighting simultaneously had a distinctively sublime experience because of the two factors. The present work will expand upon this, arguing Americans not only perceived this type of

---

[47] Ibid., 220.

[48] Nye, *Electrifying America*, 59-60; As early as 1887, tourists complained of the artificial character of the developments at Niagara Falls, showing it as a case where visitors viewed technology and modernity as antagonistic towards nature, rather than harmonious, as in Carlsbad; Spirn, "Constructing Nature: The Legacy of Frederick Law Olmsted," 95-96.

display as impressive, but also integrated it into their perceptions of what nature and technology could include.

Despite Nye's prescient description of how electric lighting enhanced visitors' experience of Niagara Falls, he still concluded his work by writing, "Disneyland completed the process of conflating nature and culture," using the examples of plastic leaves on trees and mechanical alligators and big game as examples of combinations of nature and technology. An examination of the use of large-scale technology in the national parks brings additional context to Nye's argument and shows visitors embraced the conflation between nature and man-made creations without having to accept a completely fabricated environment.

David Nye addressed the connections between nature and technology in greater depth in *American Technological Sublime*, which he published four years after his previous work. In this work, he based his description of the technological sublime on Marx's work, and he described the sublime or the "essentially religious feeling aroused by the confrontation with impressive objects" as an emotion both natural wonders and large-scale technology could evoke.[49] The sublime experience, Nye explained, included "an element of terror," and generally rendered those who experienced it unable to describe the feeling.[50] Nye included natural and technological features among those arousing the sublime feeling, including the Grand Canyon, the Natural Bridge, railroads, skyscrapers, electric lighting displays, and the Apollo XI mission. Nye also described the American sublime as distinct from any characterization of sublime previously used in

[49] David Nye, *American Technological Sublime* (Cambridge, MA: The MIT Press, 1994), xiii.
[50] Ibid., xvi.

Europe, as it fused with nationalism, asserting American identity based on natural and technological features.[51]

The technological version of the sublime, too, expressed a uniquely American value, and Nye made this distinction in his discussion of skyscrapers. Nye claimed no other nation embraced skyscrapers to the same extent as America. Rather than economic or practical concerns accounting for this difference, he argued, the "developing popular taste for the geometrical sublime" led to the widespread construction of skyscrapers. The idea of the technological sublime comes in to play in the case of Carlsbad Caverns, as the impressive electric lighting and massive elevator built into the ground aroused feelings of overwhelming wonder, but Nye does not directly explain how the similar emotional response to nature and technology altered perceptions of one or the other. He claimed the technological sublime often suggested conquest over nature or visual dominance over natural features, and he explained how designers utilized the electrical sublime on both natural and manmade features, and thus "dissolved the distinction between natural and artificial sites."[52] By focusing on technology's dominance or conquest over nature, Nye negated his previous assertion technology could intensify the experience of natural sites, rather than act in tension with them.

When Nye discussed the national parks in terms of the sublime, he did so as part of what he referred to as the "consumer sublime," and he explained this as a modern, late-twentieth century development. He wrote, in recent times, tourists frequently ask Park Service employees questions implying humans made the Grand Canyon or should improve upon it. These inquiries include whether Indians or New Deal workers built the

[51] Ibid., 32.
[52] Ibid., 76-77, 151-152.

canyon and suggestions for lighting and mechanical transport to the bottom. Nye considered these inquiries evidence "the assumption of human omnipotence has become so common that the natural world seems an extension of ourselves, rather than vice versa."[53] These questions Nye reported as frequently asked to the National Park Service actually represent a longer tradition of the conflation of nature and technology in the natural parks, as evidenced by the events at Carlsbad Caverns. As will be shown, visitors and newspaper writers in the 1920s and 1930s frequently described the natural features of Carlsbad Caverns in terms of their similarity to man-made creations, and the actual presence of an elevator to carry visitors to the bottom seems to set precedent for visitors to expect similar accommodations at the Grand Canyon. Far from being a result of the late-twentieth century rise of the consumer sublime, which Nye found represented in Las Vegas and Disney World, as "technology is put to the service of enacting fantasy," the inquiries Nye described at the Grand Canyon represent a longstanding interpretation of the interactions between nature and technology.[54] Still, Nye's interpretation of the comparison between the natural and technological sublime provides the foundation for understanding the relationship between nature and technology present at Carlsbad Caverns.

Nye's 2003 publication of *America as Second Creation: Technology and Narratives of New Beginnings* went further in navigating the positions of nature and technology in American thought. Nye explained the idea of "second creation" as "a deceptively simple story in which the natural world was incomplete and awaited fulfillment through human intervention. Being incomplete, the land needed technological

[53] Ibid., 289.
[54] Ibid., 295.

improvements that would express the pattern latent in it."[55] The writings about improvements at Carlsbad Caverns reflect this pattern, as administrative correspondence and publicity characterized the modifications as being intended by nature, or simply building upon what nature provided. However, although Nye's description of the doctrine of second creation fits perfectly with the writings about Carlsbad, his own examples of this process focus almost entirely on stories of conquest and subjugation of nature, with contrasting counter-narratives to illuminate the "injustice, misuse, and environmental destruction" inherent in second creation.[56] Nye's second creation narratives often focused on transforming nature's order into mathematical or scientific order, by imposing a grid structure onto the land, rather than taking the land's natural character into account when building upon it.[57] Nye's theory of second creation describes an antagonistic, rather than integrative, process towards nature. This version, Nye asserted, ended with the close of the nineteenth century. Following this, he showed the rise of the conservation narrative, which focused on recovering from the process of second creation, and subsequently the wilderness ethic, which attempted to preserve elements of nature separate from human narratives.[58] Though it is not Nye's intention, his theory can also be applied to the ways in which Americans naturalized technological modifications in spaces like Carlsbad Caverns, as rhetoric surrounding the tourist modifications asserts "Nature" intended the developments, and the earth simply awaited these changes to improve upon the original natural works.

---

[55] David E. Nye, *America as Second Creation: Technology and Narratives of New Beginnings* (Cambridge, MA: The MIT Press, 2003), 9.
[56] Ibid., 294.
[57] Ibid., 25.
[58] Ibid., 294-297.

Previous scholarship on Carlsbad Caverns has focused mainly on narrative history, largely ignoring the site's potential contribution to environmental scholarship. Much of the written work dealing with Carlsbad Caverns focused on the contested story of discovery of the caves, the way improvements of the cave led to recognition as a national park, and the visual history of the caves. William R. Halliday, a speleologist, and Robert Nymeyer, an individual involved in the early photography and publicity of Carlsbad Caverns, created one such semi-scholarly work*, Carlsbad Caverns: The Early Years*. In this work, the authors provided an overview of the history of Carlsbad Caverns, with an emphasis on the pictorial history. The book first outlined the various stories of discovery, presenting the reader with the various interpretations of the early history. The authors then overviewed the history of publicizing the caves, with a focus on the role of photography, as Nymeyer worked as an assistant to Ray V. Davis, one of the earliest photographers at Carlsbad Caverns. [59] This work predominantly cast the modifications as positive steps necessary to make the caves accessible and share their glory with the world. Nymeyer and Halliday emphasized the difficulty of early cave trips, and with each modification they described, set up the path to the ultimate present, rather than looking at how people at the time interpreted each alteration. As an example of this unquestioning enthusiasm, Nymeyer and Halliday wrote, as a caption to an image, "Before the first elevator was installed, visitors had to walk out of the cave, a climb of

[59] Robert Nymeyer and William R. Halliday, *Carlsbad Caverns: The Early Years* (Carlsbad, NM: Carlsbad Caverns, Guadalupe Mountains Association, 1991), vi; Also see Lois Manno, *Visions Underground: Carlsbad Caverns Through the Artist's Eye* (Los Ranchos: Rio Grande Books, 2009), for the most recent visual history of Carlsbad Caverns; Manno's exhibition catalog combined with historical perspectives overviews historic and contemporary artists working in various media and the impact they have had on Carlsbad's history; Manno's work is primarily narrative regarding the history and descriptive of the artworks, rather than analytical, but her emphasis on the visual culture at Carlsbad Caverns is an important contribution to interrogating the perceptions of Carlsbad Caverns; The history and interpretation of the caves has a large visual element, and Manno's presentation of this brings assertion to the forefront.

750 feet from the Lunch Room and more than 1,000 feet above the lowest point on the tour. In this 1929 or 1930 view, Russell T. Neville recorded the footsore return; some visitors strode confidently while most trudged, panting, toward their waiting families."[60] They also noted the "colossal tasks involved in developing the attraction so that tourists can enjoy it."[61] This type of description fits in with traditional narratives of conquest of the west, showing the way technology aided man in subduing nature.

In a completely opposite interpretation of Carlsbad Caverns, Hal Rothman derided the man-made accommodations, projecting late-twentieth century ideas of environmentalism into the 1920s and 1930s. Rothman is the only historian thus far to look at Carlsbad Caverns through ideas of environmental history, but although he adeptly identified several sources suggesting the integration of nature and technology, he interpreted them through a presentist lens, imputing negative connotations onto the tourist developments. He referred to the developments as "promotional stunt[s]," and claimed Carlsbad Caverns evoked an image of nature involving an "increasing emphasis on convenience in modern America instead of the older, more reverential notions of the meaning of nature."[62] While the desire for convenience certainly played into the motivations for developing the caverns, media coverage and publicity surrounding the introduction of tourist developments clearly show the alterations did not function purely for convenience in viewing the caves, but also took on an aspect of being independently impressive.

---

[60] Nymeyer and Halliday, *Carlsbad Caverns*, 126.
[61] Ibid., 156.
[62] Hal K. Rothman, *Devil's Bargains: Tourism in the Twentieth-Century American West* (Lawrence: University of Kansas Press, 1998), 159-160.

Rothman referred to the improvements derisively, without supporting his accusations with any interpretations from the 1920s or 1930s to corroborate his own negative opinions of the improvements. Rothman wrote, "The lunchroom on the floor of the cavern, while convenient, also accentuated the sense of the caves as profane space, as part of the modern world. Even Superintendent Boles's showmanship, designed only to attract attention to the park, often compromised it. His hucksterlike approach helped draw a line between Carlsbad Caverns and the scenic national parks."[63] Rothman's characterizations of the caves as "profane" and of Boles as a "huckster" do not reflect perceptions of the time. While the present work agrees with Rothman's claim the modernization of Carlsbad Caverns altered tourists' impressions of nature, this work seeks to challenge his assertion the developments profaned the experience or took away from the scenic character of the natural features. Instead, contemporary sources show tourists integrated the technological developments into their sense of what nature could be, and generally did not perceive any sense of disharmony, as Rothman suggested.

In a more comprehensive work on Carlsbad Caverns and the surrounding regions, commissioned by the National Park Service, Rothman examined the place of Carlsbad Caverns as an economic resource for the region, fitting it in with the history of guano mining and other extractive operations. Rothman's extensive survey stretched from pre-history to the post-industrial late twentieth century in which he wrote. Here, he characterized the caverns' developments not nearly as disdainfully as he did in *Devil's Bargains*, presumably because he needed to cast the caves in a more favorable light while writing on behalf of the National Park Service. Rather than referring to the developments, specifically the lunchroom, as profanations of nature as he did in *Devil's*

[63] Ibid., 164.

Bargain, Rothman described them as compromises between the National Park Service and local constituencies.[64] He even noted Carlsbad Caverns came to represent to the American public the combination of American success and "the beauty of the land," but did not go any further into how the Park Service accomplished this, or what it meant for Americans' perceptions of nature.[65]

Most recently, Marta Weigle's chapter in *Alluring New Mexico: Engineered Enchantment, 1821-2001* entitled "Carlsbad Caverns, the Eighth Wonder" discussed the significance of Carlsbad Caverns.[66] This brief (only thirteen pages long) chapter focused mostly on the narrative history of Carlsbad Caverns, drawing heavily from Nymeyer and Halliday's work. While the book promised to discuss the ways in which various factors helped construct New Mexico's identity at different points throughout history, it adds very little to the scholarship surrounding Carlsbad Caverns. Weigle provided a short overview of the events leading Carlsbad Caverns to public recognition, followed by a brief discussion of the United States Department of Energy's Waste Isolation Pilot Project at Carlsbad.[67] Although the introduction of the waste facility clearly transformed the identity of the region, Weigle did not clearly explain the identity of Carlsbad at the time the caves rose to popularity, or *how* this identity changed after the introduction of the waste facility. While Wiegle utilized numerous quotations from Carlsbad Caverns' publications in the 1920s and 1930s, primarily through citing Nymeyer and Halliday or

---

[64] Hal Rothman, *Promises Beheld and the Limits of Place: A Historic Resource Study of Carlsbad Caverns and Guadalupe Mountain National Parks and the Surrounding Area* (Washington, DC: Department of the Interior, National Park Service, 1998), 159.
[65] Ibid., 174.
[66] Marta Weigle, "Carlsbad Caverns, The Eighth Wonder," In *Alluring New Mexico: Engineered Enchantment, 1821-2001,* Edited by Marta Weigle, (Santa Fe: Museum of New Mexico Press, 2010), 125-138.
[67] Ibid., 136.

Rothman, she put forth little analysis of the quotations she used and therefore fell short of explaining how the development of the caves shaped New Mexico's identity.

Frederick Earle MacVaugh's unpublished thesis, "Preserving the Underground: The Creation of Carlsbad Caverns National Park, 1992-1930" provides the most thorough analysis of the history at Carlsbad Caverns to date. MacVaugh addressed the tourist developments at Carlsbad Caverns, from 1922, when limited visitation first began, until 1930, when Congress passed legislation declaring it a national park. His analysis of the developments primarily asserted their role in leading to increased tourism and the willingness of the National Park Service to take over the administration of Carlsbad Caverns. MacVaugh described Carlsbad Caverns as unique in the National Park System in that their inclusion never drew significant resistance, primarily because members of the local and regional community stood to gain more economically from an increase in tourism than they did from any natural resources or industry.[68]

MacVaugh briefly discussed the "discourses and ideological constructs" manifest in discussions of Carlsbad Caverns in the 1920s, the only scholarly effort to date to analyze what the caverns meant for people at the time, without imputing late twentieth-century environmental beliefs into the past, like Rothman.[69] Among the various meanings of Carlsbad Caverns, MacVaugh discussed the attempt to compare the natural features at Carlsbad to European aesthetic features, such as cathedrals and castles. Publicists used this technique in other locations in the west, as Americans attempted to rival Europe's historical features with America's natural sites. MacVaugh considered this characterization more dominant early in Carlsbad's history, and later, Americans

[68] Frederick Earle MacVaugh, "Preserving the Underground: The Creation of Carlsbad Caverns National Park, 1922-1930" (M.A. Thesis, University of Texas at El Paso, 2000), 215.
[69] Ibid., 51.

began to assert distinctiveness from, rather than comparison to, Europe.[70] Later descriptions more often compared Carlsbad to other American scenic attractions, including Mammoth Cave, the Grand Canyon, and Yellowstone National Park.[71] Other descriptions of Carlsbad Caverns focused on its role within the mythic West, using imagery of cowboys and Indians to assert this comparison. Those who wrote about the caves, MacVaugh noted, often described the early explorers and so-called discoverers of Carlsbad as having similar characteristics as mythic pioneers and cowboys, including "bravery, steadfastness, vigor, virility, and independence."[72] Following the same line, Jim White, alleged discoverer and one of the earliest popularizers of the caverns, always appeared in publicity materials as a "cowboy," even though he had worked more recently as a guano miner.[73] To a lesser degree, comparisons with the native inhabitants of New Mexico also influenced perceptions of the caves. Willis T. Lee, who participated in early surveying and administration of the caverns, attempted to rename the features of the caverns to reflect the region's American Indian heritage. Lee's nomenclature did not become popular, as most people involved with the caverns at that point preferred to use the names Jim White and other locals invented.[74] Finally and perhaps most importantly, MacVaugh noted Carlsbad Caverns functioned as an economic asset to the region, which could be marketed to the public because of its "scenic sublimity, culturally-relative antiquity and geological history."[75] MacVaugh's brief venture into the meanings of Carlsbad illustrates some of the associations present in publicity materials in the 1920s,

---

[70] Ibid., 73.
[71] Ibid., 75.
[72] Ibid., 77
[73] Ibid.
[74] Ibid., 78-79.
[75] Ibid., 83.

but does not address the ways in which tourist developments altered the perceptions of the caves and the scenic nature they represented. The present work will attempt to introduce this as an added dimension to the meanings of Carlsbad Caverns.

Considering the lack of rigorous, interpretive scholarship surrounding Carlsbad Caverns, the present work attempts to bring voice to the way the tourist developments in the 1920s and 1930s altered visitors' perceptions of what nature entailed, and what a national park could appropriately encompass. The written and visual material surrounding the introduction of tourist accommodations at Carlsbad Caverns shows Americans during the interwar years enthusiastically accepted technology as compatible with the natural world, without experiencing any sense of disharmony.

While this study attempts to analyze dominant American perceptions of nature in the interwar period, it should be noted the views expressed represent predominantly Euro-Americans of the middle and upper classes, as they made up the touring public at the time the National Park Service introduced the developments discussed. As Marguarite Shaffer noted, the National Park Service consciously excluded African Americans in the 1920s. While they did not outright ban non-whites, their policies intended to make them feel unwelcome since separate accommodations could not be provided.[76] Women, however, played a significant role in national park tourism; yet, the

[76] Shaffer, *See America*, 126; For an in depth analysis of the role of minorities in American tourism, see Susan Sessions Rugh, *Are We There Yet?: The Golden Age of American Family Vacations* (Lawrence: University Press of Kansas, 2008); Rugh's chapter "Vacation without Humiliation" explains the participation of African Americans in auto-tourism from the 1930s onward, as they had to create their own road trip circuits that circumvented any locations that might present hostility; Rugh also discusses the creation of separate summer resorts by Jewish Americans and African Americans, in order to avoid discrimination at mainstream tourist attractions; The personal diary of Thomas Boles shows some American Indians in fact visited Carlsbad Caverns in the 1930s as tourists; he recorded the number of Indians he observed each day, but the total he recorded for the decade only reached approximately 100; additionally, neither his reports nor any separate sources show the perceptions of these people; Carlsbad Caverns National Park Thomas Boles Papers, Series II: Diaries, 1927-1956.

perception of women as less able to endure rugged environments helped lead to some of the push for tourist accommodations. While factors of diversity will be analyzed to the extent possible, the present work focuses predominantly on the perceptions of Americans who visited and wrote about Carlsbad Caverns.

CHAPTER 2

CREATING THE PARKS, CREATING CARLSBAD

The significance of the developments at Carlsbad Caverns National Park can only be understood within the context of the larger National Park System. The motivations for establishing national parks and for creating a federal system for their administration help outline the perspectives of environmental value in the early twentieth century. As Carlsbad Caverns reached public awareness, the system of preserving natural features of the American landscape became entrenched, and the actions and values at play at Carlsbad Caverns challenged some predominant ideals regarding the meanings of natural spaces at the time.

As Alfred Runte explained, shortly after independence from Great Britain, Americans began to conflate cultural identity with the natural landscapes. Runte used Thomas Jefferson's writings as an example, as Jefferson described the scenic features of the new nation to assert distinctiveness, facing a lack of established cultural features about which to boast. However, Runte argued the attempts to distinguish America by the scenic feature proved unconvincing until the opening of the West. The United States grew rapidly in size in the first half of the nineteenth century, from 1803 when the United States acquired the Louisiana territory from France, through the annexation of Texas in 1845, subsequent acquisition of the Pacific Northwest from Great Britain, and the winning of California and most of the Southwest from Mexico. The newly acquired territories presented Americans with the opportunity not only to expand, but also to encounter new, impressive scenic features through which to assert their identity. Americans encountered numerous sites, including Yosemite Valley and the Sierra

redwoods, which they used to validate their claims of cultural distinction.[77] With the assistance of popular Western artists such as Albert Bierstadt and Thomas Moran, the sites of the West became well known throughout the United States and closely associated with American identity.[78]

In addition to the desire to assert the uniqueness of landscape features for purposes of cultural identity, nature also came to represent other values in modernizing, post-Civil War America. As industrialization took hold, the remaining natural areas, particularly those in the West, came to represent a counterforce to modernization. Features later known as "wilderness" represented, to many, a refuge from urbanization, industrialization, and a host of other social and political concerns of the time. For these reasons, Americans began to turn towards what they considered the disappearing frontier for authentic, nostalgic experiences.[79] Additionally, the movement of increasing numbers of Americans into cities led to a perceived scarcity of wilderness, which spurred the desire for preservation efforts.[80] As John Muir explained in 1901, "thousands of tired,

---

[77] Alfred Runte, *National Parks: The American Experience* (Lincoln: University of Nebraska Press, 1997), Third Edition, 11-19.

[78] Runte, *National Parks: The American Experience*, 24; Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997), 11; Albert Bierstadt's work helped create distinctive visions of the American West by merging European-style mountain images with the physical landscapes of the west, interpreting untouched landscapes, which helped combat post-Civil War anxieties about the scarcity of such lands; Nancy K. Anderson and Linda S. Ferber, *Albert Bierstadt: Art and Enterprise* (New York: Hudson Hills Press, 1990), 71, 74; Thomas Moran's work exuded more of a surreal, fantastical feeling, as he used brighter, warmer colors, especially in the skies of his landscapes; the dissemination of his work, including publication of reproductions of his work shaped American understandings of the continent's landscapes, the process and meaning of industrialization, and helped gain momentum for the national parks, Joni L. Kinsey, *Thomas Moran's West: Chromolithography, High Art, and Popular Taste* (Lawrence: University of Kansas Press, 2006), 3, 8; Although the federal government granted the land for Yosemite, the State of California administrated it; the federal government added additional land to Yosemite in 1890 and took over administration in 1906.

[79] Marguerite S. Shaffer, *See America First: Tourism and National Identity, 1880-1940* (Washington, D.C.: Smithsonian Institution, 2001), 63-64, 88-89.

[80] Roderick Frazier Nash, *Wilderness and the American Mind* (New Haven: Yale University Press, 2001, Fourth Edition), 96, 147.

nerve-shaken, over-civilized people" began to seek out refuge in nature as a way of countering the "effects of the vice of over-industry and the deadly apathy of luxury."[81]

While these factors led to appreciation for natural sites, preservation efforts took hold in the face of direct threats of commercial development to these sites. The threat of private development led to the preservation of Yosemite Valley on June 30, 1864, often referred to as the first national park, as public land to be protected permanently from private development. While Abraham Lincoln signed the bill authorizing the preservation of Yosemite, he granted the land to the State of California for administration.[82] As Runte pointed out, the early boundaries of the park demonstrate the desire for scenic preservation as the primary motivation for the legislation.[83] The federal government under President Ulysses S. Grant established Yellowstone National Park in Wyoming in 1872, making it the first site to take on the name "national park."[84] The act creating the park set aside more than two million acres for the Department of the Interior to manage for the benefit of the American people.[85] In 1899 and 1902, congressional action added Mount Rainer and Crater Lake as additional national parks, continuing the trend of protecting unique scenery from private development.[86] Shortly thereafter,

---

[81] John Muir, *Our National Parks* (New York: Houghton, Mifflin, and Company, 1901), Chapter 1, http://vault.sierraclub.org/john_muir_exhibit/writings/our_national_parks/.
[82] Runte, *National Parks: The American Experience*, 29; In 1890, the federal government established Yosemite National Park in the area surrounding the valley grant, increasing the preserved area from sixty square miles to fifteen hundred; In 1905, Congress reduced its area by one third in response to mining, logging, and grazing interests, Alfred Runte, "Joseph Grinnell and Yosemite: Rediscovering the Legacy of a California Conservationist," *California History* 69, No. 2, Yosemite and Sequoia: A Century of California National Parks (Summer, 1990): 172.
[83] Runte, *National Parks: The American Experience*, 29.
[84] Ibid., 33-35.
[85] Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997), 7,9.
[86] Runte, *National Parks: American Experience*, 67-69.

Congress authorized the U. S. Forest Service under Gifford Pinchot, whereby forests could be managed as resources.[87]

The conflict between preservation and economic development came to the forefront of debate regarding the Hetch Hetchy Valley of Yosemite National Park. Beginning in 1901, the city of San Francisco sought to build a dam in the valley, one of the most astounding scenic features included in the park. In 1913, both houses of Congress voted to uphold a permit granted in 1908 and allowed San Francisco to build a reservoir at the site. The city then constructed the dam, much to the dismay of preservationists like John Muir.[88] Following the controversy over the Hetch Hetchy Valley, preservationists realized the necessity to publicize the parks as recreational sites and make them profitable as such. In most cases, this meant development, including automobile roads, hotel construction, and other tourist facilities. As this controversy made clear to activists, in order for preservation to be feasible, the land must contribute some sort of economic value, and the selection of tourism as an economic function proved less threatening than corporate development and exploitation.[89] In 1911, the first national parks conference marked the shift of the national park ideology towards one

---

[87] Ibid., 70-71.
[88] Ibid., 78-79.
[89] Ibid, 81-83; Robert Righter, *The Battle over Hetch Hetchy: America's Most Controversial Dam and the Birth of Modern Environmentalism* (New York: Oxford University Press, 2005), 192-208; For more on the debate about Hetch Hetchy and the conservationist versus preservationist debate, see Kendrick A. Clements, "Politics and the Park: San Francisco's Fight for Hetch Hetchy, 1908-1913," *Pacific Historical Review* 48, No. 2 (May, 1979): 185-215; Elmo R. Richardson, "The Struggle for the Valley: California's Hetch Hetchy Controversy, 1905-1913," *California Historical Society Quarterly* 38, No. 3 (Sep., 1959): 249-258; Richard Lowitt, "The Hetch Hetchy Controversy, Phase II: The 1913 Senate Debate," *California History* 74, No. 2 (Summer, 1995): 190-203.

accepting hotels, roads, and trails, since these elements offered parks the economic value to effectively stave off resource exploitation.[90]

By 1914, activists began to voice the concern for the parks' vulnerability to conflicting individual desires, since no separate administrative bureau for managing the national parks existed. The Department of the Interior first drafted a bill for a "Bureau of National Parks" in 1910, and changed the name of the proposed organization to the "National Park Service" in 1912, as proposed by J. Horace McFarland, a horticulturalist instrumental in the genesis of the legislation creating the park service. Frederick Law Olmsted, Jr., a landscape architect, joined the campaign in 1910, and by 1915, Stephen Tyng Mather and Horace M. Albright emerged as leaders of the campaign to organize the National Park Service. Mather, a businessman from Chicago, accepted an invitation from Secretary of the Interior Franklin K. Lane to come to Washington to serve as an assistant while he worked toward securing legislation, and Albright, a young lawyer aided in the political aspects of the campaign. Mather brought with him experience working for the *New York Sun* and the Pacific Coast Borax Company, through which he gained experience in publicity and public relations, skills he put to use in gaining allies for the park system. On August 25, 1916, Woodrow Wilson signed the National Park Service Act, also referred to as the "Organic Act," into law, and Stephen T. Mather became the first director, with Horace Albright as his assistant.[91] While the act specified the scenery

---

[90] Runte, *National Parks: American Experience*, 92; In many cases, the management personnel of national parks also manipulated what they considered appropriate "nature," for example stocking rivers with sportfish or altering populations of large mammals, including expanding hoofed grazer populations at the expense of predators; additionally they ignored the alterations made to the land by American Indians previous to accession into the park system and dispossessed people of their land to make it more "natural," Sellars, *Preserving Nature in the National Parks*, 23.

[91] Runte, *National Parks: American Experience*, 102-105; Sellars, *Preserving Nature in the National Parks*, 29-32; Marguerite S. Shaffer, *See America First: Tourism and National Identity, 1880-1940* (Washington, D.C.: Smithsonian Institution, 2001), 101.

and natural resources should be preserved "unimpaired" for future generations, it also allowed limited grazing, leasing rights for commercial tourist facilities, and provided the Park Service the ability to destroy animals and plants threatening tourist use of the parks.[92] This act marked a departure from the treatment of other public land, as typically the government encouraged extraction of natural resources on federally-owned land in order to provide for America's economic growth.[93]

While the National Park System primarily focused on preservation of natural environments, it additionally served cultural objectives, including a patriotic desire to elevate the status of the nation's unique features. The creation of the National Park Service as an organized government entity furthered this objective, as prior to the Organic Act of 1916, no cohesive management or promotional policy existed throughout the various national parks, and therefore various private organizations, in particular railroad companies, greatly influenced the meanings of the parks. With the formation of the National Park Service, the government became actively involved in promoting and defining national tourism.[94] After the outbreak of World War I, American travelers found themselves unable to visit traditional European vacation spots and felt more of a patriotic pull towards seeing distinctive American features. Promoters of this patriotic ideal utilized rhetoric urging citizens to "See America First."[95] By touring the parks, the publicity campaign argued, the American public could view natural landscapes

---

[92] Sellars, *Preserving Nature in the National Parks*, 37-44.
[93] Richard West Sellars, "Manipulating Nature's Paradise: National Park Management under Stephen T. Mather, 1916-1929," *Montana: The Magazine of Western History* 43, No. 2 (Spring, 1993): 4.
[94] Marguerite S. Shaffer, *See America First: Tourism and National Identity, 1880-1940* (Washington, D.C.: Smithsonian Institution, 2001), 94-99.
[95] Ibid., 100; The "See America First" campaign officially originated in 1906 at a conference in Utah, attended by boosters, businessmen, and politicians from various parts of the West. They organized to further the idea of keeping American tourism dollars within the country, and also educating Americans about the distinctive features of the country; Ibid., 27.

symbolizing America's earlier history and expressing distinctive characteristics of the nation.[96]

The period of the National Park Service's formation coincided with the rise of nationwide tourism. Vacation travel required time apart from work, and in the early twentieth century, increasing numbers of Americans outside the wealthiest classes received this opportunity. During the Progressive era, reformers, social scientists, and businessmen interested in welfare capitalism as a way of increasing loyalty and productivity began to take interest in providing paid vacations as part of employment packages. These reformers and businessmen focused on providing vacations for poor and working-class women and children, but the majority of working-class Americans did not receive paid vacations until the late 1930s.[97] During World War I, as laborers became less abundant due to conscription and ceased immigration, more companies took interest in providing benefits to keep their employees loyal, including paid vacation. Increasing numbers of business owners came to believe a short period of rest from work increased productivity when workers returned.[98] As vacationing expanded to middle class workers

---

[96] Ibid., 107.

[97] Cindy S. Aron, *Working at Play: A History of Vacations in the United States* (New York: Oxford University Press, 1999), 184; For more information on the labor movements that helped lead to the rise of paid vacations, see Priscilla Murola and A. B. Chitty, *The Folks who Brought You the Weekend: A Short, Illustrated History of Labor in the United States* (New York: The New Press, 2001); Also see Kathy Peiss, *Cheap Amusements: Working Women and Leisure in Turn-of-the-Century New York* (Philadelphia: Temple University Press, 1986) and Nan Enstad, *Ladies of Labor, Girls of Adventure: Working Women, Popular Culture, and Labor Politics at the Turn of the Twentieth Century* (New York: Columbia University Press, 1999) for a discussion of increased accessibility to commercial leisure activities for the working classes, as well as the involvement of women in labor activism in the early twentieth century.

[98] Aron, *Working at Play*, 197-198; Many in the late nineteenth and early twentieth century characterized the effects of over-civilization as a disease called "neurasthenia"; Physicians characterized this disorder as symptomatic of over working the brain and over-exposure to the "strains of modern city life"; For women, doctors often prescribed rest and avoidance of brain work, but for men, they more often prescribed heavy labor or interaction with the outdoors; For additional information on the push towards physically active outdoor recreation or even through infusions of technological cures into the body see Carolyn Thomas de la Peña, *The Body Electric: How Strange Machines Built the Modern American* (New York: New York University Press, 2003); The increased effects of modern city living and "over-civilization" also led men living in the late nineteenth and early twentieth century to sense a crisis of masculinity; See Warwick

on a larger scale, many vacationing families received only limited vacation time, whereas previously upper-class vacationers possessed nearly unlimited time, and therefore vacationers felt an urgency to make their time away from work meaningful. As Cindy Aron argued, Americans often expressed anxiety regarding leisure time, and for this purpose, tourism activities held particular attractiveness, as viewing distinctive features of the country offered educational and patriotic rewards. Additionally, the outdoor activities popular in the West, in particular, allowed tourists to remain active during their vacations, a benefit particularly attractive to office-workers who often felt out of touch with world of physical labor.[99]

During this crucial period of rising tourism, Stephen Mather served as Director of the National Park Service, a position he held from its inception in 1916 until 1929.[100] During Mather's career as director, he suffered multiple ailments, leaving Horace Albright at the helm of the service for extended periods, as well as Arthur E. Demaray briefly in 1928.[101] From the beginning of Mather's tenure, he worked towards professionalizing and standardizing the administration of the parks, as well as boosting attendance and public awareness. As part of professionalization of the administration, he

---

Anderson, "The Trespass Speaks: White Masculinity and Colonial Breakdown," *The American Historical Review* 102, No. 5 (December 1997): 1343-1370; Kevin J. Mumford, "'Lost Manhood' Found: Male Sexual Impotence and Victorian Culture in the United States," *Journal of the History of Sexuality* 3, No. 1 (Jul., 1992): 33-57; Michael Kimmel, *Manhood in America: A Cultural History* (New York: The Free Press, 1995); Among the early popularizers of nature as a panacea to civilization's ills, Theodore Roosevelt advocated spending time in the Western lands engaging in strenuous activity, reliving the frontier experience, which became increasingly popular as vacation-time made these forays more possible; Richard Slotkin, "Nostalgia and Progress: Theodore Roosevelt's Myth of the Frontier," *American Quarterly,* 33, No. 5, Special Issue: American Culture and the American Frontier (Winter, 1981): 608-637; Other related reactions to the crisis of masculinity included the formation of the Boy Scouts and appropriation of American Indian identity; See Jay Mechling, *On My Honor: Boy Scouts and the Making of American Youth* (Chicago: University of Chicago Press, 2001); Philip J. Deloria, *Playing Indian* (New Haven: Yale University Press, 1998).

[99] Aron, *Working at Play*, 128, 140-141, 149.

[100] Sellars, *Preserving Nature in the National Parks*, 47.

[101] Ibid., 49, 95.

began working toward removing military leadership from the national parks and also replacing ineffective civilian park superintendents.[102] Mather delegated a significant role to engineers and landscape architects within the park service, showing the significance of development and particularly harmonious construction, within the fledgling organization.[103] Both fields gained prominence within the service; Mather hired numerous landscape architects to develop comprehensive plans for each park and eventually appointed many engineers to park superintendent positions.[104] Mather also favored appointing superintendents who previously served with either the U. S. Army or the U. S. Geological Survey.[105] Significantly, Mather appointed Horace Albright as the superintendent of Yellowstone, concurrent with Albright's service as a field assistant to the director.[106]

In order to increase publicity for the national parks, Mather hired Robert Sterling Yard, an acquaintance from the newspaper industry. Mather paid Yard out of his own pocket, while Yard officially worked under the United States Geological Survey. Yard worked fervently on essays and press releases before and after the official founding of the National Park Service. He published an extraordinary sum of articles, road maps, motion picture films, and other media productions, which he circulated to clubs, schools, and newspapers.[107] He also published two significant volumes: *The National Parks Portfolio*, which he distributed to members of Congress during the debates over the National Park Service bill, and *Glimpses of Our National Parks*, a shorter pamphlet intended to instruct

---

[102] Ibid., 48.
[103] Ibid., 50.
[104] Ibid., 52-53.
[105] Ibid., 55.
[106] Ibid., 56.
[107] Peter Blodgett, "Selling the Scenery: Advertising and the National Parks, 1916-1933," In *Seeing & Being Seen: Tourism in the American West*, ed. David M. Wrobel & Patrick T. Long (Lawrence: University of Kansas Press, 2001), 275-276.

general audience tourists.[108] In addition to Mather's direct efforts at publicity through Yard, the western railroads provided tremendous support, since western travel directly benefited their companies.[109] Mather and Albright recognized the contributions of the railroad as essential, creating alliances and speaking highly of the various railroad companies when possible. The railroads proved particularly useful to Mather and Albright, because the National Park Service received almost no budget for advertising.[110] Through these combined efforts, total park visitation rose from an estimated 229,000 in 1910 to 920,000 in 1920, and three million by 1931.[111]

Under Mather's leadership as Director, the Park Service added roads, trails, telegraph and telephone lines, as well as camping and sanitary facilities, to the national parks.[112] Utilizing landscape architecture, the park service intended these facilities to harmonize with the landscape, and therefore not impair the scenery or threaten the mission of the National Park Service.[113] When the Park Service under Mather constructed headquarters buildings and ranger stations, they utilized rustic log and stone designs.[114] While significant development occurred under Mather's administration, numerous debates arose about the degree of appropriateness of much of the construction. While Mather supported facilities for outdoor sports, he firmly opposed a proposal for building a cable-car tram across the Grand Canyon, and this plan eventually suffered

---

[108] Shaffer, *See America First*, 102-103.
[109] Blodgett, "Selling the Scenery," 277, 285; This followed earlier patterns of Western railroads supporting tourism in general as early as the 1870s, through advertisements of attractions as well as through building or financing hotels and other tourist accommodations, as well as offering guided tours, along their routes; Shaffer, *See America First*, 42.
[110] Blodgett, "Selling the Scenery," 287.
[111] Ibid., 289.
[112] Sellars, *Preserving Nature in the National Parks*, 59.
[113] Ibid., 60.
[114] Sellars, "Manipulating Nature's Paradise," 5-6.

defeat.[115] Another defeated proposal suggested an elevator be built along the lower falls of the Yellowstone River.[116] Additionally, he supported significantly greater construction of trails, rather than automobile roads, in order to leave larger areas of parks minimally developed.[117] The significant efforts to harmonize developments with nature through landscape architecture and the controversial nature of more substantial, technology-based developments help illustrate the delicate position the National Park Service took regarding alterations to natural scenery.

Due to failing health, Stephen Mather resigned as Director of the National Park Service effective January 12, 1929. Horace Albright took over leadership following Mather's resignation, and Mather passed away in 1930.[118] Albright held the position of Director until August 1933 and was succeeded by Arno Cammerer, who served until 1940.[119] In the late 1920s and into the 1930s, under Albright and Cammerer's leadership, the preservation of national parks began to focus more on "wilderness," and the legislation creating new parks began to include language voicing commitment to preservation over tourist development. This emphasis on wilderness first became apparent in the deliberations for Grand Teton National Park, which entered the park system in 1929, although Congress eventually removed the wilderness language from the bill. The value of wilderness over development definitively appeared in the establishment of Everglades National Park in 1934. Congress approved a bill authorizing Everglades National Park in 1934, which declared it a permanent wilderness area, where

---

[115] Sellars, *Preserving Nature in the National Parks*, 63.
[116] Sellars, "Manipulating Nature's Paradise," 6.
[117] Sellars, *Preserving Nature in the National Parks*, 61-62.
[118] Ibid., 87.
[119] Ibid., 93- 94.

no development for tourists could interfere with preservation or "primitive" conditions.[120] Beginning at this time, wildlife biologists also challenged the park service's practices of predator control and suppression of forest fires, urging a more scientific, research-based conservation of the parks, rather than focusing on scenery and tourist use.[121] The wildlife biologists of this period espoused early ideas of ecology, noting the interrelationships of living things.[122] Beginning in 1932, the National Park Service began to designate wilderness research reserves within the parks, showing a clear movement towards preserving portions of the parks without intentions for tourist development.[123] The years in which these changes took place within the administration of the National Park Service also represent the period of most extensive development and construction at Carlsbad Caverns.

While Carlsbad Caverns National Park fits into this complex history of the national parks, it remained a lesser part of the park system, designated as a national monument until 1930. The designation of "national monument," while administrated by the Park Service after 1916, remained a separate, often neglected category. In 1906, John F. Lacey, a congressman from Iowa, spearheaded legislation to preserve historic and scientific objects on government land, which became known as national monuments. This legislation, entitled "An Act for the Preservation of American Antiquities," passed in 1906 and allowed the President of the United States the discretion to identify and proclaim sites for preservation.[124] Initially, the act focused on preserving archeological sites in the Southwest, and professional archeologists initiated action to secure the

---

[120] Runte, *National Parks: American Experience*, 127-136.
[121] Sellars, *Preserving Nature in the National Parks*, 93.
[122] Ibid., 96.
[123] Ibid., 110.
[124] Runte, *National Parks: American Experience*, 71-72.

legislation in direct reaction to vandalism of Southwestern American Indian archeological sites.[125] The government could place monuments under the Department of the Interior, the Department of Agriculture, or the Department of War.[126] Typically, each preserved site gained its status due to an immediate threat to its historic or natural value.[127] The broad presidential power imbued by this act troubled congressmen, who typically would have held the power to designate such protected lands. Therefore, the act's language limited the size of national monuments to the smallest swath of land capable of preserving the desired feature, although it did not set a strict limitation on acreage.[128] While the Antiquities Act intended the preserved lands to remain as small as possible, presidents extended the nondescript power to include larger natural sites, such as the Grand Canyon.[129] In the case of the Grand Canyon, established as a national monument on January 11, 1908, Congress rejected the site as a national park three times during the 1880s, primarily because of opposition from local ranchers. After the Grand Canyon endured a brief stint as a Forest Reserve (without any trees), followed by a National Game Preserve, Theodore Roosevelt utilized the power of the Antiquities Act to protect the site, before Congress finally agreed to create Grand Canyon National Park in 1919.[130]

Following the passage of the Antiquities Act, the Park Service took advantage of the ease with which the president could declare a site a national monument, frequently using this categorization as an interim designation while a site awaited congressional

---

[125] Hal Rothman, "Second-Class Sites: National Monuments and the Growth of the National Park System," *Environmental Review: ER* 10, No. 1 (Spring, 1986): 46; Robert W. Righter, "National Monuments to National Parks: The Use of the Antiquities Act of 1906," *The Western Historical Quarterly* 20, No. 3 (Aug., 1989): 282.
[126] Sellars, *Preserving Nature in the National Parks*, 13.
[127] Rothman, "Second-Class Sites," 46.
[128] Righter, " National Monuments to National Parks," 283-284.
[129] Sellars, *Preserving Nature in the National Parks*, 14.
[130] Righter, " National Monuments to National Parks," 285-287.

action to declare it a national park, as occurred with the Grand Canyon.[131] Although the intention of the Antiquities Act required national monuments to possess scientific, archeological, or historic significance, many designations relied on scenic beauty as cause for preservation, leaving little difference between a national monument and a national park, aside from the significantly increased funding available to national parks.[132] In addition to this temporary designation, Mather also urged the designation of less significant monuments as convenient stopping points for motor tourists traveling between national parks.[133]

During the 1920s, Stephen Mather authorized Frank Pinkley to supervise fourteen national monuments in the Southwest, lacking the time and resources to personally supervise these sites with lesser designations.[134] Pinkley, attempting to preserve his jurisdiction over some of the more important sites, frequently objected to the efforts towards transforming national monuments into national parks. He founded his objections on the fact that efforts to move sites from the 'monument' category to the 'park' category often focused on receiving greater appropriations, and once the more impressive sites departed from the monument category, Congress would have no reason to fund the monuments, at all. For this reason, Pinkley emphatically discouraged the designation of Carlsbad Caverns as a national park, stating its geologic interest precluded it from park status.[135]

---

[131] Rothman, "Second-Class Sites," 45.
[132] Righter, " National Monuments to National Parks," 293.
[133] Rothman, "Second-Class Sites," 51.
[134] Ibid., 46; In 1923 when Pinkley accepted the position, the southwest monuments included: the Natural Bridges and the Rainbow Bridges in Utah, Pipe Spring on the Utah-Arizona border, the Petrified Forest in Arizona, Casa Grande and Chaco Canyon in New Mexico, and the Montezuma Castle in Arizona; Hal Rothman, "Forged by One Man's Will: Frank Pinkley and the Administration of the Southwest Monuments, 1923-1932," *The Public Historian* 8, No. 2 (Spring, 1986), 88.
[135] Rothman, "Second-Class Sites," 52-53.

Due to remoteness, difficulty of access, and difficulty of exploration, Carlsbad Caverns remained unknown during the period of rapid expansion of the National Park System. The history of the Carlsbad area, in southeastern New Mexico along the Pecos River, helps illuminate the reasons for the delayed discovery, slow diffusion of knowledge about the caves, and the reasons the citizens of the area so readily accepted the tourism potential of the caverns. The treaty of Guadalupe Hidalgo brought New Mexico territory into the United States in 1848, but the region surrounding Carlsbad remained peripheral, as it contained minimal mineral resources and proved difficult for agriculture.[136] The Mescalero people, the primary indigenous occupants of this region, found the Spanish and Mexican governments previously expressed little interest in their affairs, as neither found the region to hold much potential for profit. After acquisition, the United States government predicted the area would likely offer profitability only as a throughway and initially ignored the presence of the Mescalero people, as well.[137]

As American presence in the Pecos region increased after the admission of California into the Union, when mail delivery to the new state made El Paso, Texas a

---

[136] Hal K. Rothman, *Promise Beheld and the Limits of Place: A Historic Resource Study of Carlsbad Caverns and Guadalupe Mountains National Parks and the Surrounding Areas*, (Washington, DC: Department of the Interior, National Park Service, 1998), http://www.nps.gov/parkhistory/online_books/CarlsbadCav/toc.htm, 46; The treaty of Guadalupe-Hidalgo granted citizenship to Anglo residents as well as approximately 80,000 Mexicans living in the territory the United States won during the war, but as a territory, citizens living there did not have full political rights and did not have representation at the national level; Linda C. Noel, "'I am an American': Anglos, Mexicans, Nativos, and the National Debate over Arizona and New Mexico Statehood," *Pacific Historical Review*, 80, No. 3 (August, 2011): 432-433, 435.

[137] Once New Mexico entered the Union, the U. S. Army Corps of Topographical Engineers undertook explorations and resource analyses of this region and found the area best suited as a pass-through on the way to more profitable lands in Texas; For this reason, both the government and private entrepreneurs became interested in the possibility of a rail line through the region; In addition to the U. S. Army Corps expeditions, Major Robert S. Neighbors and Colonel John S. "Rip" Ford led an expedition through the Carlsbad region in 1848, mapping a possible railroad route adjacent to the caverns; The following year, Captain Randolph Barnes Marcy, of the Corps of Topographical Engineers, led an expedition seeking a railroad and overland road route through the region, and found both viable; In 1854, Captain John Pope of the Topographical Engineers, under the direction of Secretary of War Jefferson Davis, attested to the easy viability of a railroad route through the region, a claim mostly unsupported by the facts of the landscape; Rothman, *Promise Beheld and the Limits of Place*, 47-70.

useful halfway point, American settlers and army officials found themselves increasingly in conflict with the Mescalero people.[138] While the long-term settlement of ranchers and farmers remained limited, the Army made a priority of exerting control over the region and subduing the American Indian peoples.[139] Throughout the 1850s, Americans began settling land the Mescalero controlled, provoking raids, to which the new Americans in the region responded with organized military campaigns and vigilante action.[140] Following numerous conflicts, the Americans offered a twenty-seven mile tract of reservation land to the Mescalero, which they accepted.[141] Therefore, by the period of Carlsbad Caverns' relevance, most indigenous inhabitants of the region had been relocated.[142]

By the 1880s, increasing numbers of Anglo-American and *Hispano* settlers migrated to the region for sheep herding, limited but increasing cattle ranching, and to support military settlers at Forts Stanton and Sumner.[143] Cattle ranchers from Texas

---

[138] The admission of California as a state in 1850 created increased potential for Southeastern New Mexico as a throughway; With the addition of the new state, the United States government became concerned with mail delivery, and therefore in 1857, commissioned John Butterfield, an eastern businessman, to construct a transcontinental stagecoach mail delivery system, with El Paso, Texas as a halfway point; The beginning of the Civil War interrupted the Butterfield Overland Mail system, as well as the possible rail route, as the Confederacy claimed much of the territory through which it would have passed; Although the operation existed only for a short time, it brought numerous Anglo settlers to the Southwest; Many of these new settlers, arriving in the 1860s and 1870s, made their living by herding cattle, yet opportunities remained limited in this desert area; Ibid., 56-61.

[139] Ibid., 90.

[140] Ibid., 69-70.

[141] Ibid., 72; The Civil War disrupted maintenance of the reservation, and the Confederates quickly fell into conflict with the Mescaleros; Following reoccupation by Union forces, the Mescaleros again surrendered to the United States, at which point the army transported many Mescaleros to Bosque Redondo; Reservation life presented many problems, including shortages of arable land, insufficient supplies, and disease; Following an extended period of resistance led by a Chiricahua named Victorio, American Indian control of the trans-Pecos region waned, and most Mescaleros and other Southwestern Indians found themselves permanently confined to reservations, Ibid., 72-89.

[142] For further discussion of the role of American Indians in Southwestern tourism, see Chapter 4.

[143] Ibid., 93; Mexican American settlers made up the first wave of migrants into the area, bringing traditional water-distribution customs, including the allowance for people to obtain water for domestic uses through ditches, even if the ditches crossed the property of another landowner; Stephen Bogener, *Ditches Across the Desert: Irrigation in the Lower Pecos Valley* (Lubbock, Texas: Texas Tech University Press,

grazed their herds along the Pecos River, in order to fulfill government contracts to supply the military forts and the Bosque Redondo Reservation.[144] Drawn by the cattle ranching opportunities, Charles B. Eddy, the eventual founder of the town of Eddy (later known as Carlsbad) moved from New York with his brother John, first to Colorado in 1875, before establishing a cattle herd in New Mexico in 1881. Recognizing the difficulties of successful cattle ranching in the arid region, Eddy founded the Pecos Valley Irrigation Company, and these early efforts at irrigation allowed the region to become more easily inhabitable, leading to the later discovery of Carlsbad Caverns.[145]

Several years later, Eddy reorganized the company into the Pecos Irrigation and Investment Company, with the assistance of new, prominent backers. Beginning in 1889, the company started constructing canals and a diversion dam, with the intention of irrigating up to 125,000 acres.[146] At the same time, other irrigation companies developed, and by 1891, eighty-eight companies built projects intending to irrigate forty percent of irrigable land in New Mexico.[147] The Pecos Irrigation and Investment Company began constructing the Avalon Dam, an integral piece of their large-scale

---

2003), 14; The Mexican-American residents of the newly incorporated Southwest variously utilized the terms *hispano*, *native*, *nuevomexicanos*, and *hispano-americanos* to denote their identity; Noel, "I am an American," 438.

[144] Bogener, *Ditches Across the Desert: Irrigation in the Lower Pecos Valley*, 15-16.

[145] When a massive drought killed off one third of the cattle in the region, Charles Eddy recognized the importance of a reliable water supply; Ibid., 16-21; Realizing large-scale irrigation held the key to success in the arid region, Eddy partnered with former Lincoln County Sheriff Pat Garrett, who became most well-known for killing Billy the Kid, to found the Pecos Valley Irrigation Company in 1884; After failing to win reelection as county Sheriff, Garrett turned to raising cattle and pursuing cattle rustlers as a Texas Ranger; Bogener, *Ditches Across the Desert,* 21-24; To fund the project, Eddy recruited wealthy businessmen from Chicago and Colorado Springs; Rothman, *Promise Beheld and the Limits of Place*, 106; The irrigation project intended to aid settlers of the region in undertaking larger agricultural endeavors; However, the Pecos Valley Irrigation Company's lack of sufficient funds interrupted their planned project; Rothman, *Promise Beheld and the Limits of Place*, 107; Citizens of the town changed the name from Eddy to Carlsbad in 1899 in attempts to create a tourist destination; The intended to emulate the health spa at Karlsbad, Czechoclovakia; Robert Nymeyer and William R. Halliday, *Carlsbad Caverns: The Early Years, a Photographic History of the Cave and its People* (Carlsbad, New Mexico: Guadalupe Mountains Association, 1991), 14.

[146] Ibid., 109.

[147] Bogener, *Ditches Across the Desert*, 27.

irrigation plan, in 1888, and in the same year, Charles Eddy formed the town of Eddy, quickly laying out streets, ditches, and buildings. The town became attractive to those looking to move to the desert environment for health reasons, especially consumptives.[148] The irrigation company immediately planned the construction of nine buildings, including a school, a hotel, and the headquarters for the company-owned *Argus* newspaper.[149] Striving for sustained development, James J. Hagerman, one of the major investors of the irrigation project, incorporated the Pecos Valley Railroad Company in 1890, and by February 1891, rail lines reached the newly emerged town of Eddy. Increased rail connection assisted the region in becoming part of the industrializing market economy and made long-distance sale of produce possible. [150] This connection with the larger market economy provided the foundations for the later dissemination of knowledge regarding the scenic attractions at Carlsbad Caverns. The Pecos Irrigation and Improvement Company eventually failed economically, as did Hagerman's railroad company, which the Atchison, Topeka and Santa Fe Railway later purchased and completed. These economic failures led to increased dependence on the national market for numerous settlers who had moved into the region.[151]

---

[148] Ibid., 61.
[149] Ibid., 62.
[150] Rothman, *Promise Beheld and the Limits of Place*, 109; Railroads first reached El Paso in 1881, Ibid., 95; Hagerman gained his wealth in the steel and iron business, as a major supplier of iron for numerous railroads; Bogener, *Ditches Across the Desert*, 36; Hagerman also planned construction of an additional dam expressly for the purpose of supplying water and electricity to his private residence at Hagerman Heights; Bogener, *Ditches Across the Desert*, 73.
[151] In 1893, excessive rainfall led to failure of the Avalon Dam, causing massive flooding; The dam failure, combined with unfavorable weather conditions and transportation difficulties led to the collapse of Hagerman's railroad company; Hagerman eventually ceased activities in the Carlsbad region in order to concentrate on the Roswell area, approximately seventy-five miles north of Carlsbad; Rothman, *Promise Beheld and the Limits of Place*, 112- 116; Due to the multiple difficulties in agriculture in the region, ranching remained the region's primary economic activity, and ranchers needed significantly more land for grazing and sustenance farming than traditional farmers; Frederick Earle MacVaugh, "Preserving the Underground: The Creation of Carlsbad Caverns National Park, 1922-1930" (M.A. Thesis, University of Texas at El Paso, 2000), 19.

By 1900, increasing numbers of settlers arrived in the Carlsbad area, partially drawn by new legislation allowing homesteaders additional acreage, making survival increasingly feasible in the arid southwest.[152] Notably, New Mexico remained a territory, rather than a state, until 1912, further marginalizing the region in relation to the nation. Despite reaching the population requirement for statehood, possessing 195,000 residents by 1900 when federal legislation required only 60,000, the United States delayed admission into the Union mostly due to the diversity of population, which led Anglo Americans to favor excluding New Mexico as a new state.[153] New Mexico's new status as a state by the discovery of Carlsbad Caverns contributed to the need to draw tourist interest in the region, which locals hoped would offer a source of national recognition, as well as revenue.

Around the same time as the amended homestead legislation, entrepreneurs discovered significant stores of guano, bird and bat droppings commonly used as fertilizer from the mid- to late-1800s, approximately twenty-seven miles from the town of Carlsbad.[154] Abijah Long, a settler from Texas, first discovered guano sources in Carlsbad Caverns, then called Bat Cave, in 1903. Soon after arriving in Carlsbad, Long entered the caves and saw guano deposits, which in some places reached nearly to the ceilings of the cave. After this discovery, Long placed a mining claim with the Eddy County Courthouse on March 29, 1903. His claim, known as "The Big Cave Mining

---

[152] Ibid., 138.

[153] Noel, "I am an American," 433-434; The New Mexico State constitution specified *Hispanos* could not be disfranchised due to their language or heritage, required public proceedings and documents to be made available in English and Spanish, and ensured equal rights for *Hispano* children; The constitution did not guarantee rights for Pueblo Indians or people of African descent; Ibid., 461.

[154] By the time Carlsbad miners discovered guano, the use of the material was already in decline in favor of more cost-effective mixed fertilizers, derived from byproducts of Standard Oil and the Armour Company, but niche markets still purchased the material, particularly citrus growers in California; Rothman, *Promise Beheld and the Limits of Place*, 141, 144.

Claim," encompassed twenty acres.[155] The guano in Carlsbad originated from Mexican free-tailed bats, which roosted in the caves, flying out to feed each night.[156] Long sank a shaft into the cave above the guano deposits and lowered a bucket through the shaft to hoist out guano.[157] His operation, with the addition of the Ramsey Brady Company as partners, began undertaking alterations of the site, in order to make mining the material less laborious, and within several years, Carlsbad became a processing center for drying guano, much of which Long shipped to the Hawaiian Fertilizer Company of San Francisco.[158] Despite the large amount of guano mined under Long, he found his operation unprofitable, mostly due to high shipping costs and the declining availability of high-quality guano.[159] For these reasons, he sold his operation to H. F. Patterson of Carlsbad in 1906, and in the same year, Patterson sold out to The El Paso Fertilizer Company, followed by the General Fertilizer Association of Los Angeles in 1911.[160] In total, at least seven different owners possessed the Bat Cave by 1917.[161] The General Fertilizer Association ceased operations by 1921, primarily because the remaining guano consisted mostly of low-grade quantities, mixed with earth.[162]

While guano-mining represents a significant period in Carlsbad's history, in and of itself, it is more significant because the mining operations led to the discovery of the scenic portions of Carlsbad Caverns. The discovery story of Carlsbad Caverns remains

---

[155] Ibid.; MacVaugh, "Preserving the Underground," 17; Long worked briefly in the hotel business, saloon business, and freighting business before discovering the guano sources at Carlsbad Cave; Nymeyer and Haliday, *Carlsbad Cave*, 15, 18.
[156] MacVaugh, "Preserving the Underground," 23.
[157] Ibid., 24.
[158] Rothman, *Promise Beheld and the Limits of Place*, 143.
[159] MacVaugh, "Preserving the Underground," 24.
[160] Rothman, *Promise Beheld and the Limits of Place*, 144.
[161] MacVaugh, "Preserving the Underground," 26.
[162] Ibid., 27.

disputed, and many claimed the title of first to enter the cavern.[163] However, the most oft-repeated tale, and the one used in promotional tourist literature, is that of James Larken (Jim) White, an employee of Abijah Long, who previously worked in the region as a cowboy.[164] He continued working at the mine throughout its existence, including after it ceased operations, at which point he served as a watchman for the site.[165] As the story goes, White first noticed the clouds of bats flying out of a hole, by most accounts around 1901, which piqued his interest in the caves. He then convinced a young acquaintance to accompany him into the cave, with the use of a ladder. After viewing the size and beauty of the cave, he felt compelled to share his experiences and began bringing skeptical locals to see the caves. Later, he escorted small group tours of visitors through the caves, hoping to impress upon them the significance of his findings.[166] Along with his efforts to draw attention to the caves, White also participated in the earliest efforts to render the caves accessible. According to a ghost-written and somewhat embellished description from his autobiography, he "drove discarded Ford automobile axles into the

---

[163] Carl Livingston, a local rancher who wrote for *New Mexico Magazine*, claimed a group of cowboys went into the caves as early as 1885; Another story mentions a young boy name Rolth Sublett who supposedly showed the cave to Abijah Long and his father-in-law in 1900, but most dismissed this story as unlikely and unsubstantiated; Another guano miner named John Forehand reported entering the cave in 1898 and constructing a homemade ladder to explore farther in 1903; Forehand also mentioned associations with Jim White, the most oft-acknowledged explorer of the caves; Most plausibly, Abijah Long may have entered and explored the scenic portions of the caves as part of his mining operation, possibly in 1903 or 1904, which may have been before Jim White explored the caves; Nymeyer and Halliday, *Carlsbad Caverns*, 13-14.

[164] Rothman, *Promise Beheld and the Limits of Place*, 144-145; Long also claimed credit for exploring the scenic portions of the caves with numerous other miners, venturing off from the guano-mining areas to explore the depths; MacVaugh, "Preserving the Underground," 24; By some accounts, the Mescalero Apache might have been the first humans near the entrance of and perhaps even inside the caverns; there are legends that a medicine man in ancient times disappeared into the caverns to make "Big Medicine;" Several accounts mention finding skeletons within the caverns; Nymeyer and Halliday, *Carlsbad Caverns*, 11-12.

[165] MacVaugh, "Preserving the Underground," 27; Jim White moved to Carlsbad as a child from Mason County, Texas; His father established a ranch eight miles east of Carlsbad in 1892, where he attended school only until fourth-grade; Nymeyer and Halliday, *Carlsbad Caverns*, 34.

[166] Rothman, *Promise Beheld and the Limits of Place*, 145-146; By some accounts, Jim White may have led an extended three-day expedition through the caves at some point between 1898 and 1906, possibly with the accompaniment of three young Mexican men; Nymeyer and Halliday, *Carlsbad Caverns*, 37.

cracks of rocks, and strung galvanized wire from one to the other, for hand holds."[167] One of the most important trips Jim White led took place in September 1922 and included prominent Carlsbad residents, many of whom later helped promote the significance of Carlsbad Caverns.[168] The party entered the cave in a gasoline-powered guano-hoisting bucket, previously used by the miners.[169]

In addition to White's early endeavors at showcasing the caves, photographer Ray V. Davis also played a significant role in the early popularization of Carlsbad Caverns.[170] He photographed the unique features of the caves and undertook an advertising campaign to distribute his photographs through postcards and windshield stickers.[171] Davis also arranged the 1922 trip White led through the caverns.[172]

The interest aroused by White's guided trips and Davis's photography spurred governmental interest, and in 1923, the General Land Office sent Robert A. Holley to survey the caves.[173] Following confusion regarding which governmental office employed Holley, the United States Geological Survey soon heard of the caves at Carlsbad and sent

---

[167] Jim White, *Jim White's Own Story: The Discovery and History of Carlsbad Caverns*, Ghostwritten by Frank Ernest Nicholson (1940) N.P.
[168] MacVaugh, "Preserving the Underground," 9.
[169] Ibid., 29.
[170] Rothman, *Promise Beheld and the Limits of Place*, 146; According to some versions of the story, Ray Davis first visited the caves in 1917 when two young men visited his studio looking to purchase flash powder, at which point he decided to accompany them on their trip; Another version of the story states he visited the cave in 1914, because Jim White invited him, and began photographing it in 1915; Nymeyer and Halliday, *Carlsbad Caverns*, 59.
[171] Rothman, *Promise Beheld and the Limits of Place*, 147.
[172] MacVaugh, "Preserving the Underground," 28.
[173] Rothman, *Promise Beheld and the Limits of Place*, 150; In addition to surveying the caves, the General Land Office also charged Holley with investigating the ownership status of the caves and ascertaining that mining operations had ceased; to obtain the land, the General Land Office suspended the mining company's land titles, on the grounds that required improvements had not been made since 1920; MacVaugh, "Preserving the Underground," 34-35; Since the land withdrawal included minimal economic resources, private owners did not mount significant opposition, as often occurred in other national parks or monuments; In fact, the same categories of businessmen who traditionally would have opposed governmental intervention were among the most devoted proponents of development of Carlsbad Cave as a tourist attraction, because they stood to gain more than lose; Ibid., 43, 215; The General Fertilizer Company maintained ownership of the site of the only usable entrance to the cave at that point, a shaft with a gasoline-powered guano-hoisting bucket; Ibid., 124.

Willis T. Lee to explore the site.[174] With the advice of Holley and the support of Lee, President Calvin Coolidge created Carlsbad Cave National Monument on October 25, 1923, setting aside the 719 acres above the caves.[175] Coolidge noted the unique features, as well as the unusually large size of the cave, as grounds for preservation and protection.[176]

The Antiquities Act, which allowed creation of national monuments, said nothing about the manner in which monuments would be administrated or developed, and often they remained dependent on locals for leadership.[177] After Carlsbad's designation as a national monument, the Park Service appointed W. F. McIlvain, the president of the Carlsbad Chamber of Commerce, custodian of the monument in August 1924.[178] The potential for increased tourism revenues to the area led McIvain to express deep interest in the caves almost immediately, and for this reason he urged businessmen and civic leadership to help launch an advertising campaign.[179] As part of this effort, the Chamber of Commerce helped publicize Lee's articles, distributed fliers, and erected road signs throughout New Mexico and Texas.[180] Along with his publicity efforts, McIlvain improved the organization of visitation, creating a booking office at Carlsbad City Hall, to accommodate tourists looking to view the caves.[181] The Park Service appointed Jim White chief ranger in 1924, a position allowing him to continue running guided tours, as

---

[174] Rothman, *Promise Beheld and the Limits of Place*, 151; And El Paso attorney Richard L. Burges visited the caverns and mistakenly got the impression Robert Holley worked for the U. S. Geological Survey, rather than the General Land Office; He wrote to the U. S. Geological Survey for a copy of the report, which was the first they heard of the caves; Nymeyer and Halliday, *Carlsbad Caverns*, 67.
[175] Rothman, *Promise Beheld and the Limits of Place*, 152.
[176] MacVaugh, "Preserving the Underground," 43.
[177] Ibid., 5.
[178] Rothman, *Promise Beheld and the Limits of Place*, 154; MacVaugh, "Preserving the Underground," 147.
[179] MacVaugh, "Preserving the Underground," 36.
[180] Ibid., 67.
[181] Rothman, *Promise Beheld and the Limits of Place*, 154.

he had done before designation. Aside from seasonal construction crews and temporary assistants, McIvain and White served as the only employees of Carlsbad Cave that year. The Park Service renewed White's appointment in 1925, at which time they hired two additional guides.[182]

As the nationwide tourism industry expanded, due to the increased availability of automobile travel, Stephen Mather and Horace Albright of the National Park Service realized the necessity of accessible roads to, and between, the national parks and monuments. The residents of Carlsbad, likewise, saw the economic potential of the new industry; they supported and lobbied for road construction, including roads connecting Carlsbad with El Paso, Oklahoma City, and Dallas.[183] New Mexico and Texas, and the areas' respective chambers of commerce, collaborated to survey and finance road construction in the region, making possible local and national access to the monument.[184] Whereas in many other cases, local citizens protested the formation of national monuments or national parks, the residents involved at Carlsbad stood only to gain from the publicity of their newfound economic asset, as they previously possessed few options for economic viability.[185] At the same time, the Park Service sanctioned and encouraged development of Carlsbad Cave for tourist purposes, like other parks and monuments, because without visitation, the parks would lose congressional funding.[186] Congress granted the Park Service the capability to begin spending their allocated $25,000 on improvements to Carlsbad Cave in 1925, only after the State of New Mexico relinquished

---

[182] Rothman, *Promise Beheld and the Limits of Place*, 155; MacVaugh, "Preserving the Underground," 152.
[183] MacVaugh, "Preserving the Underground," 84.
[184] Ibid., 126.
[185] Ibid., 86.
[186] Ibid., 90.

title to the final section of land under which Carlsbad Cave lay, and the Park Service promptly began directing improvements. Prior to this, the Carlsbad Chamber of Commerce and other private parties financed any development of the caves.[187]

McIlvain resigned effective May 15, 1927, because he felt the job of administrating the caverns was becoming too large of a job for him to fulfill on a nearly volunteer salary and without significant administrative assistance. McIlvain offered to give up his other duties in favor of managing the caverns full-time, if offered a full salary and clerical help, but the Park Service officials chose instead to further professionalize the administration of the monument, appointing Thomas Boles custodian in 1927 and promoting him to superintendent in 1928. The Park Service leadership believed Boles possessed better training and skills, including the ability to handle the significant paperwork requirements of the job.[188] Boles brought to the position his background as an engineer, experience as superintendent of Hawaii National Park, and political connections as the son of a U. S. congressman.[189] Unlike McIlvain, the Park Service employed Boles full-time, and paid him a professional, rather than nominal ($12.00 per year), salary.[190] Boles's leadership led to a rapid period of development, since his position allowed him to focus solely on administration and development of the monument, unlike McIlvain, whose numerous other positions and duties detracted from his focus.

Boles's appointment coincided with the Park Service's efforts to professionalize the ranger-force, as they did throughout the park system in the 1920s, seeking

---

[187] Ibid., 178-181.
[188] Ibid., 149-151.
[189] Rothman, *Promise Beheld and the Limits of Place*, 157; MacVaugh, "Preserving the Underground," 148; Notably, Boles's father, Congressman Thomas Boles of Arkansas voted for the creation of Yellowstone National Park in 1872; Nymeyer and Halliday, *Carlsbad Caverns*, 114.
[190] MacVaugh, "Preserving the Underground," 11.

knowledgeable and personable guides. One of the Park Service's main priorities at Carlsbad involved removing Jim White as chief ranger, due primarily to his propensity for consuming alcohol.[191] Numerous factors, including rental agreements with the fertilizer company, allowed White to remain in the position through 1929, at which point health issues restricted his ability to work.[192] White resigned his position in June of 1929, and simultaneously Boles dismissed thirteen per diem employees, men hired and trained by White, allowing for professionalization of the ranger force, complete with National Park Service uniforms.[193]

In the same period, the Carlsbad Chamber of Commerce began lobbying to have Carlsbad Cave National Monument enlarged and reclassified as a national park.[194] Congressman Louis Cramton of Michigan, the chairman of the House subcommittee for Interior Department Appropriations, along with New Mexico's congressmen helped push Congress for reclassification.[195] In January 1930, Cramton requested a bill to upgrade the monument into a park, which Albert G. Simms introduced on February 14, 1930.[196] The bill did not increase acreage, but authorized the president to add land at a later point. After assurance that the monument brought in more money than its congressional expenditures, the House passed the bill without amendment, and the Senate passed the bill after requesting an amendment limiting the amount of land the president could add.

---

[191] Ibid., 11-12, 145-147, 154.
[192] Ibid., 155-157; The General Fertilizer Company retained ownership of the guano camp buildings, and the Park Service feared upsetting this agreement would lead the company to rent the buildings to private owners who might create campgrounds or a similar concession on the site; Ibid., 182.
[193] Ibid., 159-160.
[194] Ibid., 189; Much of the public, including journalists, already referred to Carlsbad Cave as a national park, signaling the general populace did not recognize much of a difference between the two designations.
[195] Ibid., 94-95.
[196] Ibid., 196-199.

President Herbert Hoover signed the bill into law on May 14, 1930, making Carlsbad Caverns National Park the twenty-third National Park.[197]

The rapid pace of development at Carlsbad Cave National Monument, later Carlsbad Caverns National Park, signified efforts to bring the public to the newly discovered scenic attraction, but the course of development took on significance of its own. While development always played a major role in the creation of the national parks, as preservationists chose tourist development over commercial development, the practice of landscape architecture and other efforts relegated developments to an invisible position, enhancing visitor experience without actively becoming part of it. However, at Carlsbad, the developments, which began with minimal alterations congruent with the development of other parks, rapidly outpaced much of the rest of the park system. Rather than choosing the least invasive course of development and attempting to emphasize the natural features over the man-made, the human developments quickly became defining characteristics of the caves, the focus of advertisements, and soon, especially with the introduction of the 750-foot elevator in 1931, an additional draw to the park.

[197] Ibid., 202-203.

CHAPTER 3

MAKING A MODERN CAVE:

CARLSBAD CAVE NATIONAL MONUMENT, 1923-1930

As outlined in Chapter 2, President Calvin Coolidge proclaimed Carlsbad Cave a National Monument in 1923. With this new designation, the federal government took on not only the responsibility of preserving and maintaining Carlsbad Cave, but also the responsibility of making the cave accessible and drawing a significant number of tourists to justify the government's efforts and expenses. Although the scenic features and sheer volume of the interior rooms and passageways piqued public interest, the administration of the National Park Service and the local officials at Carlsbad struggled for two decades to convince potential visitors the trip through the caverns could be made safely and comfortably. The physical alterations, the manner in which the administration described these alterations, and the reactions of the public and the media demonstrate visitors to Carlsbad Cave desired an experience exuding modernity and comfort, rather than primitive nature.

The desire for modernity at Carlsbad Cave contrasts with the motivations for creating the earliest national parks and establishing the National Park System, as explained in Chapter 2. The desire for untouched land, in reaction to the rapidly spreading cities and the fast-paced culture accompanying industrial growth, generated interest in preserving scenic lands from development. However, Wanda M. Corn, in *The Great American Thing: Modern Art and National Identity, 1915-1935*, outlined a competing value in American society during the interwar years, a value emphasizing modernity, as depicted through art, as integral to American identity. The case of

Carlsbad Cave helps illustrate the interrelated nature of Americans' embrace of untouched natural lands and their simultaneous appreciation for rapidly modernizing culture. Corn argued "machine age modernists," or American artists from 1915 onward, cast aside attempts to utilize nature and wilderness to assert American artistic identity, and instead relied on "industrialized America, replacing the iconography of Niagara Falls and the Rocky Mountains with that of skyscrapers, billboards, brand-name products, factories, and plumbing fixtures."[198] She also claimed these artists integrated speed into their artistic vocabularies, reflecting the faster pace of American production and services. This conception of American cultural identity extended beyond America's borders, as European artists embraced American modernity, turning towards technological and modern cultural phenomena for inspiration.[199] Corn identified numerous images demonstrating the American fascination with machinery and modernity, through depictions of gears, bright city lights, large-format images mimicking the scale of skyscrapers and bridges, and complicated color patterns intended to simulate the chaos of city-life.[200] The artistic fascination with modernity and technological advancement evident in Corn's work helps explain the seemingly opposing American societal value, which tourists at Carlsbad Cave integrated with appreciation for nature.

In addition to asserting American art expressed a new valuation of modernity in American culture, Corn argued art of this category functioned to help modern Americans grapple with and accept the new developments and technology. She argued, "The

---

[198] Wanda Corn, *The Great American Thing: Modern Art and National Identity, 1915-1935* (Berkeley: University of California Press, 1999), xv.
[199] Ibid., xvi.
[200] Ibid., 146-150; As examples of artworks integrating this value of machine-age modernity, Corn cites American *émigré* to Paris, Gerald Murphy's *Watch*, 1925, Italian *émigré* to America, Joseph Stella's *Brooklyn Bridge*, ca. 1919, *The Voice of the City of New York Interpreted*, 1920-1922, and *Battle of Lights, Coney Island, Mardi Gras*, 1913-1914, and Pennsylvania native Charles Demuth's *End of the Parade, Coatesville, Pa.*, 1920, and *Buildings, Lancaster*, 1930; Ibid., 120, 139, 140-141, 220-221.

picturesque artist also helped city dwellers accommodate themselves to the new city by presenting it according to familiar landscape conventions. The idea of a new kind of 'landscape' – not yet its own subject as 'cityscape'—dominated New York representation in and around 1900."[201] Additionally, Corn claimed writers described Manhattan in terms of the "grammar of landscape," again working to naturalize the new growth in the city.[202] The artistic correlation between cities and landscapes shows a cultural connection between the modern and the natural within visual art, and the case of Carlsbad Caverns demonstrates how this value physically played out in the development of a national park.

Many of the early physical developments of the cave arose out of necessity, and followed the scale of development evident in other parks. In order to make the cave attractive to visitors, the Park Service needed to immediately begin physically altering the caves by leveling ground, building trails, and installing stairways. However, material alterations alone could not easily combat the physical reality of completing a strenuous, underground hike over a rugged stretch of six miles. Unlike above-ground attractions, where a visitor who, mid-route, determined his or her abilities insufficient for the challenge could return to the hotel or campsite, visitors who had difficulty at Carlsbad Cave feared being left underground once their endurance gave out. Because of this overwhelming perception, the Park Service and local administration described and publicized the caves in such a way as to frame them as a thoroughly modern experience, requiring little athletic abilities and suitable for all tourists.[203] Rather than emphasizing

---

[201] Ibid., 163.
[202] Ibid.
[203] Examples of the touring public's perceptions of the caves as dangerous and primitive can be seen in letters written to the National Park Service, including John Edwin Hoag to Stephen Mather, 10 March 1926, National Archives, College Park Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 213, File 501 Part 1 Carlsbad Publicity; F.R. Elliot to Stephen Mather, 9 July 1928,

the natural scenic features of the caves, the merits of which the Park Service needed little effort in convincing public, the National Park Service administration intentionally framed Carlsbad Cave as modern space through internal, as well as external, correspondence. The National Park Service's national administration and on-site leadership capitalized on the public's fascination with modernity, along with the public's expressed interest in nature, and attempted to convey an impression of the caves as a space welcoming to modern tourists. The significant effort to these ends, along with the positive reactions the touring public showed to development and the negative reactions they showed to strenuous trips through the caves, definitively shows tourists of the 1920s considered modernity to be compatible with natural scenic attractions. The descriptive reactions to the developments also demonstrate visitors not only appreciated the convenience of these features, but in fact found them complementary to their enjoyment of nature.

As discussed in Chapter One, scholars Ethan Carr and Linda Flint McClelland showed landscape architecture played an important role in integrating tourist accommodations into many of the natural parks seamlessly, so as to minimize the visual effects of these accommodations.[204] In Carlsbad Cave National Monument, however, the significant effort to extensively develop the underground landscape and to emphasize and even advertise the developments shows a deviation from this model. The emphasis placed on development highlights an alternative facet of American environmental thought in the 1920s, one showing nature as compatible with the rapidly changing modern world.

National Archives, College Park Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, File 611 Part 1 Carlsbad Repairs and Improvements.

[204] Ethan Carr, *Wilderness by Design: Landscape Architecture and the National Park Service* (Lincoln: University of Nebraska Press, 1998); Linda Flint McClelland, *Building the National Parks: Historic Landscape Design and Construction* (Baltimore: The John Hopkins University Press, 1998).

As Historian John F. Sears wrote, caves, as unique natural spaces lend themselves more readily to adaptation and modification than preserved areas above ground. Sears explained the reason for this in relation to Mammoth Cave in Kentucky; no one who enters a cave expects to see it as untouched by human hands, as the "natural state" of a cave is complete darkness.[205] Sears's explanation provides one reason for the readiness of tourists to accept physical improvements, but as this chapter will show, the administration of Carlsbad Cave sought physical improvements beyond those absolutely necessary. The National Park Service officials attempted, through their physical modifications, along with printed material, to frame the caves as a thoroughly modern space, inviting not just to adventurers, but also to modern city-dwellers.

To accommodate even the most rudimentary visitation, Carlsbad Cave needed improved trails. While park-goers might explore aboveground scenic areas relatively safely without trails, the rocky nature of underground passageways necessitated trails immediately. The earliest of the government-sanctioned explorers of the caves noted this difficulty. Robert Holley of the General Land Office, in his 1923 study to determine the feasibility of creating a national monument surrounding the caverns, focused heavily on the condition of the trails and the improvements the National Park Service would have to undertake to make them publicly accessible. He described some of the rudimentary accommodations Jim White created, but warned the conditions still posed danger. In describing the section of the cave known as the Devil's Den, Holley wrote,

> Mr. White has stretched a two strand cable down this slope to station 14 and up the opposite slope to station 15, and it might be stated that in negotiating this section of the trail it is well to HOLD ON TO THE ROPE for the slope is so steep and the footing so slippery that a person needs a

[205] John F. Sears, *Sacred Places: American Tourist Attractions in the Nineteenth Century* (New York: Oxford University Press, 1989), 47.

> handhold to keep his balance. Under present conditions a portion of the distance near the bottom of the slope must be accomplished by sitting down, holding on to the rope, and sliding. At two other places in this particular section the trail is over high rocks and it is actually dangerous to traverse it.[206]

At another location, Holley discussed the dangerous descents, which made tourist travel nearly impossible, stating,

> From Station 26 to Station 22 is another sheer descent of 100 feet. Here a huge rock has dropped into the cave forming two passage-ways, both of which are extremely difficult to get through, as they are filled up with big ragged rocks… It will be necessary to construct a ladder-way and walk from Station 22 to Station 26, in order to make the travel safe. Under the present conditions it is extremely dangerous, and can only be accomplished by the co-operation of several members of the party in siding each other.[207]

After his expedition in 1923, Holley considered development, including trails, stairways, and lighting imperative, "not only to relieve the actual fatigue attached to the journey, but to eliminate the actual danger that exist[ed] under present conditions."[208] As the government-sanctioned explorer in the caverns, Holley's opinions helped shape the official perception of Carlsbad Cave. At this early date, Holley considered development absolutely necessary, and he focused on making the caves moderately accessible, yet lay the foundation for more extravagant modifications in the future.

The next year, when Willis T. Lee of the United States Geological Survey visited the caverns on an expedition sponsored by the National Geographic Society, he likewise recommended immediate improvements to help open the caves to tourists. The National Geographic Society funded Lee's expedition with the intention of publishing his findings,

---

[206] Robert A. Holley to Commissioner, General Land Office, May 14, 1923, Carlsbad Caverns National Park Administrative Records, Series 1: History, circa 1890-2007, Subseries A: General Park History, circa 1890, 1923-2004, Box 1, Folder 001 Carlsbad Cave- Report by Holley, 1923, 1949, 11.
[207] Ibid., 12.
[208] Ibid., 14.

and therefore, Lee's reports, unlike Holley's, served as the first introduction of the caves to a public audience. Lee wrote two articles for *The National Geographic*, in January of 1924 and September of 1925. The earlier article conveyed his first impressions of the cave, while the second represented the work and explorations Lee's crew undertook at Carlsbad during a six-month stay. While Lee certainly described the caves as in desperate need of improvement, the descriptions he used in his articles paved the way for the integration of more than minimal development.

Lee's articles emphasized earlier uses of the caves, which already integrated some degree of technology, and by describing the caves as previously modified, he allowed his readers to imagine the space as one that had always welcomed technology. Early in the first article, Lee described the mechanized guano-hoisting bucket, through which Jim White brought tourists into the caves. Lee found himself "quite unprepared" for the degree of evidence of civilization already at the caves upon his arrival, primarily revolving around the caves' previous use as a guano-mining operation.[209] He referred to the rudimentary machinery as "the elevator," noting the steel construction of the bucket and the rope and pulley used to lower it into an artificial shaftway, a distance of 170 feet.[210] The description of the early "elevator" immediately framed the caves as developed, rather than pristine or free of human interference. Since most Americans remained unfamiliar with the region at all before Lee's articles, they never experienced depictions of this site as untouched by humans.

Lee also described the bats in the cave in language connoting industrialization. He referred to the nightly bat flight out of the caves as resembling "smoke pouring from a

---

[209] Willis T. Lee, "A Visit To Carlsbad Cavern," *The National Geographic* XLV, no. 1 (January, 1924): 3.
[210] Ibid., 5.

smokestack."[211] Visually, this image described the fact that bats poured thickly from a small opening, but beyond this description, the use of the word "smokestack" brings to mind industrial associations, tying the natural characteristics of the caves to the industrial world. Between the description of the elevator and the figurative language Lee used to describe the bats' flights, Lee's account immediately set the caves up as a place to be considered other than pristine.

Like Holley, Lee discussed the necessary work and physical modifications required before widespread public interest in visitation could be aroused. In his first article, he stressed the difficulties of traversing the cavern at present. Regarding one point in the cave, which Lee referred to as Yeitso's Den, he wrote, "a pit something more than 150 feet deep and extending entirely across the cavern suddenly yawns in our path… The sides are so steep that footholds must be cut, and a wire somewhat insecurely anchored furnishes a handhold of questionable value." He further warned, "For the man of unsteady nerve whose foot is untrained for difficult climbing, keep out of Yeitso's Den," until the Park Service constructed a safer path.[212] His second article also asserted the danger of the caves, stating "on one occasion [he] lost [his] footing and slid down a beautifully terraced slope studded with lovely but sharp and unyielding crystals," causing permanent impairment to Lee's eyesight.[213] By expressing the dangers of the caverns, Lee discouraged visitation by any but the hardiest of adventurers and allowed readers to anticipate the future alterations of the cavern, making these alterations seem absolutely necessary for visitation.

---

[211] Ibid., 3.
[212] Ibid., 20, 25.
[213] Willis T. Lee, "New Discoveries in Carlsbad Cavern: Vast Subterranean Chambers with Spectacular Decorations are Explored, Surveyed, and Photographed," *National Geographic* (September, 1925): 312.

In addition to Lee's articles in *National Geographic*, he also wrote a similar article for *The Scientific Monthly* in 1925 and personally toured the East Coast giving lectures about his findings after his return from the caves. His lectures, along with his publications, served as a primary introduction for a portion of the American public to the caves, and therefore his own opinions shaped future perspectives of the caverns. In the *Scientific Monthly* article, he described the earliest stages of trail work, which his expedition accomplished, laying precedent for future development. In order to reduce the time needed to get to the portions of the cavern he considered worth surveying, Lee's crew undertook smoothing of rough areas of trail, until he reduced the time required to reach their work, a distance of three-quarters of a mile, from two hours to one.[214]

Besides Lee's description of the necessity of improved trails, he stressed the desire for extensive electric lighting, by describing the difficulties caused by the use of lanterns. In the Big Room, which spanned more than half a mile in length and, Lee estimated, many hundreds of feet in width, he believed even powerful electric lanterns could not produce sufficient light to "pierce the gloom" and illuminate the walls and ceilings.[215] Additionally, by using lanterns, only a small portion of an object could be illuminated at once, so even familiar cavern formations appeared "strange and unfamiliar." After describing the difficulties, Lee introduced the future possibility of systematically lighting the caves: "On this principle it will be possible, by the use of skillfully placed lights, which are soon to be installed by the National Park Service, to

[214] Willis T. Lee, "Carlsbad Cavern," *The Scientific Monthly* 21, no. 2 (August, 1925): 188; Willis T. Lee, "New Discoveries in Carlsbad Cavern: Vast Subterranean Chambers with Spectacular Decorations are Explored, Surveyed, and Photographed," *National Geographic* (September, 1925): 302.
[215] Lee, "A Visit to Carlsbad Cavern," 29.

produce a great variety of spectacular effects in a restricted area."[216] By introducing the natural features of the caves to the public in the same articles as Lee described the necessary technological developments, Lee cast these developments as absolutely essential and reduced the likelihood of public challenge to the alterations.

Lee's writings for *National Geographic* and *The Scientific Monthly* asserted the significance of development, but arguably on a moderate, fairly innocuous scale. However, in a private letter to Director of the National Park Service, Stephen Mather, Lee suggested the integration of technology on a far grander scale. In April of 1924, Lee attempted to convince the Director of the National Park Service to construct a tunnel through the wall of the cavern to use as an automobile route. In his account in *The Scientific Monthly*, he explained his survey showed, while no alternative exit to the cave existed, the far end of the Big Room lay only twelve hundred feet from the base of the mountain above ground. In this article, he suggested the construction of a tunnel directly into the mountain, so visitors could reach "the spectacular part of the cavern" more directly.[217] He expressed his even more ambitious idea, which he referred to as "brilliant" and "quite dazzling," to Mather. He asserted, the use of automobiles through the caves, "driving for a mile or two through the cavern, lighting the several wonders by headlight," would not only make the trip more convenient, but also would aesthetically enhance the sights of the caves. He described the potential trip in depth, stating,

> There is ample room for all automobiles needed and plenty of parking space inside. A very interesting route could be laid out winding into side chambers where little delicate formations make scenes of beauty and then out again into the big room past some gigantic domes. A mile or a mile and a half [of] such road could be built almost on the level circling the Big Room, with numerous side trips for walking. The chief side trip would be

[216] Lee, "New Discoveries in Carlsbad Cavern," 308.
[217] Lee, "Carlsbad Cavern," 190.

> into the group of rooms which [Mather] first saw—the Wigwam, Nursery, etc.[218]

Lee went as far as creating a potential slogan to advertise the trip: "To Hades and return by motor."[219] He expressed concern, not with the potential damage the route might cause to the scenery, nor with potential pushback against the use of automobile technology in this setting, but instead only regarding the expense of such construction. After recommending the use of road funds or a potential concession with a $5.00 motor fee to offset the costs, he suggested the National Geographic Society might take up this project of developing "a show place with all its great possibilities of lighting effects, with the intention of turning it over to the Parks when tolls have paid expenses."[220] Lee's letter to Mather shows his passionate embrace of technology and modernity at Carlsbad Cave National Monument. Although his public articles do not demonstrate his acceptance of technology in the cave so transparently, his underlying intentions of modernizing the cavern may have shaped his writings for the public. As his articles and lectures provided the first introduction of Carlsbad Cave to Americans, his opinions influenced the direction of their perceptions.[221]

Beginning in 1923, the National Park Service appointed W. F. McIlvain, President of the Carlsbad Chamber of Commerce, as the monument's custodian. After Lee's expeditions, McIlvain immediately took up the projects of introducing trails, stairways, and proper lighting into the caves. McIlvain helped institute much of the

---

[218] Willis T. Lee to Stephen T. Mather, April 19, 1924, National Archives, College Park Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, no. 630, Part 1, Carlsbad Roads Trails.
[219] Ibid.
[220] Ibid.
[221] Lee produced a manuscript entitled "Carlsbad Cavern," which the National Geographic Society rejected; Lee then proposed the manuscript to the U. S. Geological Survey, but passed away on June 16, 1926, before he could arrange publication of the manuscript; Frederick Earle MacVaugh, "Preserving the Underground: The Creation of Carlsbad Caverns National Park, 1922-1930" (M.A. Thesis, University of Texas at El Paso, 2000), 63.

original development, laying the foundations for more significant later development. As Holley and Lee noted, the caverns most immediately needed trails, and McIlvain began the physical developments by following this suggestion. In January of 1925, the Carlsbad Chamber of Commerce funded the construction of a stairway through the natural entrance, in order to eliminate the guano-bucket descent. Despite the steepness of the staircase, McIlvain and the other Chamber members felt it would make the descent safer.[222]

As early as April of 1926, McIlvain began directing the construction of trails in the Big Room. He intended to make the trails four feet wide where possible. In addition to the increasing the width of flat walking surfaces, McIlvain worked towards ensuring railings wherever the trails ascended or descended "mountains in the cave."[223] Throughout McIlvain's tenure, he focused on maintaining the trails for visitor comfort and repairing them when they became slippery or seemed too steep.[224]

When Thomas Boles took over as the superintendent of Carlsbad Cave in 1927, he continued to place significant emphasis on trail construction and maintenance. In his first Superintendent's Monthly Report, he reported allocating guides to trail work after they finished guiding the five-hour daily tour. He instituted a major effort to complete a trail around the south end of the Big Room, which allowed tourists to view the full size of the room in a unique way. He also designed the trail to be completely level, so it could act as a "period of rest, when compared with the stairways and inclines in other portions

---

[222] MacVaugh, "Preserving the Underground," 120.
[223] McIlvain to Department of the Interior, "Department of the Interior, National Park Service, Carlsbad Cave National Monument," May 7, 1926, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 3.
[224] McIlvain to Department of the Interior, "Department of the Interior, National Park Service, Carlsbad Cave National Monument," April 10, 1927, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 2.

of the Cavern." In addition to the scenic opportunities of this trail, the circular nature of the Big Room trail added to the efficiency of managing large crowds.[225]

The National Park Service also took an active interest in the trail development at Carlsbad Cave. In October 1927, federal officials sent Chief Engineer of the National Park Service, Frank A. Kittredge, to Carlsbad Cave to discuss further improvements to the existing trail system. His proposed changes, Boles believed, would "eliminate most of the fatigue of the Cave trip."[226] The collaborative efforts of the local and national administration show the significance of trail development in popularizing Carlsbad Cave National Monument.

Despite the rapid trail improvement the National Park Service undertook, the strenuous nature of the trip remained problematic. In a manuscript, a visitor by the name of Mr. Pfordte described his 1927 trip to the caverns. He acknowledged the significant developments, referring to "good trails and occasional stairs," as well as noting the trails mostly remained dry. Despite his acknowledgment of the Park Service's effort to improve the trails and their caution to only allow visitation in spots where safety could be ensured, he referred to his exit from the cave in negative terms: "The return trip over the ridges in the cave, the long trail and finally the unending stairs, was not easy, but is ameliorated by the thought of having seen the most wonderful cave in the country, if not the world."[227]

---

[225] Thomas Boles to Director, National Park Service, August 8, 1927, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 3.
[226] Thomas Boles to Director, National Park Service, November 7, 1927, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 2.
[227] Pfordte, *A Western Trip*, Unpublished Manuscript, 1927, Carlsbad Caverns National Park Administrative Records, Series I: History, circa 1890-2007, Box 4, Folder 44: Manuscript Pfordte 1927-1928, 39-40.

A friend of National Park Service Director Stephen Mather also expressed concern with the entrance stairs, as well as other elements of the trails. F. R. Elliot of Chicago criticized the National Park Service for publicizing the caves, when in his estimation, they lacked readiness for visitation, as evidenced by the "very large amount of strenuous climbing up and down underground" required during the cavern trip. In his own experience, the constant requirement of descending into small rooms only to climb immediately out during the journey exhausted him to such a degree he could "hardly climb up" the last 200 steps to the exit. He described himself as "so keyed up from the unusual exercise and altitude that [he] could not sleep that night. [His] heart pounded very vigorously all night and [he] was utterly exhausted for about a week after the trip through the cavern." He warned Mather, "It is quite an exertion for the tourist who has just come from the city and gets off the eastern train on the way west," and he believed "it would be quite dangerous for anybody with a weak heart."[228] His focus on his city origins demonstrates a diverging perspective between urban visitors and those local to the caves.

Likewise, a representative of Cook Tours, a tour group hoping to include Carlsbad Cave as an attraction on their land cruises, saw an issue with the strenuous climbing for his customers beyond middle age. While the representative, Mr. Buckley, spoke highly of the attractions, he believed the steep climbs required effort beyond the capabilities of

[228] F. R. Elliot to Stephen Mather, July 9, 1928, National Archives, College Park Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, File 611, Part 1, Carlsbad Repairs and Improvements.

his customers. Boles assured Buckley the 1929 appropriation would help alleviate some of the difficulties of the trip.[229]

A congressional party, visiting in October 1927, helped secure additional appropriations necessary for continued development. When New Mexico Congressman John Morrow and Congressmen Louis C. Cramton, Burton L. French, and J. Will Taylor of the Interior Appropriation Committee visited Carlsbad Cave, they departed with what Boles described as "an excellent impression and a true conception of the needs of the Carlsbad Cave during the coming few years."[230] Boles also noted Mr. Cramton seemed very much interested in eliminating the stairways at the entrance of the cave, as they detracted from the visual impressiveness of the entrance. Boles responded by describing his plan for the entrance trails to eliminate the stairways completely, with the exception of the ninety-six steps at the bottom. He introduced a plan to use "long sweeps with easy grades" to make travel easier and deter shortcuts.[231] Although the stairways represented a recent introduction to the caves and solved the immediate problem of the guano-bucket descent, their steep grade elicited complaints from visitors, and Boles knew he must react to these complaints in order to facilitate the rise of Carlsbad Cave to national recognition. The visit of Cramton and the others resulted in an expanded congressional appropriation for 1929.[232]

Boles immediately commenced work on improving the trails once the 1929 appropriation came through. He estimated the work he accomplished, aided by the

---

[229] Thomas Boles to Director, National Park Service, February 2, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 3.
[230] Thomas Boles to Director, National Park Service, November 7, 1927, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 3.
[231] Thomas Boles to A.E. Demaray, November 21, 1927, National Archives, College Park Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 210, File 204-01, Part 1.
[232] Thomas Boles, 1928 Carlsbad Cave National Monument Annual Report, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23a, Folder 3a, 5.

National Park Service Engineering Department, eliminated "about sixty percent of the effort" previously required during the cave trip. He focused primarily on eliminating the "humps" and "dips," of which F. R. Elliot complained. In September 1928, Boles directed his trail crews to construct a "tunnel" connecting a site known as King's Palace Junction and the underground Lunch Room (discussed in detail below), in order to eliminate an eight-foot climb, known as "Appetite Hill," visitors encountered in both directions to and from the Lunch Room. Boles also directed the construction of a fifty-foot timber bridge to eliminate a dip along this trail.[233] A month later, the trail crews completed work on the tunnel, which saved ten minutes in each direction going to and from the Lunch Room.[234] In April of 1929, the trail crew completed what Boles considered one of the most important tunnels. This trail went under a feature known as the "Devil's Hump" on the way out of the cavern. As Boles noted, this tunnel saved up to thirty minutes of walking, and also a climb of 125 feet, reducing effort significantly.[235]

As Boles discussed with Congressman Cramton, another important development involved the elimination of the 216-step stairway. Visitors constantly complained about the physical effort required to exit by the stairway; Boles estimated 90% of all complaints targeted this feature. In June of 1930, Boles and his employees finally removed the stairway. This elimination, Boles noted, marked "another stride in the development of

---

[233] Thomas Boles to Director, National Park Service, August 10, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 2.
[234] Thomas Boles to Director, National Park Service, September 1, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 3.
[235] Thomas Boles to Director, National Park Service, May 10, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 2; Thomas Boles, 1929 Carlsbad Cave National Monument Annual Report, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23a, Folder 3a, 4.

the cavern along modern lines."[236] The stairway cost $4000.00 to remove, and Boles planned a special event surrounding its removal, publicly emphasizing his achievements. He asked W. F. McIlvain, or "Uncle Mac," as Boles called him, to lead the first tourist group over the new trail and to give a special talk about the numerous improvements for visitor "safety and comfort" over the last few years.[237] Boles intended to make sufficiently evident to visitors that the National Park Service administration aimed to constantly improve the caverns, always seeking the most modern and comfortable developments.

The introduction of smooth, graded trails took on significance not only in the National Park Service's attempt to make the caves safe and accessible, but also in their attempt to convince the public the caves not only served seasoned outdoorsmen, but also should be enjoyed by the general public, including those accustomed to city-living. A description of the trails in a 1928 booklet entitled *The Carlsbad Caverns of New Mexico: Its History and Geology* helped convey this impression:

> So far as trail or development are concerned, the cavern is always changing and those who view it and return the following year find it a very changed trip from their former visit.
> Gone is the thrilling bucket ride and with it have passed the slippery, unsafe trails down rock-walled canyons, crawling or stooping. Chasms are bridged safely; tunnels have been cut through solid rock to eliminate many of the climbs; careful study has been made to find the easiest traveling step-heights and trail grades. Stairways have banisters for greater comfort.[238]

---

[236] Thomas Boles to Director, National Park Service, April 12 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 3.
[237] Thomas Boles to Director, National Park Service, July 12, 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 7.
[238] A. W. Anderson, *The Carlsbad Cavern of New Mexico: Its History and Geology* (Gaby L. Bingham, 1928), Eighth Edition, ca. 1934, n.p., Carlsbad Caverns National Park Administrative Records, Series VIII: Ephemera, 1928-1999, Box 68, Folder 10: Publications 1928-1960.

Though not written by a member of the National Park Service, this publication captures the sentiment the Park Service attempted to convey to the public, asserting the significant degree of development towards modernity undertaken at the monument.

While trail improvements represented the most immediate need for development in Carlsbad Cave, as well as the most publicly desired, the Park Service began almost as immediately to introduce an electric lighting system. According to those involved in the planning, the system not only provided additional safety for visitors, but also attractive visual effects. Similar to the call for significant trail-work, Robert A. Holley first asserted the importance of electric lighting in his 1923 report, stating illumination would improve the caves "so that the great magnitude of space, the beauties and wonderful formations may be appreciated by the sightseer to the fullest extent."[239] In 1926, Chief Electrician J. E. Emmert of the National Park Service led the installation of a lighting system reaching from the foot of the stairway at the natural entrance, through the Kings Palace and up to the entrance of the Big Room. The initial light system included both floodlights and trail lights.[240] The electricity originated at first from a small powerhouse, but by the end of 1928, the Park Service built a new 120 HP Diesel motor power plant.[241]

---

[239] Robert A. Holley to Commissioner, General Land Office, May 14, 1923, Carlsbad Caverns National Park Administrative Records, Series I: History, circa 1890-2007, Subseries A: General Park History, circa 1890, 1923-2004, Box 1, Folder 001 Carlsbad Cave- Report by Holley, 1923, 1949, 8.
[240] W. F. McIlvain to Department of the Interior, "Department of the Interior, National Park Service, Carlsbad Cave National Monument," May 7, 1926, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 3.
[241] Thomas Boles to Director, National Park Service, November 8, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 2; Thomas Boles, 1929 Carlsbad Cave National Monument Annual Report, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23a, Folder 3a, 4.

Several months later, Emmert returned to expand the lighting system; yet, McIlvain still felt the caves needed additional lighting and constantly asserted this necessity.[242]

Under Thomas Boles's supervision, William A. Oglesby, Illuminating Engineer of the Westinghouse Lamp Company arrived at Carlsbad Cave in October 1928, along with Emmert, to add floodlighting to the Big Room. The engineers put significant effort into achieving well-planned effects; they moved each light several times to various locations, determining exactly which position would best "bring out the full beauty of the formations."[243] They also placed heavy focus on concealing the electrical cables, so as not to spoil the visual effect for tourists.[244] Boles's employees also put effort into concealing transformers and floodlights with rocks, and even attempted to "artfully" conceal the light switches.[245] The attempt to minimize the less beautiful elements of the lighting system shows a distinct acceptance on the part of the National Park Service of the grandiose effects of the lighting with a wariness and discomfort towards the mundane aspects of its existence. Technology tourists could potentially view as commonplace or visually displeasing threatened the cavern experience, whereas anything large-scale and unusual held the potential to become an added attraction. This distinction helps explain why Carlsbad Cave, more so than other parks at the time, elicited acceptance of man-made alterations; the developments at Carlsbad Cave took on a much larger, more

---

[242] W. F. McIlvain to Department of the Interior, "Department of the Interior, National Park Service, Carlsbad Cave National Monument," February 10, 1927, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 1; W. F. McIlvain to Department of the Interior, "Department of the Interior, National Park Service, Carlsbad Cave National Monument," March 10, 1927, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 2.

[243] Thomas Boles to Director, National Park Service, November 8, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 2.

[244] Ibid.

[245] Thomas Boles to Director, National Park Service, February 12, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 3.

impressive scale. In utilizing this technology to bring out the natural beauty of the features, while attempting to conceal the mechanical elements of the lighting system, the engineers allowed the lighting system to seamlessly integrate into the natural space.

In preparation for a visit by Congressman Cramton, soon after the extension of the lighting system, Boles asked Emmert to make it possible to temporarily light the Big Room ahead of schedule, in order to impress the congressman. The congressional funding Cramton previously helped secure in the 1929 appropriation allowed the monument to increase electric lighting to six times its previous capacity.[246] Reportedly, Cramton was "quite enthusiastic over the effects" the engineers obtained, as were many other visitors.[247] Boles also attempted to impress the Governor of New Mexico, Richard C. Dillon, with the lighting, and Boles claimed the governor spent much of his visit to the caves in 1929 inspecting the new lighting.[248]

The use of the lighting went far beyond making the cave features more visible. Public reactions and publicity consistently highlighted the impressiveness of the lighting and the ways in which it added to the beauty of the cavern. In a 1928 article in the *Christian Science Monitor*, an author by the initials of A. D. N. described his wonder at the concealed electric lighting, writing, "Here and there an arc of light is visible on the ceiling; but there is no electric bulb hanging there. The light is cast by powerful electric

---

[246] Thomas Boles, 1928 Carlsbad Cave National Monument Annual Report, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23a, Folder 3a, 5.
[247] Thomas Boles to Director, National Park Service, December 8, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 2; Thomas Boles, 1929 Carlsbad Cave National Monument Annual Report, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23a, Folder 3a, 4.
[248] Thomas Boles to Director, National Park Service, February 12, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 3.

lamps on the ground."[249] A. D. N.'s reaction shows, while the trail crews skillfully concealed the lighting fixtures, the electric lighting still very much remained a noticeable feature of the cavern trip. Visitors joined the National Park Service in their acceptance of progressive technological achievements at Carlsbad Cave, though they also desired harmony and lack of interruption between these features and the natural features of the cave.

Another article printed in the *Christian Science Monitor* in 1929 touted the wonders of the floodlights at Carlsbad. The unnamed correspondent at Carlsbad wrote, "All lighting within the cave is indirect illumination. Hidden in alcoves and behind rocks, the floodlights shoot their rays upwards and across the chambers like footlights in a theater, showing up the most striking formations to best advantage."[250] While the concealment of the lighting machinery conformed to the practice of landscape architecture used by the National Park Service to make developments as unobtrusive as possible, the press attention surrounding the electric lighting makes the intentions of the National Park Service clear; they never desired complete obfuscation of their state-of-the-art lighting system.

A description of the lighting in the booklet *Carlsbad Caverns: Its History and Geology*, exalts the lighting to an even greater degree. A. W. Anderson, the booklet's author wrote:

> Electric lights along these safe trails make the entire journey free from a feeling of caution. Hundreds of great searchlights pierce the recesses of distant ceilings to bring out magnificent beauty of formations and give some adequate idea of the utter immensity of the chambers… The lighting

[249] A. D. N., "Down Into the Spectacular Corridors of Carlsbad Cave," *Christian Science Monitor*, November 21, 1928, 5.
[250] "Hidden Floodlights Reveal Wonders of Carlsbad Cavern's Huge Vault," *Christian Science Monitor*, July 12, 1929, 1.

> effects achieved have been highly praised by experts in this field, and the illumination is regarded as the greatest effort of its kind ever undertaken. There is no direct lighting; the visitor does not see the lights themselves, which are carefully concealed by rocks and formations.[251]

This description makes clear the value the lighting system held, both for the benefit it brought to the features of the caves, and independently as a remarkable technological feature.

A 1934 guidebook, written by Isabelle F. Story in collaboration with the National Park Service, referred to the floodlighting as a "masterpiece of electrical illumination."[252] Story described the concealment of the switches, cables, and lights, as well as the system the guides used to light only two or three adjacent sections out of twenty-four at one time. Story also explained how the system utilized different wattage of lighting, depending on the degree of illumination a particular geological feature required to best showcase it.[253] Again, and this time directed by the National Park Service, publicity included lengthy, complimentary descriptions of the electric lighting, showing it not only benefited the caves in its ability to bring illumination to beautiful features, but it also independently impressed visitors from a technological standpoint and created an added attraction in the caves. The electric lighting also gave the impression of modernity in the caves, whereas torches and lanterns conveyed primitiveness.

Like the lighting system, the underground Lunch Room, first constructed in 1926, also took on significance beyond its practical use. The use of a Lunch Room underground began out of necessity; with a five-hour hike over seven miles of trails,

---

[251] Anderson, *The Carlsbad Cavern of New Mexico*, N. P.
[252] Thomas Boles, in his Superintendents Reports, as well as numerous other examples of publicity also used this term.
[253] Isabelle F. Story, *Carlsbad Caverns National Park* (Washington: United States Government Printing Office, 1934), 20, Carlsbad Caverns National Park Administrative Records, Series VIII: Ephemera, 1928-1998, Box 69, Folder 1: Brochures, Official, Undated.

visitors surely got hungry for lunch and benefited from a brief break. As McIlvain noted, the "condition of the tourist when arriving at this point" evidenced the need for such a stop, and dictated how long of a rest the rangers allowed.[254] However, the development and advertisement of the underground Lunch Room again went beyond necessity and transformed the Lunch Room into a component of the cave's attraction.

The National Park Service did not operate the Lunch Room; instead, they offered an external concession to operate an aboveground facility as well as the underground Lunch Room. The Cavern Supply Company won the right to this concession in 1927. Although Jim White's wife repeatedly expressed interest in operating the lunch concession in the cavern, the Park Service believed she lacked sufficient funds to build a permanent, modern facility. In granting the concession to The Cavern Supply Company, the Park Service directed Harry McKim and Bert Leck, the operators, not to erect any type of temporary structure, but rather wait until they could construct a permanent facility in accordance with the Landscape Department's recommendations.[255] This shows the importance the Park Service placed upon representing the Lunch Room as a modern facility, rather than a rudimentary point of convenience.

In 1929, the administration of Carlsbad Cave, under the leadership of Sanitary Engineer H. B. Hommon, moved the location of the Lunch Room into the Left Hand Tunnel. Boles noted, the new location was "much drier and freer from drippings than was the old location, and seem[ed] a few degrees warmer than the old location."[256] The

---

[254] W. F. McIlvain to Department of the Interior, "Department of the Interior, National Park Service, Carlsbad Cave National Monument," May 7, 1926, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 2.
[255] Thomas Boles, August 7, 1927, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series I: History, 1927-2002, Folder 6, Company Ephemera.
[256] Thomas Boles to Director, National Park Service, August 12, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h.

relocation of the Lunch Room not only made it a more comfortable stopping point, but also made it more similar to a modern cafeteria than a make-shift stopping point along a trail.

A booklet The Cavern Supply Company released in 1932 described the particulars of the luncheon. According to the booklet:

> The lunch room 750 feet below the surface and operated under the supervision of the United States National Park Service, is reached at 12:30 P.M. Steaming hot coffee urns and long rows of well filled trays on spotlessly clean shelves are presided over by courteous, white clad attendants. On the whole, it presents the most pleasing picture to the entire party, made hungry by the walk. 500 persons can be efficiently served in 15 minutes. Lunch consists of two large tasty sandwiches, cheese and ham on buttered bread with a spread of mayonnaise and shredded lettuce. These and a generous slice of delicious cake are wrapped in waxed paper. A relish, a package of potato chips and an orange are on the tray. Lines are formed, cafeteria style and the diner takes a tray and moves forward. Just before reaching the Cashier's desk a cup of delicious hot coffee in a pre-heated cup is placed on his tray; or if he so chooses, he will be served fresh milk, hot tea or Coca-Cola. The price of lunch complete is 60 cents. Individual sandwiches, 20 cents, drinks, 10 cents. Cigarettes, package candies and post cards may be purchased from the lunch room cashier.[257]

The description of the Lunch Room clearly shows the effort expended in making it seem thoroughly modern. The description of the "white clad attendants" gives a perception of professionalism and cleanliness, as do the "spotlessly clean shelves." The 500-person serving capacity speaks to the organization's efficiency, and the conveyor belt-style serving line evokes the idea of a well-oiled machine. The presence of pre-packaged food, as well as sandwiches and cake wrapped in wax paper also bespeaks modernity and consideration of sanitation. While surely the concessionaires could have profited merely by feeding hungry people, they focused extensively on creating a modern identity for

---

[257] *Carlsbad Caverns: General Information for the Guidance of Visitors* (Carlsbad, NM: Cavern Supply Company, 1932).

their cafeteria, attempting every convenience and amenity a modern restaurant would possess.

The National Park Service, likewise, put effort into ensuring the cafeteria added to the cave's modern image, rather than detracting from it. When Assistant Director of the National Park Service Horace Albright received an outdated postcard depicting the lunchroom of Carlsbad Caverns, he angrily sent a memorandum to the Washington office, stating, "as a piece of photography, or art, or anything else you may want to call it, this postcard is about the most terrible thing that I have seen sent out from a National Park in a long time."[258] Since the postcard depicted the 1926 accommodations, rather than the upgraded 1930 lunchroom, exuding the appearance of primitiveness rather than modernity, Albright wanted it immediately removed from circulation. Associate Director Arno B. Cammerer forwarded the letter to Superintendent Thomas Boles at Carlsbad Caverns, who agreed the depiction of the lunchroom was "obsolete, as the lunch room has been changed, and has been so arranged that it does not resemble the temporary affair shown on this card."[259] The outrage with which the National Park Service viewed the outdated depiction of the facilities at Carlsbad Caverns shows the importance they ascribed to the value of modernity in publicizing the caves.

Visitors describing their experiences in the caves certainly perceived the modernity of the Lunch Room and described this as a positive factor in their cavern trips.

---

[258] Horace Albright to Washington Office, 14 August, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, Miscellaneous Correspondence 900-05.

[259] Thomas Boles to A.B. Cammerer, 4 September, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, Miscellaneous Correspondence 900-05.

In a Pacific Mutual Life Insurance publication, *The Pacific Mutual News*, C. I. D. Moore described his experience in the Lunch Room:

> A real lunch room, fitted out with the usual accessories thereof. Tables well loaded with food and steaming urns of coffee provide more than sufficient to satisfy the most voracious appetite… Seated on benches or hummocks of rock while eating our lunch, we make a picturesque group in a setting that cannot be duplicated in any other spot I have yet heard of, 750 feet below the surface of the earth.[260]

Moore commented on his astonishment at finding the Lunch Room to be of the caliber he would find in a modern restaurant, and also on the unique experience of dining underground. His positive reaction to the underground Lunch Room shows the National Park Service accomplished its goal of adding the Lunch Room as an attraction to the caves, one adding a perception of modernity to the location.

A 1929 *Los Angeles Times* article, reprinted in the *Christian Science Monitor* also showed the impressiveness of the underground Lunch Room. The article's title, "Underground Trail of Matchless Grandeur Made when Dinosaurs Romped Overhead: Inspiration, Thrills, and Cafeteria Lunch in Seven-Mile Cavern Hike Through Super-Fairyland of Palaces, Cathedral and Monoliths," shows the cafeteria added to the attraction of the caverns. The article described the Lunch Room as "a huge vaulted chamber set with lunch tables, cafeteria style. It is a relief; the place is overwhelming; it is a relief to be brought back to earth by a hot dog sandwich."[261] Harry Carr described the Lunch Room as a stark, yet welcome, contrast to the rest of the cavern, adding an element of modern life into the strangeness of the underground world.

---

[260] C. I. D. Moore, "The Caverns at Carlsbad," *Pacific Mutual News* (July, 1929): 239.
[261] Harry Carr, "Underground Trail of Matchless Grandeur Made when Dinosaurs Romped Overhead: Inspiration, Thrills, and Cafeteria Lunch in Seven-Mile Cavern Hike Through Super-Fairyland of Palaces, Cathedrals and Monoliths" *The Christian Science Monitor* (Copyright 1929, *The Los Angeles Times*) September 14, 1929, 7.

The editor of the *El Paso Times*, H. S. Hunter, also wrote highly of the Lunch Room, particularly regarding the efficiency "with which the management and employes [sic] receive hundreds, or a thousand, or more people, and serve lunches to them, and do it quickly but with no evidence of haste." He also complimented the quality of the food and coffee.[262] The widespread tendency to comment on the Lunch Room after visiting Carlsbad Cave demonstrates this feature's position as an added attraction and testament to the modernity of the caves, rather than just a convenient stopping point.

The underground Lunch Room pleased most visitors, both as an addition to the cavern trip and in its quality. As Thomas Boles noted, one of the only sources of opposition against the Lunch Room originated from friends of restaurant owners in Carlsbad, displeased with the competition. The restaurants in Carlsbad previously sold boxed lunches, for the purpose of transporting into the cavern, and when the underground Lunch Room opened and began to provide full-service lunches for only five cents more, fewer people chose to tote their own lunches. The only other complaints he noted originated from locals who believed Mrs. White should have received the concession.[263]

However, Chief Landscape Architect of the National Park Service Thomas C. Vint also opposed the lunchroom, but for other reasons. In a letter to Horace Albright, Vint voiced his opinion that the original intention of eliminating the accumulation of waste by offering lunches, rather than accommodating boxed lunches, which contained "more paper than food, as well as a surplus of food," had not been accomplished. The Cavern Supply Company's sale of candy bars, cigars, and cigarettes, Vint claimed,

---

[262] H. S. Hunter, "Around Here," *El Paso Times*, October 1935, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3l.
[263] Thomas Boles to Director, National Park Service, October 3, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 4.

created an enormous amount of garbage, and with the large volume of visitors making the trip simultaneously, the rangers found it easier to clean up after the visitors than to enforce anti-littering regulations.[264] As H. S. Hunter, editor of the *El Paso Times*, noted:

> Time was when all visitors were cautioned (and watched carefully) against dropping any sort of litter in the Caverns. No scraps of papers, no cigarette butts, nothing. Now people smoke as they go through the Caverns, and in the lunch room. It is no flattering commentary on humanity that as the visiting party passes through the Caverns a scavenger crew follows along the trails, picking up cigarette butts or anything else that may have been discarded. Anyway, the Caverns are kept so clean, so utterly free of litter of any sort that one would never surmise that 500,000 people had preceded him through.[265]

Despite Vint's opposition and desire to remove the Lunch Room from the cave, the perceived benefit and attraction of having the Lunch Room outweighed the concern for a litter-free space. Vint, who worked closely on many development projects at Carlsbad Cave, did not view the Lunch Room, itself, as a disruption of the visitor experience, but rather opposed it for its potential to increase trash output. Like the Park Service's glorification of the lighting effects and minimization of the cables and switches, Vint accepted the large-scale, non-natural element of the lunchroom, but opposed the mundane introduction of garbage. The presence of garbage, like that of electrical cables, held the potential to remind visitors of the less spectacular, less fascinating elements of the rapidly modernizing world. At Carlsbad Cave, only the modern and technological elements with the possibility to excite and enrapture tourists became part of the attractions, and other introductions of "modern life" took on negative significance. This helps illustrate why Carlsbad Cave, more than any other national park, took on the role of integrating modernity and nature to such a degree. Within a cave, the possibilities for displaying

---

[264] Thomas C. Vint to Horace Albright, November 28, 1928, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series II: Correspondence, 1927-2008, Box 1, Folder 1, Correspondence, 1927-1931.
[265] Hunter, "Around Here."

never-before-seen introductions of technology into nature dwarfed the possibilities for the same in a forest.

The construction of trails, installation of the lighting system, and the creation of the underground Lunch Room demonstrate the efforts of the National Park Service to physically transform Carlsbad Cave into an accessible, modern space. Since the nature of the scenic site required five hours of constant walking through an underground space, the administration immediately perceived a need for alterations to convince American tourists to visit. While other natural sites at the time demonstrated efforts to minimize the effect of any physical alterations of the landscape, the administration at Carlsbad found only by emphasizing these alterations and focusing on the modernity these elements added, could they convince the American public the caves welcomed them.

CHAPTER 4

ADVERTISING THE MODERN CAVE, 1923-1930

Convincing American tourists Carlsbad Cave welcomed them and provided an accessible, comfortable trip took more effort than simply providing accommodations. Due to the prominent perception of the cave as a restrictive, dark space, requiring excessive effort to experience, which the East Coast media supported, many potential tourists throughout the 1920s continued to believe the trip exceeded their capabilities. Despite Boles's efforts, East Coast media outlets remained reluctant to describe Carlsbad Cave as anything resembling "modern" until approximately 1930. Throughout the 1920s, most Eastern newspapers, in particular the *New York Times*, focused on the dangerous and prehistoric elements of the caves, when they mentioned Carlsbad at all. Conversely, newspapers and magazines in the Southwest, including Los Angeles, readily adopted the perspective the National Park Service sought to propagate. To spread the news of the improved accommodations, the administration of Carlsbad Cave needed advertising and newspaper publicity, for which the National Park Service provided no budget. Through special treatment of members of the publicity industry, as well as constant effort to control the image of Carlsbad Cave these publications espoused, Thomas Boles magnified the advertising abilities of Carlsbad Cave and ensured advertisements constantly bespoke the wonders of the developments at Carlsbad Cave, thus successfully overriding the East Coast perceptions of Carlsbad Cave as undeveloped.

Historian of advertising, Roland Marchand explained the usefulness of advertising as a historical source for determining popular opinion in *Advertising the American Dream, Making Way for Modernity, 1920-1940*. Marchand suggested historians should

view advertising as a "distorting mirror," which reflects culture, while also imposing certain beliefs upon the public.[266] He argued advertisements achieve success only when they resonate with the public, taking advantage of beliefs and ideals the public already holds. This suggests advertisements are useful not only to dictate what corporations want Americans to believe at any given time, but also in capturing beliefs Americans already hold.

Marchand's theory regarding advertising aids the understanding of the role of advertising at Carlsbad Cave; yet, Carlsbad Cave reflects public opinion to a greater degree, since the Park Service influenced, but did not direct the content. Carlsbad Cave departed from traditional advertising in that the agency selling the "product" of cave visits (the National Park Service) did not undertake direct advertising. Newspaper publicity and numerous travel brochures and guidebooks originated from individuals who visited Carlsbad Cave and formed their own independent perceptions thereof. Superintendent Thomas Boles often provided special accommodations for, and personally met with, any individuals of potential advertising value. Repetitious language from varying sources suggests Boles often provided information he wanted included in publicity, whether via printed material or casual mentions in conversation. Certainly, most of these agencies stood to gain something by promoting Carlsbad Cave, whether they sought travel package sales, railroad tickets, or newspaper sales. However, each individual agency independently characterizing the caves in a similar way proves the intentions of the National Park Service to cast Carlsbad Cave as a modern entity permeated and found successful reception. The advertisement of the developments along

---

[266] Roland Marchand, *Advertising the American Dream, Making Way for Modernity, 1920-1940* (Berkeley: University of California Press, 1985), xvii.

modern lines at Carlsbad Cave, rather than merely the scenic, natural attractions, show the touring public valued these developments; otherwise, the numerous organizations involved in the promotion of Carlsbad Cave would not have found success through mentioning these features. Americans interested in visiting features of the National Park System, therefore, valued modernity and embraced the integration of nature and technology.

When Thomas Boles took over as Superintendent of Carlsbad Cave in 1927, he immediately realized the challenge of drawing national visitation. Lacking a budget for creating his own advertisements, he relied heavily on visiting newspapermen and advertisers. Boles explained his desire to impress these influential spokespeople in one of his monthly reports: "As the Park Service has no advertising funds, you can see readily how much it is to our benefit to extend every courtesy to these visitors who have control of unlimited funds for this purpose."[267] By devoting special attention to these visitors, Boles achieved the goodwill of these individuals and their desire to help promote the caves, and also gained the opportunity to explain his, and the Park Service's, perspective of how the caves should be portrayed.

Despite Boles's efforts to draw and accommodate influential visitors, he remained plagued by differing perspectives between the East Coast media and regional organizations. The American Southwest in general held a reputation as undeveloped and uncivilized during the period of Carlsbad's development, with which the Park Service was forced to contend. The East Coast media's characterization of the caves as primitive fit consistently with depictions of the Southwest of the time. By the 1920s, Easterners

[267] Thomas Boles to Director, National Park Service, September 1, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g.

mostly acknowledged the greater West's "wild" heyday as passed, and many western-focused tourist attractions held an admittedly artificial atmosphere. Dude ranches, a popular tourist destination offering Eastern visitors the chance to take on a cowboy persona on what appeared as a working cattle-ranch, shifted ranchers' focus from actually running working ranches to attracting tourists with their rustic, "Wild West" atmospheres. As several *New York Times* articles from the 1920s and 1930s illuminate, cattle and sheep ranching declined in financial potential by this point, and the profession of luring tourists with Western attractions rose to such prominence, members of the profession founded a Dude Ranchers' Association, and the University of Wisconsin developed a degree program to train dude ranchers in "hotel management and 'horseology.'"[268] Another article described the tameness of the "wild" West by the 1930s, stating,

> It is true that cowboys in ten-gallon hats and wooly chaparajos still ride hard and shoot fast, but one encounters them only on dude ranches or at the rodeos staged for visitors. Redmen, decked in paint and feathers, still stage their snake dances, but their prime objective is to coax silver showers from tourists, not rain withheld by the angry gods.[269]

However, while Eastern newspapers asserted the falsity of the cowboy-themed attractions of the greater West, the American Southwest came to represent the "final frontier" for Americans after 1920. For this reason, Southwestern American Indians and Southwestern natural sites like Carlsbad Cave took on added significance, as articles, guidebooks, and other literature portrayed the region as the last swath of land untouched

---

[268] "Dude Ranchers, Inc.," *New York Times* December 28, 1928, 22; Rose Henderson, "Dude Ranches Popular: They Offer the Vacationist a Variety of Activities in a 'Wild West' Setting, *New York Times*, September 29, 1935, XX8.
[269] F. L. Minnigerodequartisite, "'Wild' West Now Tamer," *New York Times*, November 1, 1936, XX10.

by modern civilization.[270] Erna Fergusson, the creator of the Koshare Tours, a guided tour based out of Albuquerque, focused on the "primitive" character of the Southwestern native people in publicity materials, utilizing the status of the region as "untouched" as a draw for tourists. The Koshare Tours guidebook, produced in 1923, referred to the Southwest as a place "where the past and present touch hands" and encouraged tourists to "get away from the railroad and shake hands with a thousand years."[271] Fergusson also referred to the Pueblo Indians as "one of the unspoiled primitive people remaining in North America."[272] The Santa Fe Railway later incorporated Fergusson's idea, renaming the trips "Indian Detours." The advertisers for the Santa Fe Railway utilized similar rhetoric to Koshare Tours, referring to the Southwest as a place where tourists could "catch archeology alive."[273] By referring to the Pueblo people as relics of the past, these attractions perpetuated an idea of the Southwest as the last region remaining untouched by modern civilization.

---

[270] Frederick Earle MacVaugh, "Preserving the Underground: The Creation of Carlsbad Caverns National Park, 1922-1930," M.A. Thesis, University of Texas at El Paso, 2000, 72.

[271] "The Koshare Book about New Mexico and Albuquerque: The Hub of the Indian Land," The Koshare Tours and The Albuquerque Chamber of Commerce, c. 1923, Center for Southwest Research, University Libraries, University of New Mexico, http://elibrary.unm.edu/cswr/, 2-4, http://econtent.unm.edu/cdm4/document.php?CISOROOT=/Manuscripts&CISOPTR=3113&REC=16.

[272] Ibid., 3.

[273] "Harvey Cars, Indian-detours," Santa Fe Railway, 1930, Center for Southwest Research, University Libraries, University of New Mexico, http://elibrary.unm.edu/cswr/, 1; The Fred Harvey Company and the Santa Fe Railway adapted Fergusson's idea in 1926, offering a way for American tourists to see and meet American Indians up-close. The detours escorted tourists from the railroads to distant Pueblos, offering a safe and comfortable way to have what they viewed as an authentic experience in the Southwest. The Harvey Company hired young women as Couriers, or tour guides, many of whom had graduated from college; the company required the women to complete four months of training that involved lectures and trips. Along with the Couriers, the company employed men as drivers, who the brochures asserted possessed skills in driving through the rugged terrain and in automobile repair, Ibid. 5-7; Erna Fergusson worked for the Santa Fe/Harvey Company from 1926-1927, conducting training of the Couriers; Marta Weigle, "Exposition and Mediation: Mary Colter, Erna Fergusson, and the Santa Fe/Harvey Popularization of the Native Southwest, 1902-1940," *Frontiers: A Journal of Women Studies* 12, No. 3 (1992): 117; Marta Weigle, "From Desert to Disney World: The Santa Fe Railway and the Fred Harvey Company Display the Indian Southwest," *Journal of Anthropological Research* 45, No. 1, University of New Mexico Centennial 1889-1989 (Spring, 1989): 115-137.

Members of the Taos Society of Artists, based in Northern New Mexico, also added to the perception of the Southwest as undeveloped and primitive. In an article in *The Craftsman*, a New York-based, Arts-and-Crafts-focused publication edited by Gustav Stickley, Joseph Lewis French described the practices of E. Irving Couse, a founding member of the Taos Society. French remarked upon Couse's practice as more authentic than many other painters depicting American Indians, as "his interest in painting the Indians is confined to the Taos tribe who live down New Mexico way and do not travel with the Buffalo Bill show. They are more remote and very picturesque Indians who have not come much in contact with what we call civilization, who are still a very poetical and gentle people."[274] French's description derided the groups of American Indians who performed for Anglo-Americans as having lost the authentic and picturesque qualities those in Taos maintained.

The characterization of the American Southwest as the last remaining uncivilized land in the United States attracted considerable tourist attention, but in the case of Carlsbad Cave, this served as more of a challenge than a benefit. The Santa Fe Railroad offered encounters with American Indians mediated by polished guides, but early tourists to Carlsbad came face-to-face with the underground reality of the cave. While this may have attracted some visitors who considered themselves adventurous and ready for a challenge, the National Park Service sought to convince all Americans they could and should visit the caves without danger or threat. For this reason, the National Park Service actively attempted to convince publicity outlets in major cities on the East Coast to offer a modern image of the caves.

---

[274] Joseph Lewis French, "A Remote North American Civilization and Its Portrayal in the Art of E. Irving Couse," *The Craftsman* XVIII, No. 6 (September 1910), 619-625.

As early as Willis T. Lee's 1924 expedition, it became clear news repositories on the East Coast resisted the image of Carlsbad as a potentially modern space and remained more likely to describe the caves as primitive and dangerous. While Lee's writings paved the way for development, the publicity surrounding Lee's trip often characterized the caves as primitive and undeveloped, as truly they were at that point. A 1924 *New York Times* article, in describing Lee's explorations, focused on the prehistoric past of the caves, noting the human skull and other remains reportedly found in the caves. The same article also mentioned Lee hoped to find entrances that would make the caves accessible to visitors.[275] While accurately describing the intention to expand and improve visitation conditions, this article made visitation at present seem impossible. Another article, printed in the *New York Times* shortly after the first, mentioned the possibility for visitation, but with strong caution:

> The cave is open to the public at present only under the guidance of its original discover, who has been given a guide permit by the Government. The only means of entrance is through a hole in the roof, through which one is lowered several hundred feet in a bucket. The cavern, of course, is in darkness, with many steep drops from one level to another, and slippery declivities.[276]

This article mentioned Lee's expedition and his writings regarding the caves, but erased his subtle references to the budding modernity of the caverns. While Lee described the bats as resembling smoke from a smokestack, the *New York Times* article altered this metaphor to instead say the bats looked like "smoke from a chimney."[277] Another *New York Times* article, published in 1929 repeated this altered metaphor. The 1929 article

---

[275] "Records of an Old Race: Experts Find Skulls and Implements in Carlsbad Caverns," *New York Times*, September 14, 1924, E1.
[276] "Carlsbad Cave Full of Wonders: New National Monument in Guadalupe Mountains Described as Strikingly Beautiful," *New York Times*, September 21, 1924, S6.
[277] Ibid.

focused on the bat flights, stating, "each evening these little mammals come out through a large natural opening, at times in such numbers that they look like smoke from a chimney."[278] While this difference is minor, the erasure of Lee's descriptive language of the "smokestack" shows the eastern media's rejection of the modern image of the caves from the earliest accounts. The difference between local depictions of Carlsbad Cave and East Coast media accounts signaled the beginning of the administration's battle to convince the rest of the country the cavern was modern and accessible. While at this point, the descriptions of inaccessibility held truth, the lack of consistently updated information left readers, for almost the entire decade, to assume these statements remained true.

Even when Carlsbad Cave acquired electric lighting, the *Wall Street Journal* included only two sentences about the improvement: "Illumination of the cavern at Carlsbad, N.M. requires 15,000 feet of wire. Trails are being made through the cavern."[279] The *New York Times* made no reference to the electric lighting, and instead, just a few months after the electricians completed the installation of new lighting system, ran an article by Carl Livingston about the region's prehistoric heritage. Carl B. Livingston, who served as a member of the National Geographic expedition, wrote about "a prehistoric cave tomb, belonging to the vanished basket-maker race 4,000 years old" in the same region of the Guadalupe Mountain foothills as Carlsbad Caverns.[280] While this heritage acted as a separate draw to the region, the decision of the *New York Times* to ignore the modernization at Carlsbad and focus on pre-history showed a rejection of the modern image of the caves the administration attempted to espouse.

---

[278] "New Mexico Bat Cave," *New York Times*, October 13, 1929, X18.
[279] "Salt and Pepper," *Wall Street Journal*, May 27, 1926, 2.
[280] Carl B. Livingston, "Southwest Caves Reveal Early Race," *New York Times*, September 24, 1926, 14.

In contrast, Carl C. Magee, editor of the *New Mexico State Tribune*, a publication based in Albuquerque, wrote an article in 1927 showing the regional acceptance of the developing image of modernity at the caves. Magee assured readers the trip could be undertaken more comfortably and safely than popular perceptions suggested, stating, "The disagreeable features of the trip through the caverns are exaggerated. The temperature is uniformly 56 degrees, winter or summer. There is no animal life in the cave to be dreaded. There is no danger of a mis-step. There is no sensation of being shut in—the spaces are too immense. There is only the physical ordeal to be undergone." His tone made clear his intention to dispel misinformation and misconceptions about the cave, noting, although the distance is about five and a half miles, the slow progress and "frequent rests prevent undue fatigue."[281] While he mentioned the ongoing work in the caves, he did so in a tone praising the constant effort of the Park Service, rather than one warning potential visitors not to visit. He noted, "the visitor must wait until Uncle Sam can spend the money to build the trails to make the caverns accessible," but also asserted the currently open areas were more than sufficient to "paralyze the powers of the eyes to see."[282]

In addition to Magee's negation of the frequently exaggerated difficulties of the cavern trip, his metaphorical language also supported the notion of the cave as a modern space. He described the features of the cavern in comparison to architecture, noting it was "hard to realize that a chisel never touched them nor a rule never measured them." He also referred to the creator as a "Supreme Architect."[283] By comparing the divine creator of the caves to an architect, a profession connoting precision and building

[281] Carl C. Magee, *New Mexico State Tribune*, May 14, 1927, 5.
[282] Ibid., 2.
[283] Ibid, 4, 6.

potential, Magee made the caves seem like a built space. This metaphorical language referencing the caves' previous construction suggested potential for future developments. Furthermore, this language reinforced the idea of the caverns as part of the "technological sublime," by referencing the heavenly nature of the caves, while simultaneously reflecting human influence.[284] Magee's language starkly contrasts the erasure of Lee's mildly industrial language in the *New York Times* publications.

Similarly, The Santa Fe Railway developed significant relations with Carlsbad Cave, publicizing the caves as part of their Indian Detours; through their publications they helped portray Carlsbad Cave as thoroughly modern and accessible. As part of an effort to sell train tickets, the Santa Fe Railway frequently participated in the promotion of destinations along their route, specifically through partnerships with the Fred Harvey Company, which became renowned for bringing "civilization" into the west, through the use of upscale dining facilities and well-dressed, female serving staff.[285] In 1926, the Santa Fe Railroad and the Fred Harvey Company first began publicizing the "Indian Detours," offering not only experiences with American Indian people, but also transportation to other destinations off the train route. These detours gained traction as a

---

[284] David Nye, *American Technological Sublime* (Cambridge, MA: The MIT Press, 1994), xiii.

[285] Prior to Harvey's expansion throughout the West, most travelers stayed in shacks or public rooms and ate greasy, fried meat, canned beans, rancid bacon, and week-old coffee; Lesley, Poling-Kempes, *The Harvey Girls: Women Who Opened the West* (New York: Marlowe & Company, 1991): 31; The female servers, whom Harvey began employing in 1883 after firing all of his African American servers in one hotel for fighting, also became essential to his atmosphere of civility; Ibid., 42; Harvey hired women between the ages of 18 and 30, stipulating that they must be women "of high moral character;" He also trained them in a particular style of service, which they performed while wearing plain black dresses with white collars, black shoes, and black stockings; James D. Henderson, "Meals by Fred Harvey," *Arizona and the West* 8, No. 4 (Winter 1966): 315; For more on the perception of females as a civilizing influence on the American West, see Dee Brown, *The Gentle Tamers: Women of the Old Wild West* (Lincoln: University of Nebraska Press, 1958); Joan M. Jenson and Darlis A. Miller, "The Gentle Tamers Revisited: New Approaches to the History of Women in the American West," *Pacific Historical Review* 49, No. 2 (May, 1980): 173-213; Elizabeth Jameson, "Women as Workers, Women as Civilizers: True Womanhood in the American West," *Frontiers: A Journal of Women Studies* 7, No. 3 Women on the Western Frontier (1984): 1-8.

way to experience the "authentic" Southwest within a safe and comfortable guided setting.[286] On October 14, 1927, only five months after Boles took over the administration of the cave, he personally guided Ford Harvey, the son of Fred Harvey and the president of the company from Fred Harvey's death in 1901 through the 1930s, through the caves. He included Harvey as part of the congressional party, alongside Congressman Cramton and Congressman Morrow, signifying his importance.[287]

Following Harvey's visit, the Santa Fe Railway Company produced a travel brochure about Carlsbad Cave in 1928, and printed 60,000 copies.[288] The association with the Harvey Company's reputation added credibility to the safety and comfort of the Carlsbad trip. Ensuring mutual profitability, the brochure offered rail passengers the opportunity to either hire a car to transport them to the caves, or to participate in a Harveycar Motor Cruise, where tourists could stay at Harvey hotels and see many attractions along the route. Tourists also had the opportunity to combine the trip to the caverns with a two or three-day Indian-detour to Santa Fe.[289]

While the Santa Fe Railway remained complicit in describing the Southwest as prehistoric and promoting many attractions as such, the Carlsbad brochure placed heavy emphasis on framing Carlsbad Cave as a modern space, evincing this as a feature considered similarly desirable to the touring public. The Santa Fe Railway boasted the present modernity of the cave's accommodations, particularly in contrast to the difficulty

---

[286] Marta Weigle, "From Desert to Disney World: The Santa Fe Railway and the Fred Harvey Company Display the Indian Southwest," *Journal of Anthropological Research* 45, no. 1, University of New Mexico Centennial, 1889-1989 (Spring, 1989): 125.
[287] Lesley, Poling-Kempes, *The Harvey Girls: Women Who Opened the West* (New York: Marlowe & Company, 1991): 148; Thomas Boles to Director, National Park Service, September 1, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g.
[288] Ibid.
[289] "Carlsbad Caverns New Mexico," Santa Fe Railway, July, 1928, Center for Southwest Research, University Libraries, University of New Mexico, http://econtent.unm.edu/cdm/compoundobject/collection/Manuscripts/id/2982/rec/2, 43-45.

of visitation only three years prior, showing the constant state of improvement. The rapid development of the caves meant, "the difficulties of descent that so long guarded the treasures of the caverns have been eliminated by the building of broad railed stairways. Easy, springy footpaths follow the old guiding strings. Flood lighting and powerful lanterns have replaced miners' lamps, torches and candles."[290] The brochure described the Lunch Room as "a cavern room fitted with electric light, running water, benches and tables."[291] By focusing on the rapid pace of modification, this travel brochure asserted Carlsbad Caverns as a part of, rather than an opposition to, the rapid pace of development in America.

The images in the brochure also portrayed the cave as a modern space, as the images depicted not rugged looking individuals in the act of exploring a primitive environment, but rather fashionably dressed women and men leisurely enjoying the scenery **(Fig. 1; Fig. 2).** The style of dress and the mood of relaxation helped convey the impression the cavern trip did not require effort beyond the capabilities of modern Americans, but instead represented a leisurely journey. Textual descriptions support this assertion: "Progress through the caverns is unhurried. Frequent halts are made on all ascents and descents and at many points of exceptional interest. For the rest of the journey is in the nature of a leisurely stroll, prolonged by the unfolding wonders of another world."[292] The emphasis on leisure in the Santa Fe brochure shows the embrace of modernity; the cave trip did not need to depart from the modern world, or retreat from

---

[290] Ibid., 14, 17; "Indian-detours: The Most Distinctive Motor Cruise Service in the World," Santa Fe/ Harvey Cars, 1930, 5-7, http://econtent.unm.edu/cdm4/document.php?CISOROOT=/ Manuscripts&CISOPTR= 3181&REC=1.
[291] "Carlsbad Caverns New Mexico," Santa Fe Railway, July, 1928, Center for Southwest Research, University Libraries, University of New Mexico, http://econtent.unm.edu/cdm/compoundobject/ collection/Manuscripts/id/2982/rec/2, 34.
[292] Ibid., 18.

it into nature, but rather showed the tourists of the 1920s desired the integration of nature into their modern lives.

In 1929, the visitation of illustrator Charles H. Owens and columnist Harry Carr of the *Los Angeles Times*, brought additional publicity, which according to Boles represented the greatest visibility since Lee's *National Geographic* articles. The two men visited in May of 1929 and spent several days sketching and viewing the caves with a special guide, rather than by guided tour. Although the rangers generally utilized the lighting system only in the section where the group walked, Boles placed the entire system at the disposal of the two important newspapermen.[293] Carr's article discussed the immensity of the caves, stating, "you could poke in the new Los Angeles City Hall, 452 feet high, and still not touch the roof," and through this comparison, made the cave features similar to city features familiar to his readers.[294] Besides the vastness of the cavern rooms, Carr also pointed out the Lunch Room and the lighting system. He described the cavern as "beautifully and skillfully lighted by an electric light system that cost the Government $25,000. The light effects add ineffably to the charm of the wonderment."[295] By mentioning the cost of the system, Carr emphasized the effort the National Park Service put into making the caves accessible and comfortable. While clearly praising the added beauty the lights brought to the cave, he also pointed out they

---

[293] Thomas Boles to Director, National Park Service, June 11, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 5.
[294] Harry Carr, "Underground Trails of Matchless Grandeur made when Dinosaurs Romped Overhead: Inspiration, Thrills, and Cafeteria Lunch in Seven-Mile Cavern Hike Through Super-Fairyland of Palaces, Cathedrals and Monoliths," *The Christian Science Monitor*, September 14, 1929 (Copyright 1929, *The Los Angeles Times*), 7; Charles Owens provided a large tinted drawing to the publisher of the *Los Angeles Times*, who also was very impressed by the caves, and kept the drawing in a prominent place in his office for years, "Albright Lauds Boles for Work at Caverns," *Carlsbad Current-Argus*, N.D., Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23c, Folder 3L-3P, June 5, 1934.
[295] Ibid.

helped erase fear of the enclosed, dark space, as there "is no plowing around in the dark by flickering torches that you are afraid will snuff out every minute."[296] Similarly, he assured readers of the ease of the cavern trip, describing it as "pleasant for those without an athletic record. The pace is set for one mile per hour with the frequent rests." For any readers who doubted the ease of the journey, Carr provided a shocking fact: "On the day I went through, one visitor walked on crutches. The week previous, a legless man had propelled himself through without fatigue."[297]

Carr's article not only reached 500,000 *Los Angeles Times* readers, but was also syndicated and reprinted in the *San Francisco Chronicle*, *Detroit News*, *Christian Science Monitor*, and *Oklahoma News*, for a total circulation of 1,185,513.[298] Estimating approximately 4.5 individuals read each circulated paper, Boles rejoiced that the article had reached over four million people.[299] By December, Boles noticed an increase in "long distance" travel, and attributed the rise to Owens and Carr's publicity contribution.[300] Not only did Carr's article help bring recognition to Carlsbad Cave, but with the help of Boles's special treatment of the gentlemen, the article portrayed the caves as accessible and constantly developing along modern lines.

The greatest boon to Carlsbad Cave's nationwide publicity came in 1930 when a man by the name of Frank Ernest Nicholson contacted the National Park Service, requesting to explore portions of the cave, broadcast his findings, and report daily to the *New York Times*. While Boles and the Department of the Interior felt no need for

---

[296] Ibid.
[297] Ibid.
[298] Thomas Boles to Director, National Park Service, November 4, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h.
[299] Ibid.
[300] Thomas Boles to Director, National Park Service, December 8, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h.

additional exploration, as the work of opening the explored portions safely to the public took priority, Boles granted Nicholson permission to "enter the Carlsbad Cavern, and broadcast from the unexplored portion thereof for a period of one week." While Boles valued the publicity potential of allowing Nicholson access, he noted, "Carlsbad Cave is well past the 'exploration' stage, and is today the most completely surveyed cavern in the world."[301] Boles stipulated Nicholson would be required to adhere to the rules and regulations of the Department of the Interior, be accompanied by a representative of the National Park Service at all times, and broadcast only on matters concerning the cavern, without including "advertising matter of any kind."[302] While Boles felt the need to institute strict regulations upon Nicholson, he could not deny the significance of the publicity a series in the *New York Times* would bring to the caves. This opportunity, he hoped, would help combat the inconsistent East Coast publicity by featuring Carlsbad daily.

Unfortunately for Boles, publications quickly revealed the differing intentions between Nicholson and the Park Service. The first *New York Times* reference to the expedition described Nicholson's provisions for the trip as quite inconsistent with the expectations Boles set for his visit. The article reported Nicholson and his exploration party would be "equipped to reach parts of the cavern which so far have been unexplored and with provisions for a three weeks' continuous journey."[303] Whereas Boles prepared

---

[301] Thomas Boles to Director, National Park Service, February 5, 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h.
[302] Thomas Boles to Frank Ernest Nicholson, November 30, 1929, Carlsbad Caverns National Park Administrative Records, Series III: Correspondence, 1929-2004, Folder 1: Correspondence, 1929-1989; Thomas Boles to Director, National Park Service, December 8, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 6.
[303] "Will Explore Cave 60,000,000 Years Old," *New York Times*, January 5, 1930, 4; Thomas Boles to Director, National Park Service, December 8, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 6.

for Nicholson's broadcast by planning to connect the telephone line already installed inside the cavern to the line at the surface and then to a regular station in Fort Worth or El Paso, Nicholson planned to carry in radio and telephone equipment to send out his daily reports. This article also mentioned in an ominous tone, Nicholson's party would travel without guns, because they feared the vibrations would damage the cavern formations, but they would rely on a police dog named Jerry for protection while inside the cave. The article did not note from what, exactly, Nicholson felt he needed protection.[304]

In contrast, the first mention of the Nicholson expedition in the *Carlsbad Daily Current-Argus* focused on the visit's publicity potential. The article quoted Nicholson, saying over a telegram, "Everything points to expedition publicizing Carlsbad on more colossal scale than I at first anticipated."[305] The local paper's focus on publicity potential, rather than exploration, furthered the division between the local focus and the beliefs of the East Coast media.

Despite the assertions by the *New York Times*, Nicholson's trip to Carlsbad Cave never held any scientific promise. Nicholson arrived with fourteen crewmembers, which Boles deemed excessive and potentially troublesome. After Boles reduced the party to four, the group, accompanied by either Boles or a ranger the entire time, took several trips into the cavern. When Boles brought the group to a room, not yet open to the public, Nicholson and his group spent "several hours searching out the remote sections of this room… Since then they spent considerable time searching around small tunnels, and

---

[304] Ibid.
[305] "Cavern Exploration Party to Leave New York Jan." *Daily Current-Argus*, January 13, 1930, Carlsbad Caverns National Park Administrative Records, Historic Newspaper Article and General Information.

have in fact found considerable new places."[306] However, these rooms had not yet been entered, not due to lack of exploratory capability, but rather because the Park Service focused more on making the cavern accessible to the public than on searching small, out-of-the way passages at the far end of unopened rooms. The passages Nicholson "discovered" were "so remote and difficult of access that it will be years before they could be reached and developed along the modern lines used in the tourist portion of the cavern." Although Nicholson entered passages theretofore unexplored, "they carried neither compass, aneroid, or tapeline," further indicating the expedition never had potential for true scientific discoveries.[307]

Despite the lack of scientific potential and the precautions the National Park Service undertook to ensure Nicholson's safety and compliance, his exploits appeared in print as daring undertakings, necessary to the future of the National Monument, where danger constantly threatened his life. An article describing Nicholson's preparations for the voyage noted Nicholson hoped to find an underground river, and for that purpose, brought collapsible boats. The article also described an intended experiment involving a Goodyear racing balloon, which would be used to survey the ceiling of the Big Room. To guard against becoming lost, the *New York Times* article noted, Nicholson intended to lay telephone line as guide string, as well as bring carrier pigeons in case of emergency. Continuing the pretense the crew would spend up to three weeks in the cave, Nicholson reported packing "food producing the greatest amount of energy for the least weight," including "cheese, chocolate, smoked meats, hardtack and hard crackers, canned milk

[306] Thomas Boles to Director, National Park Service, March 10, 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 5.
[307] Thomas Boles to Director, National Park Service, April 12, 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 7.

and coffee."[308] Surely these preparations would have looked ridiculous to Boles and other members of the Park Service who knew they would be rigidly controlling Nicholson's movements within the cave, and especially in light of the extensive meals available at the Lunch Room within the cave.

Once the "explorations" began on February 27, 1930, the reports remained exaggerated. In order to create a suspenseful publication, Nicholson reported constant danger and close-calls from within the cavern. In describing one ledge in the cave, he wrote, "a slip or a misstep would mean death on the jagged rocks in the blackness beneath."[309] He described the same danger again in another spot regarding an ascent to a raised chamber: "The ascent was a slow, nerve-racking climb up a 90-foot grade covered with loose crumbling formations, where a misstep meant falling into a yawning black pit filled with jagged stone."[310] Boles referred to these "hairbreadth escapes" as occurring only in Nicholson's imagination.[311]

Despite Boles's significant precautions against a member of Nicholson's party becoming lost, anticipating "'Getting Lost' is always a big stunt for a sensationalist," Nicholson took literary license in creating a story about losing his way.[312] In Nicholson's March 13 report, he described his escapades in searching through a tunnel "no larger than the head of a barrel." Of course, in his story, he conveniently forgot to lay string to signal the way back, and became lost. Dramatically, the bulb of his flashlight burnt out at the same time, and despite having an extra bulb on hand, he was so overcome with "sheer

---

[308] "Explorers Start to Carlsbad Caves," *New York Times*, February 9, 1930, 8.
[309] Frank Ernest Nicholson, "Boulders Crumble under Foot in Cave," *New York Times*, March 8, 1930, 24.
[310] Frank Ernest Nicholson, "Find Oldest Recess of Carlsbad Cave," *New York Times*, March 13, 1930, 24.
[311] Thomas Boles to Director, National Park Service, April 12, 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 7.
[312] Thomas Boles to Director, National Park Service, April 12, 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 6.

fright," that he found difficulty in replacing it. Resolving his adventure, he described how his "blind luck" allowed him to stumble around in the darkness until he found the correct passageway.[313]

The very next day, Nicholson fabricated another dangerous encounter for his audience, a tale Superintendent Boles refuted in his monthly Superintendent's Report. This time, accompanied by Ranger Cal Miller, Nicholson described climbing through a three-foot opening towards an unexplored chamber, before removing a "medium-size stone" from his route, which caused a larger rock to shift into the opening of the tunnel "entombing" himself and the ranger. After the "tedious process" of digging away the rocks surrounding the stone, Nicholson wrote, the two re-obtained their freedom.[314]

Nicholson's reports make immediately clear the reasons Thomas Boles felt ambivalent toward the expedition. Within a few days of Nicholson's arrival, Boles attempted to exercise control of the visual image of the caves Nicholson disseminated. After viewing negatives of the poor-quality images Nicholson's party took within the caves, Boles felt "very much disappointed in them." He ordered Nicholson to cease photography within the caves immediately, due to his "defective equipment or incompetent operators, or both," which, Boles believed not only failed to accurately portray the beauty of the caves, but also failed to live up to the standards the National Park Service hoped to exude regarding photographic work. As Boles stated, the National Park Service found it important the "cavern views be presented in a first class manner." Furthermore, he claimed the excessive smoke Nicholson created through "experimental"

---

[313] Frank Ernest Nicholson, "Nicholson Loses Himself in Cavern," *New York Times*, March 13, 1930, 25.
[314] Frank Ernest Nicholson, "Nicholson, In Trap, Finds Cave of Gems," *New York Times*, March 14, 1930, 10; Thomas Boles to Director, National Park Service, April 12, 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 6.

flash work potentially harmed the caverns. Boles feared the incompetence of Nicholson's photography would make the caverns appear less than up-to-date regarding photographic technology, and he and the rest of the Park Service desired them to appear modern in every possible way.[315]

After Nicholson left Carlsbad, Boles further expressed his discontent with the course of events. When Boles ordered reduction of the exploration party, the members of the crew excluded from entry to the caves became discontent with the situation and therefore "spared no effort to discredit Nicholson." Boles also noted, although Nicholson operated under commission from the *New York Times*, none of the his earnings reached him during his expedition at Carlsbad, leaving him in "financial embarrassment" during the time he was there.[316]

Despite Boles's annoyance with Nicholson, he recognized the effect the series in the *New York Times* had for publicity of the caves. Between the *New York Times*, and the estimated fifty-five other newspapers across the country to which the *Times* relayed the stories, Boles projected up to twenty million people read the daily accounts. He referred to the publicity as "especially valuable," since many people who read the stories "knew little if any thing" of the existence of Carlsbad Cave. He especially stressed readers from the North and East likely had never heard of the caves before the story, and those who visited after reading the stories "would NOT be disappointed." Although Thomas Boles referred to the inaccuracies in Nicholson's stories as "elaborate and unreal, especially to the local community," he valued the detailed descriptions of the cavern's visual

---

[315] Thomas Boles to Frank Ernest Nicholson, March 3, 1930, Carlsbad Caverns National Park Administrative Records, Series III, Folder 1: Correspondence.
[316] Thomas Boles to Director, National Park Service, April 12, 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 6.

spectacles.[317] Attempting to express his ambivalence toward the expedition, he explained to the Director of the National Park Service,

> The Superintendent appreciates the friendship that the *New York Times* has always shown toward the National Park Service and its officers, and for that reason the latitude allowed Nicholson was a courtesy to the *Times*, rather than to Nicholson; but I believe it best that from now on, our explorations be conducted by our own forces, with the possible inclusion of credited representatives of say the National Geographic Society, whose early explorations brought the Carlsbad Cavern its first world wide publicity.[318]

Within three months, Boles noticed many visitors in attendance heard of the caves first through the Nicholson articles, showing the significant impact of the publicity.[319] Later, Boles even defended Nicholson when Carl Livingston wrote two articles in *New Mexico Magazine* deriding Nicholson's expedition. Boles remarked he saw "nothing in either of these [Livingston's] articles that would encourage travel to Carlsbad National Park or to the State of New Mexico, and it seems unfortunate that our state magazine should print articles whose only purpose is to ridicule writers who were able to bring the Carlsbad Cavern to the notice of hundreds of thousands of people throughout the world."[320]

Despite Boles's acceptance of the articles for their publicity value, he remained unhappy with the thoroughly un-modern character they ascribed to the caves. *Time Magazine,* one of the many news sources publishing coverage of Nicholson's exploits, stands as an example of how Boles challenged the image and attempted to convince the press of the modernity of Carlsbad Cave. The article in *Time* described the caverns as "big, black Carlsbad Cave" and claimed many rooms were "reachable only by rope and

---

[317] Thomas Boles to Director, National Park Service, April 12, 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 6-7.
[318] Ibid., 7.
[319] Thomas Boles to Director, National Park Service, July 12, 1930, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 5.
[320] Thomas Boles to Arno B. Cammerer, May 21, 1934, National Archives, College Park Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 854, File 5-1-02.

boldness."[321] Boles actively sought to combat the impression of Carlsbad Cave as undeveloped, dangerous, or in any way not modern, by writing a letter to Henry Luce, the editor of *Time Magazine*. Boles expressed his concern the article would give readers "a wrong impression about the Carlsbad Cave; and the fact that a small exploration has been authorized in a remote portion of the cavern." This, he feared, would lead Americans to view Carlsbad Cave as "practically unknown and undeveloped." He proceeded to outline the geological surveys, congressional recognition and appropriations, as well as visitation totals, hoping to impress Luce with the total of "nearly 80,000" visitors in 1929, and the anticipated visitation total of over 100,000 in 1930. Boles attributed the high visitation totals to "the fact well known in the southwest that the cave is highly developed, and elaborated [sic] lighted by hundreds of artistically placed floodlights, and an excellent highway reaching within two-hundred feet of the cave entrance." Dramatically, Boles asked Luce to "bring to the attention of [his] hundreds of thousands of readers that the Carlsbad Cavern is now ready for them."[322] Boles's insistence on asserting the modernity and scale of development shows he remained discontent with Americans knowing only of the natural wonders of Carlsbad Cave, but wanted them also to recognize it as a modern tourist entity capable of accommodating urban Americans.

Although the accounts of Nicholson's supposed misadventures in the cave mostly showcased their undeveloped aspects, and Boles felt the articles had not done justice to the modern developments of the caves, Nicholson, in fact, made many references to the potential developments and used language that potentially helped American readers imagine Carlsbad Cave as part of the modern world. Describing Nicholson's

---

[321] "Diggers," *Time* 15, Iss. 4 (January 27, 1930): 72.
[322] Thomas Boles to Henry Luce, December 29, 1930, National Archives, College Park Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 213, File 501, Part 1: Carlsbad Publicity.

preparations, a *New York Times* article mentioned the electric lighting, noting, although many portions of the cave were lighted with such, most of Nicholson's exploration would be done by electric flashlights and lamps.[323] In Nicholson's very first article, he described one section of the cave as impassable, but contrasted it with the "smooth, well-lighted trails which Superintendent Boles has constructed in the explored area."[324] While Nicholson did not place the bulk of his focus on the developments, by any means, as Boles may have wished, readers interested in Nicholson's adventures would surely know more heavily developed portions of the cave existed than those around which the stories revolved.

Nicholson also helped espouse the view of the caverns as constantly developing, though mostly focusing on what he considered his own contributions to their developments. After "discovering" a steep, downward tunnel, Nicholson noted it could potentially serve as a route between two rooms presently open to visitors. He even credited Boles with actively and efficiently directing development, stating if the opening proved to connect the two rooms, "Superintendent Boles plans to order construction of stairs and a trail so that in later days visitors may traverse this area."[325] More ambitiously, Nicholson also suggested if he discovered a second entrance to the cavern, the Park Service might consider building a hotel within the cavern: "They [visitors] could come in the old entrance and stay overnight at a hotel built in the great inner chamber, for that would make a marvelous hotel site. Then they could go out the other entrance the next day."[326] While National Park Service never actually considered this, Nicholson's

[323] "Explorers Start to Carlsbad Caves," *New York Times*, February 9, 1930, 3.
[324] Frank Ernest Nicholson, "Finds Fairy Grotto in Carlsbad Cave," *New York Times*, February 27, 1930, 3.
[325] Frank Ernest Nicholson, "Cavern Explorers See Bat Festoons," *New York Times*, March 2, 1930, 2.
[326] "Explorers Start to Carlsbad Caves," *New York Times*, February 9, 1930, 3.

printed suggestion of it had a significant impact in framing Carlsbad Cave as a modern site. Rather than suggesting a campsite, which would have connoted rustic, makeshift lodging, he chose to suggest a hotel. The suggestion of a modern lodging facility within the cave helped create an association with modernity.

In addition to making suggestions for future developments, Nicholson also used metaphorical language and references signifying Carlsbad Cave as a place appropriate for modern, and even technological, development. Nicholson described natural features of the cave in technological terms, again forging the association with modern life, rather than nature and primitiveness. Like Harry Carr's *Los Angeles Times* article, Nicholson's articles described the enormity of the chambers in Carlsbad Cave in terms of modern buildings, in this case, New York skyscrapers.[327] Much like Willis T. Lee, Nicholson also described the bats in terms of their similarities with modern, technological entities. Nicholson described disrupting the bats during hibernation, stating they first emitted a "squeaking noise" resembling the sound "produced by filing a steel saw." As the bats awoke and began to swoop towards the party, he described the sound as "a deep hum that grew until it resembled the motors of an airplane."[328] By comparing the bats to features of the technological world, Nicholson forged associations making Carlsbad Cave seem more welcoming to technology.

Beyond describing features as resembling technological phenomena, Nicholson also helped naturalize the tourist technologies used in the caverns through language suggesting nature anticipated and intended the developments. Nicholson utilized this

---

[327] "Will Explore Cave 60,000,000 Years Old," *New York Times*, January 5, 1930, 4; "Explorers Start to Carlsbad Caves," *New York Times*, February 9, 1930, 3.

[328] Frank Ernest Nicholson, "Cavern Explorers See Bat Festoons," *New York Times*, March 2, 1930, 2; This story certainly was one of his fabricated tales, since the bats at Carlsbad Caverns migrate, rather than hibernate.

naturalizing language in regards to the electric lighting and the elevator the National Park Service installed the following year (to be discussed further in Chapter 5). In regards to the floodlighting, Nicholson described a short, straight row of stalagmites as "footlights," which "Nature" provided in one room strongly resembling a theater.[329] Even more forcefully, Nicholson described the colors of the cavern features: "While nature has created these magnificent examples of her handiwork in absolute darkness, she tinted them with a variety of delicate colors in preparation for the eventual invasion of man and his artificial light."[330] Nicholson's descriptive language here had a significant impact; he suggested Nature, in creating the caves, left her work unfinished, and man—the National Park Service in particular—accomplished only what Nature intended by installing electric lighting, and thereby illuminating and displaying the colors.

Similarly, Nicholson described the installation of the passenger elevator into the cavern, a project already underway at the time of his visit, as intended by Nature. One location about which Nicholson wrote reminded him of a "huge elevator shaftway in a skyscraper."[331] In making this comparison, Nicholson framed the caverns as a place where an elevator shaft fit naturally. Further cementing the association, he wrote in a later article about another natural shaft he discovered, which lay directly underneath the proposed location of the elevator. He suggested building the elevator's shaft directly into nature's shaft, implying Nature intended this use. He proposed, "Assuming the correctness of their calculations, the engineers will have only to dig through the ceiling of our mystery room, then the floor of the room we see below, allowing the elevator to pass through the natural shaftway and making it possible for the car to stop at three distinct

[329] Frank Ernest Nicholson, "Find Circular Path in Carlsbad Cave," *New York Times*, March 7, 1930, 7.
[330] Frank Ernest Nicholson, "Asbestos Believed Found in Cavern," *New York Times*, March 9, 1930, 18.
[331] Frank Ernest Nicholson, "Land of Palaces in Cavern Depth," *New York Times*, March 6, 1930, 14.

floor levels, instead of cutting through 750 feet of solid rock as they had anticipated."[332] By suggesting Nature intended a 750-foot elevator to be built into an underground cave and providing the geological evidence to back up this claim, Nicholson helped solidify the association between nature and technology at Carlsbad Cave for the millions of potential readers of his articles. Although Boles did not necessarily realize its impact, this association helped influence Americans to view Carlsbad Cave National Monument as a modern space, to be valued for its man-made features, as well as its natural features.

Just three months after Nicholson's articles brought significant publicity to Carlsbad Cave, Congress passed H. R. 9895, upgrading Carlsbad Cave from a National Monument to a National Park. The public interest in Carlsbad, magnified by the publicity Nicholson helped spread across the country, played a significant role in the passage of this act. Along with this change, which conveyed greater national status and recognition, Congress also conferred a new name to the newly admitted park: Carlsbad Caverns. This name change additionally helped convey the modernity of the site, as the word "cave" signified primitiveness, with its associations with cavemen or cave-dwellers, while "cavern" helped communicate the vastness and magnitude of the new park.[333]

The following year, Boles secured a definitive piece of publicity to help solidify the caverns' identity as thoroughly modern. After the Executive Vice-President of Coca Cola, Harrison Jones, visited Carlsbad Caverns, and Boles treated him to "every possible courtesy," the company featured Carlsbad Caverns in a color advertisement.[334] The

---

[332] Frank Ernest Nicholson, "Find Oldest Recess of Carlsbad Cave," *New York Times*, March 12, 1930, 24.
[333] Frederick Earle MacVaugh, "Preserving the Underground: The Creation of Carlsbad Caverns National Park, 1922-1930" (M.A. Thesis, University of Texas at El Paso, 2000), 197-205.
[334] Thomas Boles to Horace Albright, June 30, 1931, National Archives, College Park Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 213, File 501, Part 1: Carlsbad Publicity; Coca-Cola first became available for purchase in 1888 in drug stores, where pharmacists mixed Coca-Cola syrup with carbonated water by the glass; By 1895, every state and territory in the United States had

advertisement depicted fashionably-dressed tourists leisurely enjoying their bottled beverages 750 feet underground, along with a caption that read, "Ready Ice-Cold 750 Feet Underground, Yet nobody is surprised" **(Fig. 3)**. Like the Santa Fe Railway's 1928 brochure depicting an atmosphere of relaxation, the advertisement depicted both males and females in the act of socializing or relaxing in the modern lunchroom, rather than engaging in any strenuous exercise in pursuit of scenic views. This advertisement helped connect Carlsbad Caverns to the modern world of leisure, as Boles and the Park Service often attempted. Like other examples of publicity surrounding the caverns, this advertisement had a significantly more extensive reach than the National Park Service could accomplish on its own; Harrison Jones estimated, between printings in *Liberty*, *Saturday Evening Post*, *Colliers*, and *Ladies Home Journal*, the advertisement reached approximately 10,197,000 people.[335] Boles estimated this advertisement cost the Coca Cola Company approximately $50,000, or roughly the equivalent of half the total congressional appropriation to Carlsbad Cave the previous year.[336] In explaining the reason why the Coca Cola Company featured Carlsbad in this advertisement, Executive Vice-President Jones wrote, "This is but a slight token of my appreciation of the miracle of the Cavern itself, and the universal hospitality with which I was greeted on all

---

retailers for Coca-Cola; Retailers first began bottling Coca-Cola in 1894, and within the next several years, independent bottlers developed independent operations, separate from the Coca-Cola corporate company, which sold the concentrate; Constance L. Hays, *The Real Thing: Truth and Power at the Coca-Cola Company* (New York: Random House, Inc., 2004), 12, 13, 15, 24; By the 1920s, Coca-Cola instituted a massive advertising campaign focused on selling the product to motorists, capitalizing on the country's new interest in automobile technology; this campaign included images on signboards along roads and even on the sides of barns; Ibid., 86.

[335] Harrison Jones to Thomas Boles, 24 June, 1931, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 213, File 501, Part 1: Carlsbad Publicity.

[336] Thomas Boles to Horace Albright, 30 June, 1931, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 213, File 501, Part 1: Carlsbad Publicity.

sides."[337] Jones's appreciation of his treatment at Carlsbad shows the extensive effort Boles committed to impressing any potential ally of Carlsbad Caverns. It also shows the success of Boles in disseminating a modern image of the caves, as not only did the advertisement depict the caves as a visually modern space, but the association with Coca Cola as a company helped further this image as well.

Although the National Park Service had no budget for advertising, Boles utilized connections and special treatment of influential individuals to help disseminate his intended vision of Carlsbad Cave. For years, Boles struggled to reach East Coast media with his modern image of Carlsbad and to convince East Coast tourists the caves offered safe and welcoming accommodations. The struggle to convince potential visitors shows American tourists valued modernity in the natural sites they chose to visit and did not always seek rustic, authentic experiences. Frank Ernest Nicholson's expedition to the caves, while greatly exaggerated in print, helped bring widespread publicity to the caves. While Boles felt the articles obscured the developed character of the caves, Nicholson's writings utilized language making the caves seem welcoming and ready for technology, modernity, and advancements, which helped future visitors view the caves in these terms. Shortly after Congress re-designated Carlsbad Cave National Monument as Carlsbad Caverns National Park, the National Park Service undertook a huge construction project, further solidifying the image of Carlsbad Caverns as a modern, technological space—the installation of a 750-foot elevator.

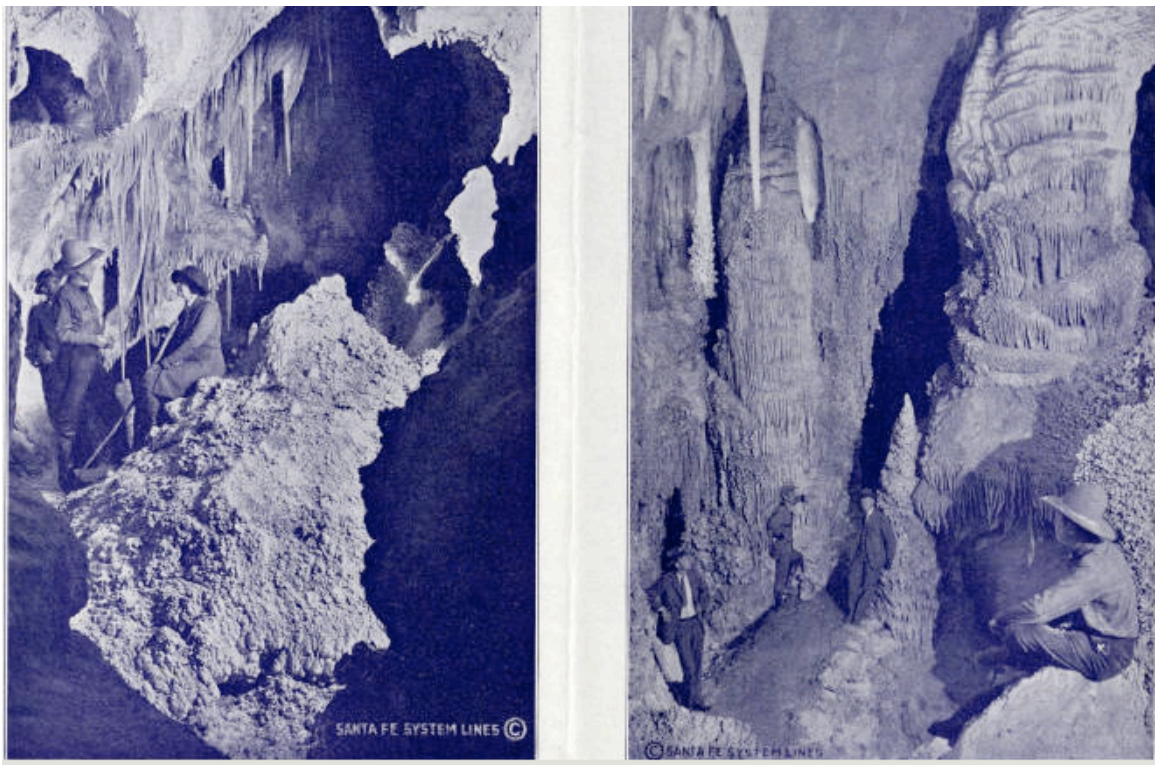
---

[337] Harrison Jones to Thomas Boles, 24 June, 1931, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 213, File 501, Part 1: Carlsbad Publicity.

Figure 1

"Carlsbad Caverns New Mexico," Santa Fe Railway, July, 1928, Center for Southwest Research, University Libraries, University of New Mexico, http://elibrary.unm.edu/cswr/, 57-58.

Figure 2



"Carlsbad Caverns New Mexico," Santa Fe Railway, July, 1928, Center for Southwest Research, University Libraries, University of New Mexico, http://elibrary.unm.edu/cswr/, 23-24.

Figure 3

"The Pause That Refreshes," *Boys Life* (October 1931).

CHAPTER 5
"A FAST RIDE INTO THE DEPTHS OF THE EARTH": INTEGRATING LARGE-SCALE TECHNOLOGY INTO A NATIONAL PARK

The installation of a 750-foot passenger elevator into Carlsbad Caverns in 1931 firmly solidified the identity of the new national park as technologically advanced and thoroughly integrated into the modern world. This elevator lift, second in height at the time of its construction only to the Empire State Building's passenger elevator, aroused interest and enthusiasm from across the country. This grand undertaking extinguished any doubt of Carlsbad Caverns' accessibility and sufficient development for city-dwelling visitors. The installation of the elevator also spurred enthusiastic reactions from the press and from tourists, and the character of their responses demonstrated acceptance of the technological introduction, not merely for the sake of convenience, but also as an added feature to the excitement of the caves.

Elevators, while not newly invented by the time Carlsbad Caverns acquired one, held significant capital as examples of impressive, large-scale technology. Mechanical freight elevators first emerged in textile mills in England in the early nineteenth century, and Americans adapted similar construction possibly around the 1840s.[338] Elisha Otis, who worked as a gristmill operator and master mechanic, began designing and manufacturing freight hoists in the 1850s, introducing an additional safety feature in 1854, a new type of safety break, which helped avoid accidents if the hoist rope broke or if the elevator were removed from its power source. Otis also introduced additional

[338] Lee E. Gray, *From Ascending Rooms to Express Elevators: A History of the Passenger Elevator in the Nineteenth Century* (Mobile, AL: Elevator World, Inc., 2002), 3- 8; Gray notes the precise date of this type of hoist in the United States remains unknown, but that it is "reasonable to assume" this type of freight elevator was used by the 1840s; See Gray for a detailed description of developments in the mechanical components and power sources for freight and passenger elevators over the nineteenth century.

safety features when applying for a patent in 1855. After the death of Elisha Otis, his two sons Norton and Charles took over the business and continued his efforts to improve the safety of the freight elevator.[339] The passenger elevator developed soon after the improvement of the freight elevator, but according to Architectural Historian Lee E. Gray, the first example of a passenger elevator is unknown. Descriptions of examples of primitive contenders for this record date as early as the 1820s, but such descriptions appeared with more regularity in the United States by the 1840s and 1850s. According to Gray, Elisha Otis installed what is most typically acknowledged as the first passenger elevator in the Haughwout Building in New York City in 1857, followed by Otis Tufts' installation of a more significant passenger elevator in The Fifth Avenue Hotel in 1859.[340] By 1860, most new hotels in New York City and in some other locations incorporated passenger elevators, and some retail stores in New York likewise began to install elevators in the 1860s.[341] The introduction of passenger elevators into office buildings in the 1870s led to the development of the skyscraper.[342]

According to Adrienne R. Brown, the skyscraper not only took on commercial and practical significance with its introduction into American cities, but from 1890 to 1930 also took on symbolic significance as a representation of modernity and technological prowess in American life.[343] Brown also claimed American authors utilized skyscrapers in fiction as a comparison with the mythic Western frontier.[344] Edward W. Wolner similarly tied the popularity of skyscrapers in the 1920s to frontier

---

[339] Ibid., 14-19.
[340] Ibid., 21-41.
[341] Ibid., 62.
[342] Ibid., 66.
[343] Adrienne R. Brown, "Between the Mythic and the Monstrous: The Early Skyscraper's Weird Frontier," *Journal of Modern Literature* 35, No. 1 Re-assessing, Breaking, Transcending Genres (Fall, 2011): 166.
[344] Ibid., 167-168.

ideology, arguing the developers of four major skyscrapers in the Midwest possessed the values of frontier-type self-made men within urbanizing, increasingly technological America.[345] Even grain elevators, as non-passenger carrying elevators, gained cultural capital in the early twentieth century in North America as "visual example[s] of the Modern Movement," especially as concrete grain elevators became popular in the 1930s.[346]

By 1929 nearly 5,000 buildings with ten or more stories existed in the United States, nearly half in New York City. Chicago, Los Angeles, Detroit, Philadelphia, and Boston followed New York, and each of these cities possessed over one hundred buildings with over ten stories. Only ten buildings in the United States reached over five hundred feet by 1929. As Joseph J. Korom, Jr. explained, the tallest of these buildings became objects of American admiration and pride.[347] The Woolworth Building in New York City, built in 1913, held the record as the world's tallest skyscraper for seventeen years, spanning 55 floors, and reaching 792 feet into the sky.[348] In 1930, the Bank of Manhattan Building briefly held the title of the world's tallest building, at 927 feet, until the Chrysler Building surpassed it with a span of seventy-seven stories, or 1,046 feet, holding the title until the construction of the Empire State Building.[349]

With the significance of elevators and skyscrapers in American culture in the early twentieth century, the push for, and eventual existence of a 750-foot elevator in a

---

[345] Edward W. Wolner, "The City-within-a-City and Skyscraper Patronage in the 1920's," *Journal of Architectural Education* 42, No. 2 (Winter, 1989), 10.
[346] George O. Carney, "Grain Elevators in the United States and Canada: Functional or Symbolic?" *Material Culture* 27, No. 1 (Spring, 1995): 17-18.
[347] Joseph J. Korom, Jr., *The American Skyscraper, 1850-1940: A Celebration of Height* (Boston: Branden Books, 2008), 324.
[348] Ibid., 299- 305.
[349] Ibid., 401, 413-416.

cave, competitive with the heights of the world's tallest buildings of the time, drew interest to Carlsbad Caverns and became a notable element of the cavern environment.

Since his arrival at Carlsbad, Superintendent Thomas Boles fervently attempted to convince Americans of the easy accessibility and modern identity of the caves; however, he did not spearhead the attempt to obtain the elevator, and in fact demonstrated early resistance. He initially believed the elevator unnecessary and frequently asserted his belief tourists could easily access the caves without mechanical assistance. Much of the desire and agitation came from visitors, who felt the hike in and especially out of the caves required too much physical effort. The public demand for an elevator initially represented the desire of tourists to see the features of the caves without excessive effort, but their reactions to the installation went beyond this practical need. The media attention and positive reactions to the elevator, as an independently marvelous attraction, show American cultural acceptance of the integration of nature and technology.

Visitors began requesting mechanical assistance for their climb out of the caves as early as 1926, despite the efforts of the Park Service to make the trails safe and easily passable. The *Carlsbad Current-Argus* reported, due to visitor demand, the Carlsbad Chamber of Commerce began looking into manufacturers for escalators, to aid with the final ascent out of the cave. The article noted numerous complaints from visitors unaccustomed to "hard walking and hiking." While noting the demand, the local newspaper remained somewhat derisive towards the idea of an escalator, referring to it as "Lazy Man's Stairs."[350]

The following year, another New Mexico publication, the *Santa Fe New Mexican* commented upon the growing demand as well. The article noted, "the need is

[350] "Lazy Man's Stairs Wanted for Cavern," *Carlsbad Current-Argus*, January 25, 1926, n.p.

immediately evident of an escalator or inclined cableway from the entrance to the foot of the Bat Cave, a straight shoot of hundreds of feet." Many tourists considered the climb of 600 steps, after completing the rest of the hike, "the straw that breaks the camel's back."[351] This publication recommended, aside from the proposed entrance elevator, numerous other "short elevators, escalators or bridges would greatly reduce the labor of seeing the cavern."[352] The idea of including multiple mechanical devices within a cave shows the readiness to integrate highly visible technological features into a natural site.

Aside from local publications, numerous private citizens also echoed this call, based on their own difficulties in the journey or their concern for others. F. R. Elliot, a friend of National Park Service Director Stephen Mather, expressed the desire for mechanical assistance in 1928. Stressing the difficulties visitors from cities (himself included) incurred due to the degree of exercise required, Elliot suggested an "incline elevator, operated on a cable, could be put in at the entrance to let tourists down and haul them up the 200 or so steps at the entrance." As a city-dwelling native of Chicago, he noted, he personally could "hardly climb up these steps."[353] While he also suggested the National Park Service build small bridges to eliminate the frequent descents and climbs along the path, which Boles put a great effort into doing, his hastiness to look towards mechanical assistance shows early visitors saw technology as entirely compatible with the caves.

The president of the Texas & Pacific Railway, Mr. J. L. L. Lancaster, agreed. Boles described him as "well advanced in years as well as in weight" and noted Lancaster

---

[351] "Cavern Improvement," *Santa Fe New Mexican*, September 20, 1927.
[352] Ibid.
[353] F. R. Elliot to Stephen Mather, July 9, 1928, National Archives, College Park Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, File 611, Part 1, Carlsbad Repairs and Improvements.

believed "some kind of elevating device should be installed."[354] Influential people such as Lancaster, who held the potential to significantly boost advertising of Carlsbad, helped shift the National Park Service toward believing large portions of the population not only desired, but also required, an elevator.

The difficulty of the cave trip manifested as inconvenience for many visitors and as real danger for some. In August 1930, Boles noted, after removing the long stairway at the cavern entrance, the rangers only had to carry three people out of the cave the previous month on account of "physical exhaustion," whereas previously, the rangers might have expected to carry out ten times as many. The significant number of individuals who found themselves physically unable to complete the cavern trip, particularly before Boles's ranger teams removed the stairs at the entrance, shows the trip concretely exceeded the physical capabilities of some who desired to see it. Furthermore, at least one person died of a heart attack while inside the cave. In August of 1929, a man from Texas died of heart failure about 1000 feet into the cavern. Boles noted, the man had previous heart trouble and "the incident cannot be attributed to the cave trip."[355] Regardless of the man's previous conditions, any visitors who witnessed this event or any potential visitors who read about it became more inclined to see the trip as dangerous and to desire assistance in any way possible.

Despite the public desire for an elevating device at the caverns, Thomas Boles resisted. Boles repeatedly asserted his belief trail revisions, reduction of unnecessary climbs and descents, and the removal of stairs would eliminate the demand for the

---

[354] Thomas Boles to Director, National Park Service, May 10, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 4.
[355] Thomas Boles to Director, National Park Service, September 10, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 6.

elevator. Boles showcased the current and proposed improvements to Congressman Cramton, hoping to convince him reasonable appropriations for trail construction would reduce the calls for an elevator.[356] He repeated these assertions in his reports to the National Park Service each time he began or completed a new trail revision.[357] He also attributed the bulk of the agitation not to discontented visitors, but to the influence of the Otis Elevator Company, whose representative visited the caves in 1928. Boles blamed this representative for exaggerating and instigating demand for the elevator, in order to win a contract.[358]

Aside from attempting to reduce demand through trail improvement, Boles also made frequent reference to the elderly, disabled, and juvenile visitors who made the trip comfortably, hoping to convince or embarrass others into accepting the image of accessibility. Boles frequently mentioned these cases in his reports to the National Park Service, as well as in newspaper coverage. In one lengthy article in the *El Paso Herald* in 1928, H. S. Hunter quoted Boles saying, "There has been talk of escalators at the entrance…but I notice that the elderly visitors make the trip with us without difficulty." The article went on to describe the oldest man and women in the crowd the previous Sunday: The oldest man was 89, and the oldest woman, a "spry little grandmotherly woman in sunbonnet and flatheeled shoes," was 82.[359]

---

[356] Thomas Boles to A. E. Demaray, November 21, 1927, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 9, Box 210, File 204-01, Part 1, Carlsbad Inspections & Investigations, Congressional Committees.
[357] Thomas Boles to Director, National Park Service, August 10, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 2.
[358] Thomas Boles to Director, National Park Service, September 1, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 6.
[359] H. S. Hunter, "Uncle Sam Spending $70,000 on Carlsbad Caverns, N. M.," *El Paso Herald*, July 28, 1928, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 213, File 501-03: Carlsbad Newspaper Articles (Press Notices).

Boles even created a bit of a competition around the age of visitors, documenting the record of the current oldest visitor. In August of 1928, he reported to the National Park Service, a Confederate Veteran from Pecos, Texas made the trip without assistance at the age of 90. This gentleman beat what Boles noted as the previously-held record, and Boles joked a 103 year old "threaten[ed]" to make the trip in the future, endangering this gentleman's record. Using these counterexamples as fuel, Boles wrote, "I think it should put shame on some of our 'soft-cushion' tourists who are now complaining because the Government does not furnish them an elevator or escalator at the Cave."[360]

A 1927 article in the *Carlsbad Argus* helped Boles prove visitors of diverse ages found little difficulty in traversing the caves by outlining the story of a four-year-old girl named Natalie Smith who undertook the cavern trip, and then shared the experience with her Kindergarten class. When the Carlsbad reporter asked Natalie if she walked the entire way, she proudly stated, "Yes, Daddy never had to carry me, at all."[361] While only the local newspaper published this report, the residents of Carlsbad must have found it foolish when out-of-town visitors demanded mechanical assistance for the trip, while a local four-year-old girl did not complain of its difficulty.

Aside from the diversity of age Boles and the local press asserted in regards to cave visitation, Boles also noted many injured or permanently disabled individuals undertook the trip successfully and enjoyed it. Boles informed the Director of the Park Service his crews made accommodations for visitors when their physical condition required it, often suggesting they start the trip into the cave an hour ahead of the rest of

---

[360] Thomas Boles to Director, National Park Service, September 1, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 6.
[361] "Little Natalie Smith Visits the Cave," *Carlsbad Argus*, September 20, 1927, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 213, File 501-03: Carlsbad Newspaper Articles.

the group. Such was the case with Mr. P. E. Montgomery, who arrived at the cavern on two crutches in 1927, but rather than accepting Boles's accommodations, he chose to make the trip with the rest of the party. Boles suggested this as evidence the elevating device would be unnecessary, stating, "That a crippled man should make this entire cave trip and enjoy it is especially interesting at this time when there seems to be a demand from lots of our visitors for an escalator and a tramway to carry them through."[362]

Stories such as these permeated the publicity about Carlsbad Caverns; in Harry Carr's *Los Angeles Times* article, he described one visitor in his party on crutches, and another "legless man" who a week prior to Carr's visit had "propelled himself through without fatigue."[363] Similarly, in the *Pacific Mutual News*, published by the Pacific Life Insurance Company, C. I. D. Moore described meeting a former colleague, F. A. Stearns, who used two crutches to pass through the cave. He made the journey with elaborate accommodations: "One of his two attendants built an ingenious toboggan on which they…skidded him down the long flights of steps, in advance of the main party." C. I. D. Moore noted, as Boles had previously, "It occurs to me that if one in his crippled condition can make the tour of the Caverns with such apparent ease, there is hope for everyone who has the desire to pay them a visit and can get about at all."[364] Despite Boles's persistent assurances of the cave trip's safety and ease of access without an elevator and the support of some media outlets regarding the same, Boles did not manage to convince his visitors of this point.

---

[362] Thomas Boles to Director, September 21, 1927, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 213, File 501-03: Carlsbad Newspaper Articles.
[363] Harry Carr, "Underground Trails of Matchless Grandeur made when Dinosaurs Romped Overhead: Inspiration, Thrills, and Cafeteria Lunch in Seven-Mile Cavern Hike Through Super-Fairyland of Palaces, Cathedrals and Monoliths," *The Christian Science Monitor*, September 14, 1929 (Copyright 1929, *The Los Angeles Times*), 7.
[364] C. I. D. Moore, "The Caverns at Carlsbad," *Pacific Mutual News* (July, 1929): 239.

Notwithstanding Boles's hesitation, the National Park Service made their serious consideration of the elevating device apparent as early as October 1927. The Park Service sent Frank A. Kittredge, Chief Engineer of the National Park Service, to Carlsbad to inspect a proposed site for the escalator at the entrance, in order to make cost estimates.[365] By July 1929, the Assistant Engineer from Kittredge's office, Alison van V. Dunn created an extensive report outlining the possibilities and costs of various elevating devices for Carlsbad. Dunn spent a period of seven weeks at Carlsbad, conducting surveys and compiling data.[366]

Dunn outlined numerous other problems, aside from the difficulty of ascent, which made a mechanical elevating device desirable. Given Carlsbad Cave's status as a relatively new National Monument in 1929 when he wrote the report, Dunn described Boles's developments in the caves as "conservative," noting with the increasing crowds, further improvements became ever more necessary.[367] Among the operational issues, Dunn listed the length of the tour, the congestion within the caves when more than one party toured, the sanitary facilities, and the popularity of midday trips due to the long distance between caves and local hotels.[368]

Dunn critiqued the use of time during the underground cavern trip. As of January 1, 1929, Dunn observed tourists spent one hour in what he described as the "preliminary trip," or the descent from the entrance to the Lunch Room, the level at which the most

---

[365] Thomas Boles to Director, National Park Service, November 7, 1927, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 2.
[366] Frank A. Kittredge to Mr. Director, July 26, 1929, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 211, File 207: Report on Engineering Activities, Carlsbad National Monument, Spring 1929.
[367] Alison van V. Dunn, Report on Engineering Activities, Carlsbad National Monument, July 26, 1929, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 211, File 207: Report on Engineering Activities, Carlsbad National Monument, Spring 1929, 2-3.
[368] Ibid., 3.

comprehensive display of stalagmites and stalactites existed. Despite the intense focus Boles placed on trail work, the trip still required visitors to descend 880 feet and climb 170 feet, due to the inclines and dips in the trails. On the reverse journey, the inclusion of a chamber called King's Palace necessitated an additional quarter mile where tourists climbed and descended another eighty feet. As Dunn noted, this required visitors, whom Dunn described as "habitual motorists with uncertain endurance" to spend approximately three hours in "relatively unprofitable travel."[369] Aside from the mechanical assistance, which most visitors desired, Dunn provided two alternative options: "Weed out the physically unfit between the entrance and lunch room and take them back by way of the King's Palace as soon as they have lunched," an unfavorable option due to "the determination on the part of the American public to see everything," or, "the removal of reverse grades by tunneling or bridging, and the construction of the most direct trails which a comfortable grade will permit between the various points of interest."[370]

While Dunn outlined suggestions for trail improvements, he acknowledged, "The most common suggestion from the touring public after climbing out of the cave is 'build an escalador [sic] or elevator to get us out." The public, as well as Governor Seligman of New Mexico, much preferred the idea of the escalator.[371] When Dunn investigated this popular mechanical option, he found, based on information from the Otis Elevator Company, an escalator could not operate on more than a thirty-degree slope, and therefore the Park Service would need to build four stages of escalator stairs to accomplish the lift of 240 feet. For the narrowest possible stair width—two feet—the

---

[369] Ibid., 3.
[370] Ibid., 4.
[371] "Elevator for the Caverns is Nearing Official Dedication," *Cavern City Chronicle,* 25 August 1931, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 215, File 611.1, Part 1.

project would total approximately $200,000, not including rails or footings. As the "most expensive option," the escalator plan would not even eliminate a significant portion of the trip, reducing only about a third of the total climb.[372]

The next option Dunn investigated involved an inclined railway, which could be built at any grade. Based again on estimates from the Otis Elevator Company, an inclined railway at the entrance would cost approximately $55,000. Again, this possibility, while significantly cheaper, would only reduce the total climb by one third.[373]

Dunn investigated the possibility of an elevator in two forms: a utility elevator or a passenger elevator. As the cheapest option, estimated at $15,500, a dumb-waiter would alleviate some sanitation and material transportation issues, but would do nothing to help tourists complete the trip. The passenger elevator, unlike the escalator or the inclined tramway, would eliminate the entire climb for tourists.[374] Dunn estimated the cost of a passenger elevator, including the shaft, at $85,000. He recommended the Park Service install a dumb-waiter as a preliminary step, anticipating a passenger elevator in the future, when funds allowed.[375] Notwithstanding the recommendations, the congressional appropriations committee moved forward with requesting funds for the passenger elevator immediately.

Despite the enthusiastic display of desire for an elevator, the process of obtaining a congressional appropriation of $85,000.00 for what, at the time of the requests, remained a national monument, proved anything but easy. Congressman Louis Cramton,

---

[372] Alison van V. Dunn, Report on Engineering Activities, Carlsbad National Monument, July 26, 1929, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 211, File 207: Report on Engineering Activities, Carlsbad National Monument, Spring 1929, 12.
[373] Ibid., 13.
[374] Ibid., 13-14.
[375] Ibid., 15.

the Chair of the Department of the Interior Appropriation Committee, and Congressman Albert G. Simms of New Mexico spearheaded the requests in Congress. Senator Andrieus A. Jones of New Mexico participated in the early agitation for the elevator, but passed away in December 1927. Prior to his death, Jones promised to help secure an appropriation of $200,000.00 for Carlsbad Cave, most of which he planned to put towards installing an elevating device. Arthur Seligman, who acted as a representative of Senator Jones until Jones's death, and took office as Governor of New Mexico in 1930, assisted Jones with this effort. For this, the administration at Carlsbad and the press credited Seligman with the early efforts to secure funding for the elevator.[376]

When Congressman Cramton proposed an $85,000 appropriation during the 1929 congressional deliberations for the 1931 appropriations, other representatives found this total excessive. Cramton focused his argument on the beauty and unique character of the caves, noting the extreme difficulty required of egress. Additionally, he emphasized the "great many people with physical disabilities" who remained excluded from cavern visitation under present conditions. Congressman William H. Stafford of Wisconsin challenged him, suggesting the elevator would predominantly serve "the ever-increasing number of visitors with increasing girths," noting the costly expenditure would serve only a limited number of "heart-affected visitors." Cramton contradicted this claim; instead it would serve "a good many people," stating even a member of the appropriations committee, Mr. Edward T. Taylor of Colorado, felt incapable of undertaking the trip, during the group's visit. Despite the ambivalence of members of the congressional deliberation, Cramton ultimately prevailed with the argument that Carlsbad's past

[376] Thomas Boles to Director, January 9, 1928, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g-j, 5.

revenues had more than paid for their appropriations, and he expected the present revenues to do the same. As a result, Congress approved the appropriation for the elevator at Carlsbad Caverns.[377]

Frank A. Kittredge directed the design of the elevator shaft, leading the Engineering Division of the National Park Service at Field Headquarters in San Francisco. Walter G. Attwell, Associate Engineer, oversaw on-site construction.[378] The National Park Service opened up bidding to contractors on November 25, 1930, and The Dunning Company, under Charles H. Dunning of Phoenix, Arizona placed the lowest bid, winning the contract.[379] Dunning hired local crews, including out-of-work miners, who proved well-suited to the task. Although many locals still found the elevator unnecessary, the use of local work crews and the potential of the new development to bring increased tourism may have helped soften them to the idea. Mr. Morrow, a representative of the Pacific Elevator Company supervised the crews on site. The crews commenced work December 29, 1930, and using six different crews, Dunning's operation drilled twenty-four hours per day.[380] The crews drilled from the top and the bottom simultaneously, and Attwell's surveys of the area proved immensely important in ensuring the two shafts lined up and the orientation of the two matched. In order to

---

[377] U.S. Congress, House, Congressman Cramton of Michigan and Congressman Stafford of Wisconsin Speaking for Carlsbad Cave National Monument, New Mexico Appropriations, 71st Congress, 2nd sess, *Congressional Record* LXXII, Part 1 (December 2, 1929-December 21, 1929), 497-498.
[378] Walter G. Attwell and Frank A. Kittredge, "Tourist Elevator and Shaft Driven through Rock 754 Feet from Top and Bottom Simultaneously, Carlsbad Caverns National Park, Carlsbad, New Mexico," March 13, 1932, Carlsbad Caverns National Park Administrative Records, Series I: History, circa 1890-2007, Subseries A: General Park History, circa 1890, 1923-2004, Box 1, Folder 9: Elevators 1923-1979.
[379] Release for December 27, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 1.
[380] Frank A. Kittredge, "Facts Concerning Elevator and Shaft," January 16, 1932, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 2; Thomas Boles to Director, National Park Service, December 8, 1931, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3i, 5.

complete the survey, Attwell and the men working under him had to lay line from the intended base of the elevator shaft through the cave, up stairs, and through the natural entrance, to locate the point directly above the lower end. The crews undertook this process three times independently to marginalize the chance of error.[381]

The drilling became difficult and costly for several reasons. Rather than solid limestone, the crews found they needed to drill through badly eroded material, with many small passageways, each only a few inches across, which caused drills to become stuck, frequently breaking the steel tools. Additionally, since water flowed through the rocks of the active cave, "dripping milk colored water" continually ran down the walls and work surfaces, proving not only bothersome, but a hindrance to accuracy.[382]

The Dunning Company lined the shaft with gunite, or a cement mixture applied with a hose using compressed air so it can be applied at any angle, and installed steel guide rails to support the elevator. The gunite served the purpose of preventing weathering and disintegration from the moisture, and also prevented displacement of falling rock fragments and fire damage.[383]

Although the Dunning Company's contract involved drilling a shaft to accommodate two elevators, the Park Service staggered the installation of the two for funding reasons. The National Park Service contracted the Pacific Elevator Company to install the first of the two elevators, with a bid of $18,429.[384] The Pacific Elevator

---

[381] Walter G. Attwell and Frank A. Kittredge, "Tourist Elevator and Shaft Driven through Rock 754 Feet from Top and Bottom Simultaneously, Carlsbad Caverns National Park, Carlsbad, New Mexico," March 13, 1932, Carlsbad Caverns National Park Administrative Records, Series I: History, circa 1890-2007, Subseries A: General Park History, circa 1890, 1923-2004, Box 1, Folder 9: Elevators 1923-1979.
[382] Ibid.
[383] Ibid.; Frank A. Kittredge, "Facts Concerning Elevator and Shaft."
[384] Walter G. Attwell and Ira Stintson, "Final Report on the Excavation of a Shaft and the Construction of a Passenger Elevator," January 25, 1932, 14, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 215, File 611-1.

Company of San Francisco installed a gearless traction passenger elevator with automatic leveling capabilities, meaning it automatically stopped at the top or bottom, without the assistance of the operator. The elevator operated at a speed of 700 feet per minute and could be controlled from the surface or from inside the cage. Additional safety features included a telephone inside the passenger car, emergency alarm gongs, and indicators showing the exact position, speed, and direction of travel. The Pacific Elevator Company completed installation on December 23, 1931.[385] The National Park Service contracted the Otis Elevator Company to install the second elevator, entering the contract on May 7, 1931. The Otis Elevator Company completed work during the summer of 1932, and the National Park Service accepted the work on September 13, 1932.[386]

With great fanfare, the National Park Service introduced the first elevator at a dedication, featuring Governor Seligman of New Mexico. In keeping with Boles's propensity for attracting positive media attention, he timed the dedication to coincide with the Convention of the New Mexico Editors' Association in Carlsbad, guaranteeing press coverage.[387] On Saturday, January 23, 1932, a group of 403 people assembled at Carlsbad Caverns for the elevator dedication. The group included nearly 200

---

[385] Walter G. Attwell and Frank A. Kittredge, "Tourist Elevator and Shaft Driven through Rock 754 Feet from Top and Bottom Simultaneously, Carlsbad Caverns National Park, Carlsbad, New Mexico," March 13, 1932, Carlsbad Caverns National Park Administrative Records, Series I: History, circa 1890-2007, Subseries A: General Park History, circa 1890, 1923-2004, Box 1, Folder 9: Elevators 1923-1979; Walter G. Attwell and Ira Stintson, "Final Report on the Excavation of a Shaft and the Construction of a Passenger Elevator," January 25, 1932, 14, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 215, File 611-1.

[386] Thomas Boles to Director, "Superintendent's Annual Report, 1932, Carlsbad Caverns National Park," September 12, 1932, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 212, File 207-001.2 Part 1; Burney to Director, May 9, 1932, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1: Carlsbad Repairs and Improvements, Part 4; Thomas Boles, "The Year in the Parks": Carlsbad Caverns National Park, 1932-1933, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23a, Folder 3A, 2.

[387] Thomas Boles to Director, National Park Service National Park Service, January 8, 1932, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3i, 8.

newspapermen and their families, about 100 "Cavern Pioneers," or influential members of early development of the caves, and 100 tourists from 16 different states. Governor Seligman, recognized at the ceremony for his early contributions in assisting Senator Jones in requests for funding, enthusiastically participated in the day's events, seizing control of the elevator operations for the day, and displacing Ranger Convis, who had been charged with this responsibility. When Boles encouraged Seligman to give up this post, he "announced that he was the 'elevator boy' and insisted on taking the controls, running the car to the surface and bringing it down again."[388] The focus on Seligman helped draw attention to the event, crediting the current governor as the originator of the elevator idea, an assertion the newspapers frequently repeated. For example, the *Santa Fe New Mexican* claimed, "he was, in fact, the originator of the idea and it was through his instrumentality that the necessary congressional action was taken to provide the elevator.[389]

Despite the grand celebration of the elevator's opening, Thomas Boles continued to focus on the capabilities of the elevator to bring the wonders of the cavern to a greater number of people "whose age and infirmities would otherwise deny them the inspiration

---

[388] Thomas Boles to Director, National Park Service National Park Service, February 4, 1932, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3i, 7-8.

[389] "Elevator for the Caverns is Nearing Official Dedication" *Cavern City Chronicle*, August 25, 1931, "Governor Names Elevator Day at Carlsbad Cavern," *Santa Fe New Mexican*, January 8, 1932 National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611.1 Part 1; From Seligman's perspective, publicity in Carlsbad was integral to his campaigning strategies; he worried about this region so intensely that he regularly corresponded with Will Robinson, a Carlsbad resident who also worked for the *Carlsbad Current-Argus*; Seligman referred to Robinson as his "scout" in the region, and relied upon him heavily for information and positive relations in Carlsbad, Roswell and Artesia; Governor Arthur Seligman Papers, State Records Center and Archives, Santa Fe, New Mexico, Series 1: Correspondence, Box 5, Folder 125 LR&LS: Correspondence with Will Robinson, 1931-1932; Robinson's daughter, Mary Jane Robinson, for whom Seligman helped secure government employment in Santa Fe, also attended the Elevator Dedication as a representative of the Press Association.

of this wonderful trip."[390] Likewise, the National Park Service sought to limit use of the elevator as much as possible and place an emphasis on making the full trip through the natural entrance. As the congressional hearings indicated, the government intended the elevator to be used predominantly for exit trips. During the appropriation debate, Cramton stated, "The need is emphasized for exit. If I were running it, I think they would have to show a certificate from a doctor in order to let them go down in the elevator because the entrance is a wonderful entrance, and they lose a lot of it if they do not walk down the steps."[391] While the Park Service decided not to require a doctor's note, Horace Albright of the National Park Service wrote a letter directing Boles to limit the trip to "exit trips and for those aged and infirm visitors to whom the Caverns would otherwise be denied."[392] Aside from the motivation of preserving a portion of the trip they considered scenically important, the administration also wished to reduce strain on the elevator and preserve the guided tour schedule, which use of the elevator as an entrance disrupted. To this end, Albright requested Boles hire an elevator operator who could double as a ranger, taking a major role in discouraging use of the elevator and encouraging use of the trail at the natural entrance. He instructed Boles to pick a man with a personality befitting this task and also skilled in elevator operation. For the job, Boles selected Perry Convis, a man who already served Carlsbad Caverns as a ranger.[393]

---

[390] Thomas Boles to Director, February 4, 1932, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3i, 10.
[391] U.S. Congress, House, Congressman Cramton of Michigan and Congressman Stafford of Wisconsin Speaking for Carlsbad Cave National Monument, New Mexico Appropriations, 71st Congress, 2nd sess., *Congressional Record* LXXII, Part 1 (December 2, 1929-December 21, 1929), 497.
[392] Horace Albright to Thomas Boles, November 11, 1931, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, File 611-1, Part 2; N. J. Mittenthal, "Report of Work Done at Carlsbad Caverns National Park Elevator," January 20- April 27, 1932, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1: Carlsbad Repairs and Improvements, Part 4.
[393] Ibid.

Despite the National Park Service's conservative recommendations for use and their assurances the elevator simply assisted older visitors and visitors with limited walking capabilities in seeing the natural features of the caves, reactions to the elevators make clear its significance went beyond this utilitarian function. Newspapers described the elevators as independently impressive features, marvels of modern technology, and as competing draws of tourism to the caves. The celebratory tone of press coverage, along with descriptions of compatibility between the natural and technological features of the cave, show Americans in the early 1930s harmonized nature and technology and viewed both as equally impressive.

The scale rather than the existence of an elevator within a cave proved the most extraordinary factor; a 750-foot elevator stood out in any context, not just within a natural space. Shenandoah Caverns in Virginia, a privately owned entity, installed a passenger elevator shortly before Carlsbad. This elevator ran from a hotel above the caverns to the floor of the cave, a distance of approximately 60 feet.[394] Shenandoah's elevator, completed in 1931, shortly before the elevator at Carlsbad, did not attract significant national attention, most likely due to its modest scale. The minimal news coverage of the elevator at Shenandoah focused primarily on the added comfort and reduction of fatigue.[395] At the time of the installation of the elevator at Carlsbad, many believed Carlsbad, in fact, held the record as the first cave to install an elevator.[396]

---

[394] "Another Cavern Elevator," *Popular Mechanics Magazine* (September 1932): 397; "The Yellow Barn at Shenandoah Caverns," Shenandoah Caverns, 2013, http://www.shenandoahcaverns.com/v.php?pg=43.
[395] Col. Howard J. Benchoff, "The Shenandoah Valley: An Arcadia Famed in Song and Embattled Epic," *The Washington Post*, April 25, 1931, 16; "Virginia Offers Holiday Tourists Rustic Scenes, Unrivaled," *The Washington Post*, July 20, 1934, 12.
[396] "Elevator to Reach Underworld Wonderland," *Popular Mechanics* (June 1931): 963.

The scale of the Carlsbad elevator exceeded almost all elevators in the ever-increasing skyscrapers in the United States. When plans for Carlsbad's elevator began, the engineers involved in the project believed it would hold the record as the tallest single lift passenger elevator in the world.[397] In late 1930, representatives of the National Park Service contacted representatives from the Woolworth and Chrysler Buildings in New York to determine the exact length of their elevators, to ensure the elevator at Carlsbad would exceed theirs following its completion. The Woolworth Building confirmed their elevators ran from the ground floor to the fifty-fourth floor, covering only slightly over 700 feet. The Chrysler Building, while significantly taller than the reach of Carlsbad's proposed elevator, did not operate the elevator as a single lift, meaning passengers could not ride one elevator the entire height without changing cars. Since the engineers intended Carlsbad's elevator to operate as a single lift, it was on track to hold the record for "the longest single lift in the world in the strictly passenger class."[398]

Unfortunately for the expectant engineers at Carlsbad, their elevator did not become the longest single lift passenger elevator, because construction of the Empire State Building occurred simultaneously with their own construction. In November of 1931, A. E. Demaray of the National Park Service received confirmation the main elevators in the Empire State Building spanned from the ground floor to the eightieth floor, with a rise of 956 feet. "This is a single lift," the representatives of the Empire State Building wrote, surely disappointing those in the National Park Service who hoped to hold the record. The elevators in the Empire State Building also operated at a speed of

---

[397] Release for December 27, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, File 611-1, Part 1.
[398] Hogan to Director, November 1930; Illegible to Moskey, December 1, 1930; Release for December 27, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, File 611-1, Part 1.

1000 feet per minute, while the elevators at Carlsbad operated at 700 feet per minute.[399] The Empire State Building opened to the public on May 1, 1931, and spanned 102 floors, or 1,250 feet in total, attracting visitors to marvel at its modernity and technological prowess by offering wide-sweeping views of the city from the highest floors, as well as "the world's highest soda fountain and tea garden."[400] While Carlsbad could not claim the record as the longest passenger elevator in the world, associations with the brand new Empire State Building, a symbol modernity and architectural success, helped solidify the place of Carlsbad Caverns as a thoroughly modern entity.

The potential for a record-breaking elevator drew significant press attention. Dozens of newspapers across the country printed information from a press release dated December 27, 1930, stating the Park Service expected the elevator at Carlsbad to be the longest single lift passenger elevator in the world.[401] Although this misconception drew a

---

[399] Illegible to Demaray, November 25, 1921, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, Par 2.
[400] Korom, *The American Skyscraper*, 426-427.
[401] Release for December 27, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, File 611-1, Part 1; "Elevators for Carlsbad Cavern," *New York Times*, April 12, 1931, n.p., National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1; "740-Foot Elevator Is Being Built by U.S. In Carlsbad Cavern," *New York Herald-Tribune*, March 11, 1931, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1; "Longest Single Lift Elevator in World to be Erected at Carlsbad Caverns", *Coast Banker*, February 20, 1931, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1; "Caves and Caverns" *Montana Standard*, February 5, 1931, n.p. National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1; "The Carlsbad Elevator," *Montana Post*, January 17, 1931, n.p., National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1; "Elevator Will Aid Carlsbad Cave Visitors," *Stockton Record*, January 3, 1931, n.p. National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1; "Carlsbad Caverns to Have World's Largest Elevator," *Boise Statesman*, December 27, 1930, n.p., National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1; "Carlsbad Caves to Have Longest 'Lift' in World," *San Jose Mercury Herald*, December 24, 1930, n.p., National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1; "Cave Elevator Contract Bids Total 93,118," *Carlsbad Daily Current-Argus*, November 26, 1930, n.p., National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1; "A Long Elevator Trip," *Wall Street Journal*, January 7, 1931, 2; "Caverns Elevator Has 750-Foot Drop," *The Washington Post*, 16.

beneficial publicity boost, Frank Kittredge wished to set the facts straight and correct newspaper writers who published this incorrect information, and so he and his staff compiled and released a fact sheet for distribution in January of 1932. In it he noted, with the exception of the Empire State Building, Carlsbad Caverns had the "longest single lift passenger elevator in the world." Still, the oft-repeated comparison to the Empire State Building boosted the technological and modern associations of Carlsbad Caverns.[402] He sent one hundred copies of the memo to Superintendent Boles for distribution, and Boles circulated them to "practically every paper in the Southwest."[403]

The safety features also elicited wonder as technological advancements. Engineers Walter G. Attwell and Ira Stintson's final report on the construction of the elevator described the safety features in terms of how well they replicated or exceeded the capacity of the human worker. "It is so nearly human in operation," they wrote, "that should the operator go to sleep at his post the car simply goes on and levels itself in at the top or bottom entrance, coming to an easy, comfortable stop within a quarter of an inch of the floor level." Likewise, if the operator became "confused and thr[e]w the controls over, going from full speed in one direction to full speed in reverse, the car simply slows down and acting like a high pendulum changes direction and accelerates up to full speed again with no jar or discomfort whatsoever." Additionally, mechanical features

---

[402] Frank Kittredge, "Facts Concerning Elevator and Shaft," January 16, 1932, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, File 611-1, Part 2.

[403] Frank Kittredge to Thomas Boles, January 16, 1932, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 214, File 611-1, Part 3; Thomas Boles to Department of the Interior, February 4, 1932, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3i, 4.

prevented the car from moving with the doors open.[404] In addition to being independently remarkable, Kittredge noted, and news articles repeated, the engineers at Carlsbad designed the elevator "with the same regard for safety and comfort of the passengers as are embodied in the latest installations in modern office buildings."[405] The artificially intelligent technology, along with its connections with modern office buildings in New York, helped shape the identity of this elevator as not merely helpful for non-athletic tourists, but also remarkable as a specimen of technology.

Despite the strong public desire for the elevator, the landscape architects working on the project put significant effort into determining where to place the elevator and how best to integrate it. Although their jobs involved integrating man-made additions to the park in the least obtrusive way, the men involved in the landscape architecture of Carlsbad Caverns did not make all of their decisions with a mind toward minimizing the presence of the elevator.[406] The deliberations between the various landscape architects and engineers on the project demonstrate the numerous concerns and preferences involved in introducing such a modern development into a cave. Engineer Alison van V. Dunn and Chief Landscape Architect Thomas C. Vint argued the elevator's location could be used to conceal its presence, by placing it in a "relatively unattractive" room without any notable scenery. Chief Engineer Kittredge conversely argued location alone could not conceal the lower entrance to the elevator, and instead the opening should be "framed in rock in such shape that the steel would not be evident." Kittredge also

---

[404] Attwell and Stintson, "Final Report on the Excavation of a Shaft and the Construction of a Passenger Elevator," January 25, 1932, 42, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 215, File 611-1.
[405] Frank Kittredge, "Facts Concerning Elevator and Shaft," January 16, 1932, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 2.
[406] Linda Flint McClelland, *Building the National Parks: Historic Landscape Design and Construction* (Baltimore: The John Hopkins University Press, 1998), 6, 1.

introduced a plan to have passengers at the surface descend a ramp "through a rock tunnel," rather than entering through a building at ground level, which would require a raised support tower. Kittredge argued the entrance should resemble a "cave entrance," rather than the entrance of a "modern building elevator," in order to preserve the effect of a natural space.[407]

The landscape architects rejected Kittredge's plan for two reasons. Junior Landscape Architect Charles Peterson asserted his belief, in a letter to Vint, that there could be nothing *more* appropriate than an entrance within the cave resembling "the lobby of a large office building."[408] Peterson's willingness to embrace the aesthetic of an office building within the cave shows even within the landscape architecture department of the National Park Service, modernity and nature could be integrated seamlessly. The second reason, and the reason Vint used to convince Kittredge, focused on feasibility. According to Vint's calculations, creating the descent into a cave-like entrance on the surface would require a long ramp, using fifteen percent grade, with two right angle turns. He claimed most people would expect the elevator to come to ground level, and recommended construction accommodate this expectation.[409] Vint's argument prevailed; due to practical concerns, a raised elevator building housed the surface entrance, very

---

[407] Alison van V. Dunn, Report on Engineering Activities, Carlsbad National Monument, July 26, 1929, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 211, File 207: Report on Engineering Activities, Carlsbad National Monument, Spring 1929, 12; Frank Kittredge, memo, February 25, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 1; Frank Kittredge to Thomas Boles, May 27, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 1.

[408] Peterson to Vint, May 24 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 1.

[409] Vint to Kittredge, July 24, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 1.

much resembling the entrance to a modern office building **(Fig. 4)**. However, the engineers made some effort to naturalize the lower entrance within the cave **(Fig. 5)**.

The landscape architects also worked to naturalize the elevator building with the landscape, so the addition of new buildings did not generate opposition. Before the introduction of the elevator, the landscape architects developed a plan to naturalize buildings, using local materials and embracing the southwestern style of architecture. By 1926, Superintendent McIlvain noted, "the general appearance and architecture of the above buildings coincide very beautifully with the surroundings and when completed will be very attractive."[410] Boles observed favorable comments on the "rustic" buildings as well, mentioning in a monthly report many visitors stopped to photograph the buildings "from every angle."[411] The landscape architects chose to focus significant attention on the construction of the elevator building, as its location made it one of the more conspicuous buildings in what Boles referred to as the park's "cave village."[412] The landscape architects chose to construct the elevator building, equipment shed, and several other new buildings out of native limestone quarried within the Park **(fig. 6)**. The use of local materials helped integrate the buildings into the natural surroundings, making them less objectionable. In fact, Boles noted, the material elicited "favorable comment from [the park's] visitors."[413] These conventional tactics, used widely in other national parks,

---

[410] McIlvain to Department of the Interior, "Department of the Interior, National Park Service, Carlsbad Cave National Monument," May 7, 1926, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3g, 3.
[411] Thomas Boles to Director, National Park Service, August 12, 1929, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 3.
[412] Thomas Boles to Director, National Park Service, August 13, 1930 Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23b, Folder 3h, 4.
[413] Thomas Boles, "The Year in the Parks," Carlsbad Caverns National Park, 1932-1933, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23a, Folder 3a, 2.

helped landscape architects integrate the technology into the landscape and to make it part of the beauty of the park.

Very limited resistance to the elevator's installation surfaced. Aside from the hesitance of Boles and the National Park Service, very few other individuals voiced any concern the elevator harmed the appearance or natural environment of the cave. Caspar W. Hodgson, a member of the Explorers Club, wrote the only complaint letter against the elevator the National Park Service kept on file, and presumably one of the only ones they ever received. Hodgson described an Explorers Club Meeting at which one of the members of the club began talking about the electric lights and "other modern conveniences" at Carlsbad Caverns, and Hodgson reported being so angry, he and some others walked out of the meeting. His unhappiness with the modifications to the cave increased when he heard about the proposed elevator, as he believed the National Park Service should require visitors to walk the entire way out. He focused on an elitist perspective of the cave, claiming only those who were capable of making the entire trip on foot deserved to see the caves.[414]

The only other example of opposition the National Park Service documented originated from the Carlsbad Chamber of Commerce. Members of the Chamber worried a shorter cave trip would decrease the necessity for visitors to remain in the town of Carlsbad overnight. This decreased the likelihood tourists would patronize the hotels, restaurants, and other accommodations of Carlsbad. Members of the Chamber of Commerce, including McIlvain, the Monument's first custodian, played an important role in the earliest development and publicity of the caves, hoping the town would reap the

[414] Caspar W. Hodgson to Horace Albright, December 29, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 1.

monetary benefits of increased tourism.[415] Despite the ongoing cooperation between the National Park Service and the Carlsbad Chamber of Commerce, by 1930, the Chamber's secretary Victor Minter opposed the decision to shorten the cave trip. Minter feared the use of the elevator "to any extent" would lead tourists to bypass the town of Carlsbad and exclude the cave's earliest advocates from the benefits of tourist travel.[416] Kittredge attempted to diffuse conflicts claiming the elevator would, in fact, bring more business to Carlsbad. He estimated there must be thousands of potential tourists who completely avoided the town of Carlsbad or passed through it without stopping, because they believed the climb into the caverns was "entirely beyond their strength." He believed advertisement of an elevator would bring a significant increase in visitation to both the caverns and the town of Carlsbad.[417] Significantly, none of the opponents of the elevator claimed technology and machinery should not be utilized in a natural setting.

The celebratory tone of press coverage of the elevator at Carlsbad Caverns echoed across the country, showing Americans in the early 1930s largely accepted the integration of technology and nature in this case. A 1931 *New York Times* article proclaimed tourists would find "the machine age has done them a good turn" if they visited Carlsbad Caverns that summer.[418] While the idea of a cave entering the machine age seems contradictory, the article framed it as an asset to the caves and a feature with potential to attract tourist interest. Similarly, the *Washington Post* described the elevators as a "new thrill," noting

---

[415] Frederick Earle MacVaugh, "Preserving the Underground: The Creation of Carlsbad Caverns National Park, 1922-1930" (M.A. Thesis, University of Texas at El Paso, 2000), 36, 68.
[416] Director to Cammerer, May 10, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 1.
[417] Frank Kittredge to Director, July 10, 1930, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 1.
[418] Irvin S. Taubkin, "Elevators for Carlsbad Cavern," *New York Times*, April 12, 1931, E6.

tourists would experience "a fast ride under the earth on an elevator."[419] The East Coast newspapers chose to capitalize on the elevator itself as an attraction, rather than simply the potential for visitors with limited abilities to view the caves. This shows prospective tourists viewed the elevator as an enhancement to the caves, rather than a conflicting entity or mere necessity.

The amusement park-like description the *Washington Post* used became a popular trope in descriptions of Carlsbad's elevator. The *Montana Standard* also referred to the elevator as a "new thrill," which would offer a "fast ride into the depths of the earth."[420] Articles of this tone focused on the technological wonder, especially the way in which it complemented the natural wonders of the cave. The comparison between this national park and an amusement park shows a conflation between two popular types of recreation in the first third of the twentieth century.[421] It also drew nature tourism into the rising fascination with technologically-oriented leisure activities, exemplified by the popularity of Coney Island.[422]

Some news articles went as far as to predict the elevators would become attractions unto themselves, drawing visitors to see the technological display, rather than the natural wonders. An article in *Popular Mechanics* suggested the elevators would rival the geological features for attention, saying the elevator offered "engineering and

---

[419] "Caverns Elevator Has 750-Foot Drop," *The Washington Post*, February 2, 1931, 16.
[420] "Caves and Caverns," *Montana Standard*, February 5, 1931, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 215, File 611-1, Part 1.
[421] For further explanation of the various uses of the term "park," as related to nature and emerging technology, see Janet R. Daly Bednarek, "The Flying Machine in the Garden: Parks and Airports, 1918-1938," *Technology and Culture* 46, No. 2 (April, 2005): 350-373.
[422] See John F. Kasson, *Amusing the Millions: Coney Island at the Turn of the Century* (New York: Hill and Wang, 1978).

mechanical features as startling as those of nature displayed in the cavern."[423] One newspaper quoted Frank Kittredge, suggesting more people would visit the caves to see the "thrilling accomplishments of man." The same article predicted visitors might "enjoy the spectacular in 'rides', as well or even more than the scenic wonders."[424] Similarly, the *Montana Post* predicted, "Some people will go up in it just because it is a record-maker. Others will go to see the caves."[425] The oft-repeated assertion the elevators would begin to rival the natural attractions helps demonstrate the fascination American tourists had with technology in the early 1930s. This enthusiastic refrain also indicates the transcendence of the elevators beyond necessary and convenient features and into an integral component of Americans' understanding of nature at the caves.

Other attractions in the same period also demonstrated the same phenomenon; the works of man in natural areas attracted tourist attention, as well as the natural features, showing Carlsbad Caverns as part of a larger trend. A 1937 *New York Times* article explained how the conflation of natural and technological wonders attracted tourists, especially under the federally sponsored Public Works Projects. Richard L. Neuberger wrote:

> This year the handiwork of man will vie with the scenic spectacles of nature as the premier attraction for visitors to the Far West. Special tours have been arranged to include the great public works projects of the Federal Government that are either completed or well under way. From May 27 to June 2 the Golden Gate Bridge fiesta at San Francisco will celebrate the opening of the Giant Span.
> The Department of the Interior has announced that itineraries have been worked out for Easterners who wish to visit other building and construction enterprises. These schedules take in Boulder Dam on the

[423] "Elevator to Reach Underworld Wonderland," *Popular Mechanics* (June 1931): 963.
[424] "Midnight Lake," Paper Unknown, October 20, 1931, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1.
[425] "The Carlsbad Elevator," *Montana Post*, January 17, 1931, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Box 215, File 611-1, Part 1.

> Colorado River, Fort Peck Dam on the Missouri River, and the Bonneville and Grand Coulee Dams on the Columbia River. Boulder Dam is completed, and the smooth lake behind its towering walls affords various aquatic sports. Bonneville will be finished later this year while Grand Coulee affords the tourist an opportunity to view one of the largest structures ever planned by man.[426]

While the article focuses mainly on the man-made attractions, it also mentions the rivers and other natural sites with which the new features interact, including the vivid description of the "smooth lake." As David Nye explained in *American Technological Sublime*, Americans experienced the "sublime" in a unique way; whereas once the word referred only to the confrontation with impressive *natural* objects, Americans also experienced this profound appreciation in technological contexts. Not only did Americans experience a similar quasi-religious emotion when confronted with natural and technological entities, but they also actively sought out attractions where they could experience man-made and natural attractions simultaneously.[427] The case of Carlsbad Caverns strongly exemplifies this conflation of nature and technology, but the additional examples provided by the *New York Times* article show Carlsbad Caverns as part of a larger trend.

Visitors who rode in the elevators described them as similarly impressive as the initial news coverage. After a visit, F. S. McGinnis, Vice President of the Southern Pacific Railway described the excitement of riding in the elevators, which he referred to as the "second longest express elevators in the world." He described the trip in terms of an action-packed adventure, in which the elevators "whizzed [the passengers] to the surface at a rate of better than twelve feet per second." In his words, he "watched a tiny

---

[426] Richard L. Neuberger, "Westward Ho! For the Tourist: Sunset Trails and Summits Beckon, and this Season the Mighty Spectacles of Nature Will Be Rivaled by Vast Works of Many," *New York Times*, April 25, 1937, 175.
[427] David Nye, *American Technological Sublime* (Cambridge, MA: The MIT Press, 1994), xiii, xvi, 32.

panel of lights that indicated our progress upward at fifty-foot intervals. Starting at '750,' we rose rapidly. '700,' '650,' with the elevator emitting a curious whining noise and my ears popping. Finally, the elevator murmured to a stop..."[428] McGinnis's description of the elevator experience demonstrated the enthusiasm with which tourists embraced the new technological attraction.

The enthusiastic descriptions of the elevator clearly show acceptance of large-scale technology in this national park, and reports regarding usage of the elevator indicate the acceptance lasted beyond the initial novelty of the elevator within the cave. Immediately following the elevator's installation, usage evinced its popularity. During the final eight days of January 1932, the days in which the elevator first opened to the public, Boles calculated that less than three percent of visitors rode down, but fifty-eight percent returned to the surface by elevator.[429] During the rest of the year, the percentage of visitors riding the elevator down remained fairly level, hovering between one and a half and three percent, while the visitors riding upwards fluctuated; anywhere between thirty-eight and seventy-two percent of visitors rode the elevator out of the caves during the remaining months of 1932.[430] The remainder of the decade showed fairly consistent usage of the elevator. Between 1933 and 1939, three to seven percent of visitors each year rode the elevator down into the caves, and between thirty-nine and forty-five percent of annual visitors used the elevators to exit the caves. After 1939, usage of the elevators

---

[428] F. S. McGinnis, "Carlsbad Caverns," Southern Pacific, 11, Thomas Boles to Director, National Park Service, August 4, 1937, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23c, Folder 3n.

[429] Thomas Boles to Arno B. Cammerer, February 18, 1932, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 3.

[430] Thomas Boles to Director, National Park Service, April 22, 1932, May 5, 1932, August 5, 1932 Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23c, Folder 3i; Untitled Chart Showing Number of Visitors Using Elevator Services, 1932, National Archives, College Park, Maryland, Record Group 79, Entry 10, Box 214, File 611-1, Part 2.

increased even further, as the National Park Service reduced fees for elevator usage by half for adults, and from twenty-five cents to fifteen cents for children under the age of twelve. In the year following this change, the percentage of visitors riding out of the caves by elevator increased to fifty-nine percent.[431] The prevalent usage of the elevator indicates many visitors who viewed Carlsbad Caverns in the 1930s experienced the technological element of the caves in addition to the natural, and this forced them to confront the connections between their perceptions of technology and the environment. The choice of this many visitors to utilize the elevators also indicates public acceptance of the technological element of the cave.

In general, Thomas Boles received only complimentary reactions to the park, his employees, and the modifications and accommodations. The only complaints he noted originated from tourists who desired "individual service," which the limited personnel could not accommodate.[432] The positive and dramatically descriptive responses to the elevator, coupled with the lack of reported complaints, show the overall acceptance of the elevator at Carlsbad Caverns National Park.

The case of the elevator at Carlsbad Caverns functions as an example of the way in which Americans in the 1930s confronted the interaction between nature and technology. The widespread publicity surrounding the elevators' installation indicates the public viewed the elevator as a positive introduction, not just for convenience in viewing a National Park, but also as an independent feat competing with the caves for

---

[431] Thomas Boles, "The Year in the Parks," Carlsbad Caverns National Park, 1933-1934, 1934-1935, 1935-1936, 1936-1937, 1938-1939, 1939-1940, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23a, Folder 3a.

[432] Thomas Boles to Director, National Park Service, August 6, 1935, Carlsbad Caverns National Park Administrative Records, Series V: Staff Reports, 1926-2004, Box 23d, Folder 3l, 16.

attention. The broad-based acceptance, originating from the media and from visitors to the caves, shows the National Park Service successfully integrated this large-scale technology into the park, and thereby altered Americans' perceptions of nature and technology.

Figure 4

Photograph from Walter G. Attwell and Ira Stintson, "Carlsbad Caverns Park: Final Report Covering Construction of Passenger Elevator, Account #492," February 7, 1932, National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 849, File 611-01.

Figure 5

"Photograph Showing How Far Below the Level of Floor of Cavern Elevator Dropped, Distance: 29-3/16 inches," National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 214, File 611-1, Part 3.

Figure 6

Plate XII. Elevator Building. Carlsbad Inspections by Field Officers Kreinkamp. December 17, 1932. National Archives, College Park, Maryland, Record Group 79, Entry 10, Central Classified Files, 1907-1949, Record Group 79, Entry 10, Box 211, File 204-010.

CHAPTER 6
THE BATTLE FOR THE LUNCHROOM

As the previous chapters clearly show, tourists in the 1920s and 1930s fully embraced the modern and technological developments in Carlsbad Cave National Monument, later known as Carlsbad Caverns National Park. Analysis of the American public's views on these issues helps demonstrate a fascination with technology and modernity, which permeated environmental thought and became intertwined with the way Americans perceived this particular natural site. Rather than desiring pristine, untouched nature, as the earliest proponents of the National Park System advocated, Americans of this era viewed these elements as harmonious with nature. However, as the twentieth century progressed, environmental thought shifted, and this shift caused a reevaluation of some of the man-made features at Carlsbad Caverns. In Carlsbad Caverns, where the administration of the National Park Service emphasized the modernity and the technological features of the caverns beginning in the early years of development in the 1920s and 1930s, the new emphasis on ecology created debates about those features, which centered on the potential removal of the Underground Lunch Room.

Whereas previously, the preservation of aesthetic characteristics of natural sites prevailed in considerations for site protection, Americans in the mid-twentieth century began to give more attention to biological life within the sites they preserved. As Adam Rome explained, the new environmental movement surfaced following World War II, partially due to new scientific beliefs regarding ecology, which alerted citizens to the "risks of transforming nature." Other factors in the shift towards the environmental movement included the rise of affluence following war, the resurgence of liberalism, and

the politically active counter-culture.[433] According to Samuel Hays, the "environmental movement," which he described as beginning in the late 1950s, differed from the earlier conservation movement predominately due to the new concerns for ecology and environmental quality. Additionally, the movement amassed a broader base of support than previous iterations. The burgeoning movement focused on the quality of human surroundings, including air, water, and land. Along with this new focus, Americans reacted to increased technological disruption of the environment, including industrial plants, surface mining, and housing developments. As Hays noted, the concern with technological interruption, combined with the new focus on human environments, "gave rise to a broader concern for the long-run viability of the physical and biological world upon which sustained human institutions depended." The new environmental consciousness focused on changes to biological processes, ecosystems, and plant and animal populations and habitats.[434] This movement resulted in the declaration of Earth Day on April 22, 1970.[435] Along with the cultural environmental movement, President Richard Nixon signed environmental legislation including the National Environmental Policy Act, demonstrating the national scale of the concern for environmentalism.[436] While this new environmental consciousness changed perceptions of the nature for many

---

[433] Adam Rome, "The Environmental Movement," *Major Problems in American Environmental History: Documents and Essays*, Third Edition, ed. Carolyn Merchant (Boston: Wadsworth Centage Learning, 2012), 511; Adam Rome, "'Give Earth a Chance': The Environmental Movement and the Sixties," *The Journal of American History,* 90, No. 2 (Sep. 2003): 525-554; According to D. T. Kuzmiak, Rachel Carson's *Silent Spring*, published in 1962, made "ecology" a household word; Barry Commoner later expanded the definition of ecology to suggest total interconnectivity of all elements on earth; D. T. Kuzmiak, "The American Environmental Movement," *The Geographical Journal* 157, No. 3 (Nov., 1991): 270, 272.
[434] Samuel P. Hays, "The Environmental Movement," *Journal of Forest History* 25, No. 4 (Oct., 1981): 219-221.
[435] Rome, "The Environmental Movement," 511-519;
[436] Ibid., 520.

Americans, this chapter will show, notions of the environment as harmonious with modernity and development continued on a smaller scale.

As the environmental movement mounted, the manner in which people enjoyed the preserved environments of national parks changed as well. Popular ideas about the character of the preserved spaces shifted towards the increasingly prevalent ideals of ecology. On a national scale and in response to the changing nature of the environmental movement, the National Park Service re-evaluated its priorities and responsibilities to the American public with the creation of the Vail Agenda of 1991 at the National Park Service 75th Anniversary Symposium in Vail, Colorado. In the Vail Agenda, the Steering Committee addressed the conflict between ecological protection and recreation and returned to the fundamental purpose of the National Park System to provide guidance, noting "the ability of our national historic sites, cultural symbols, and natural environments to contribute to the public's sense of shared national identity is at the core of the purpose of the National Park Service."[437] Based on this mission, the Steering Committee stated the primary purpose of the National Park Service is to "preserve, protect, and convey the meaning of those natural, cultural and historical resources that contribute significantly to the nation's values, character, and experience."[438] Therefore, the Steering Committee listed the first strategic objective of the Vail Agenda as Resource Stewardship and Protection, that is, "the primary responsibility of the National Park Service must be protection of park resources from internal and external impairment."[439] The second objective, addressing access and enjoyment, stated the Park Service must

---

[437] William J. Briggle and Henry L. Diamond, et al, *National Parks for the 21st Century: The Vail Agenda* (Vail, Colorado: Our National Parks: Challenges and Strategies For the 21st Century, an International Symposium, 1992), 17
[438] Ibid.
[439] Ibid.

provide "enjoyment and enlightenment," rather than merely "entertainment and recreation."[440] Under this objective, the Steering Committee recommended the National Park Service minimize the development of facilities within the park's boundaries, as well as refrain from compromising wilderness properties of a park when such facilities proved necessary. Furthermore, the report recommended, "facilities that are purely for the convenience of visitors should be provided by the private sector in gateway communities."[441] This attempt to move tourist facilities outside parks demonstrated the reevaluation of the Park Service's priorities away from providing conveniences for visitors and towards more ecological objectives. The Vail Agenda suggested facilities like the Underground Lunchroom at Carlsbad Caverns should exist only beyond the borders of national parks, but the opposition to the Lunchroom's removal showed a significant subset of the American population disagreed.

Even before the formal creation of the Vail Agenda in 1991, the National Park Service began pushing towards aligning its activities more closely with principles of ecological protection. The elevators at Carlsbad Caverns never drew significant opposition, even into the twenty-first century, as they proved too necessary. While the National Park Service never challenged the use of the elevators, they embarked on remediation of some issues related to the elevators in the late twentieth century. As J. S. McLean noted in *The Microclimate in Carlsbad Caverns, New Mexico*, a study undertaken by of the U. S. Geological Survey for the National Park Service, the elevator shafts caused significant evaporation, as air moved up them, primarily during the winter months. McLean estimated this led to a loss of 83,000 liters, or 22,000 gallons, of water

[440] Ibid., 21.
[441] Ibid., 23.

per year. In addition, subterranean lighting caused additional evaporation due to increased heat. McLean's primary recommendations included sealing the elevator shaft and using more efficient bulbs.[442] The National Park Service responded by installing the recommended revolving doors, and they later began monitoring temperature and humidity in different locations in the cave.[443]

Tourists' continued reliance on the elevators became evident during periods when the park closed or offered reduced service on the elevators, due to repairs. In 2010, the National Park Service contracted White Construction to perform safety upgrades to the elevators shafts' infrastructure. The Park Service estimated the project would take nine months, but due to problems in the renovations, they extended the timeline repeatedly, as some of the work failed to comply with the contract. The Park Service switched contractors, and the new contractors eventually finished the project in April 2014. During the lengthy period of repairs, the park utilized smaller, secondary elevators, resulting in extended wait time for visitors using these elevators, sometimes up to an hour.[444]

Again beginning on November 4, 2015, the administration of Carlsbad Caverns closed the elevators due to a problem with one elevator stalling mid-way between the surface and the caverns. As public affairs specialist Valerie Gohlke explained to news reporters from the *Carlsbad Current-Argus*, the park chose to close the remaining elevator because, "When you only have one elevator running, if that last elevator got

---

[442] J. S. McLean, *The Microclimate in Carlsbad Caverns, New Mexico* (Albuquerque: United States Department of the Interior Geological Survey, May 1971), 6-7.
[443] Paul Burger, "Cave Climate Monitoring," *Canyons & Caves: A Newsletter from the Resources Stewardship & Science Division* 29 (Summer 2003): 4.
[444] Zach Ponce, "Four Years Later, Elevators Finished at Caverns, *Current-Argus*, April 22, 2014, http://archive.currentargus.com/carlsbad-news/ci_25613210/four-years-later-elevators-finished-at-caverns; Stella Davis, Carlsbad Caverns Elevator Repair Looks to Late September for Completion Date," August 1, 2011, *Current-Argus*, http://archive.currentargus.com/ci_18597567.

stuck, it'd be difficult to stage a rescue."[445] The park later announced an internal breakdown inside a 40-year old motor caused the malfunction. The problem, they estimated, would take until summer to repair.[446]

News coverage of the situation discussed the idea of hiking down and back as almost so difficult as to be ridiculous. One anchor on *KOB 4 Eyewitness News* laughingly claimed, "If you're heading to Carlsbad Caverns in the near future, you'd better wear some really comfortable shoes," as his co-anchor stated, "Those elevators that take you all the way down and back up are broken!" Reporter Samantha Esquivel, who covered the story, likewise focused on the difficulty of the climb, remarking "visitors are facing" 750 feet, or more than 69 stories each way, making it seem almost like an insurmountable challenge.[447] Another news report on *KRQE News 13* demonstrated the hike as possible, by having reporter Cheyenne Cope complete the journey, but noted numerous visitors' responses to the increased difficulty of the trip. Cheyenne Cope, herself, noted, "The hike down wasn't too bad, with plenty of places to stop and rest on the way. The hike back up is a little more difficult." David Mattson, a man who made the trip on the same day as Cope, remarked, "I was not excited about that to begin with, and I was really not excited about it as we kept going down and down and down, you know I thought, I'm gonna be down there till midnight."[448]

---

[445] *Carlsbad Current-Argus*, "Elevators at Carlsbad Caverns Out of Service," *Albuquerque Journal*, November 5, 2015, http://www.abqjournal.com/671024/news-around-the-region/elevators-at-carlsbad-caverns-out-of-service.html.
[446] Carlsbad Caverns National Park Facebook Page, Status Update December 15, 2015, https://www.facebook.com/Carlsbad-Caverns-National-Park-270383569687673/?fref=ts.
[447] Samantha Esquivel, "Carlsbad Caverns Elevators Out of Service," *KOB Eyewitness News 4*, November 11, 2015, http://www.kob.com/article/stories/s3956083.shtml#.VlRpI2SrTu0.
[448] Cheyenne Cope, "No Elevator Service at Carlsbad Caverns National Park," *KRQE News 13*, November 5, 2015, http://krqe.com/2015/11/05/no-elevator-service-at-carlsbad-caverns-national-park/.

Trying to make the most of the situation, the park officials at Carlsbad Caverns waived fees temporarily and attempted to capitalize on the historic elements of the hike, noting on Facebook, visitors could "enjoy the cave the way early explorer, Jim White, did…hike in!"[449] Some visitors latched onto the idea, sharing stories of their own hikes in and out of the cave, and even asking whether the park permitted visitors to hike in and out when the elevators were in use. One Facebook user commented, "Ooooooooo!!!!! How long will the elevator be out? I've always wanted to hike out as well as in," to which another visitor responded "[The] natural entrance is always open. Elevators or not. Was just there. My kids did both."[450] However, many other Facebook users balked at the idea of walking in and out. One visitor responded to a comment claiming the hike "sounds like fun," by stating, "It is not fun. Trust me. You're sore for [about] 3 days afterwards. It's almost straight up."[451] One woman responded, "Ha! I would just live down there until the elevators reopened."[452] Other visitors commented with descriptions of medical issues preventing their entrance into the caves without the elevators, including one who was "on oxygen" and another who hoped to bring her mother-in-law as part of a "bucket list road trip," who asked whether the Park Service permitted wheelchairs on the natural entrance trail (which they do not due to its steepness).[453] The responses to the

---

[449] Carlsbad Caverns National Park Facebook Page, Status Update November 9, 2015, https://www.facebook.com/Carlsbad-Caverns-National-Park-270383569687673/?fref=ts.
[450] Charla Wright Henney, Facebook Comment to Carlsbad Caverns National Park, November 9, 2015, https://www.facebook.com/Carlsbad-Caverns-National-Park-270383569687673/?fref=ts; Hollie Staten Merchant, Response to Charla Wright Henney's Comment to Carlsbad Caverns National Park, November 9, 2015, https://www.facebook.com/Carlsbad-Caverns-National-Park-270383569687673/?fref=ts.
[451] Ryan Bowen, Response to Erika Gpe Flores's Comment to Carlsbad Caverns National Park, November 10, 2015, https://www.facebook.com/Carlsbad-Caverns-National-Park-270383569687673/?fref=ts.
[452] Jill Raczelowski, Response to Pamela Crump's Facebook Comment to Carlsbad Caverns National Park, November 10, 2015, https://www.facebook.com/Carlsbad-Caverns-National-Park-270383569687673/?fref=ts.
[453] Sharyn Walker Triplet, Facebook Comment to Carlsbad Caverns National Park, November 9, 2015, https://www.facebook.com/Carlsbad-Caverns-National-Park-270383569687673/?fref=ts; Ramie Liddle,

temporary disuse of the elevators clearly show the public's continuing acceptance of and demand for mechanized transportation into the caves.[454]

Similarly, the lighting of the caverns never drew contention, but the Park Service instituted changes to ensure sound ecological practices. In 2015, the Park Service commissioned a project to re-work the lighting system to use LED lights, rather than incandescent, fluorescent, and other bulbs. In addition to an increased capability to adjust the brightness and visual warmth LED lights provided, they also are intended to reduce algae growth, to which the other bulbs contributed. Ray Grenald, the designer of the lighting in Carlsbad Caverns both in 1976 and in the 2015 project, emphasized the role of the lighting in facilitating an interaction with nature, stating, "We want people to go through there and connect with nature and to see the beauty they can't see anywhere else and be emotionally involved while they do so."[455]

Unlike the elevators and lights, which members of the public never advocated removing, the Underground Lunchroom became the subject of a major controversy beginning in the late 1980s. When members of the National Park Service began to suspect the presence of the Underground Lunchroom threatened the natural environment of the cavern, they unsurprisingly moved towards its removal. That part of the public supporting this decision cited either concerns for preserving the cave's environment or

---

Facebook Comment to Carlsbad Caverns National Park, November 16, 2015, https://www.facebook.com/Carlsbad-Caverns-National-Park-270383569687673/?fref=ts.

[454] On March 18, 2016, Carlsbad Caverns National Park announced a contract with Supplied Industrial Solutions, of Granite City, Illinois, for $235,965, to repair a secondary set of elevators, which had been out of service since the summer of 2015; The park's Public Affairs Specialist Valerie Gohlke announced the work would begin April 11, 2016, and anticipated its completion by Memorial Day weekend; The work would involve lead paint abatement, the installation of 12 structural beams and six angle beams, as well as safety inspections of the new construction; Maddy Hayden, "Contract Awarded for Elevators," *Carlsbad Current-Argus*, March 18, 2016, http://www.currentargus.com/story/news/local/carlsbad-caverns/2016/03/18/contract-awarded-elevators/81991830/.

[455] Maddy Hayden, "Carlsbad Caverns Being Re-Lit by the Same Designer from 1970s Project," *Current-Argus*, September 2, 2015, http://archive.currentargus.com/carlsbad-news/ci_28741206/carlsbad-caverns-being-re-lit-by-same-designer.

the visual inappropriateness of a commercial facility in a natural setting. Steeped in the rising environmentalist tide of the late twentieth century, this reaction can hardly be characterized as surprising; however, the opposition to the lunchroom's removal invoked numerous different arguments, many of which resembled the earlier generation's immense fascination with modernity and technology, even to the degree that it could be considered compatible with nature.

Since the Underground Lunchroom functioned as a concession, not directly run by the National Park Service, but rather by a private company in contract with the Park Service, the National Park Service had to approve, but did not directly control the company's actions. In 1988, the administration of Carlsbad Caverns undertook an Environmental Assessment in preparation for the renewal of the concession contract with Cavern Supply Company. The Environmental Assessment aimed to comply with the regulations of the National Environmental Policy Act of 1969, which required all federal agencies to assess the environmental consequences of proposed actions. In this case, the National Environmental Policy Act required Carlsbad Caverns to undertake the assessment before renewing a contract with a private concessionaire. The renegotiation of the Cavern Supply Company's contract represented the end of a twenty-year service contract with the National Park Service, and including the time under this contract, the Cavern Supply Company had operated the concession for a total of sixty years.[456]

The assessment addressed potential problems associated with the Underground Lunchroom, including attracting non-native wildlife, changes in microbial and algae populations and population diversity in the cave's pools, water quality, air quality, and

[456] John E. Cook to Nick Jenkins (DRAFT), August 26, 1987, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 6: Visitor Survey Final Report.

litter build-up. The first section of the assessment focused on Biological Elements, noting human introductions, including lighting, trashcans, and the Underground Lunchroom, attracted "non-cave" animals deeper into the cave than they historically ventured. In particular, raccoons and mice led to "feces, decaying corpses, scattered trash, and polluted water," all of which, the report noted, disturbed the cavern ecology.[457] Between 1975 and 1985, rangers reported trapping approximately 300 raccoons within the cavern.[458] In an attempt to remediate the raccoon problem, rangers instituted a Raccoon Management Plan in 1985, which called for more frequent emptying of trashcans, raccoon-proof trash containers, and increased attention to cleanliness and food removal. Reportedly, these protocols successfully reduced the incidences of raccoons within the cave, as well as the presence of mice within the caves, as the Environmental Assessment reported no mice found on the traps intended to assess the severity of the mouse problem.[459] Additionally, the Environmental Assessment looked at the diversity levels and population structure of microbial and algae populations. While the assessment did not include a comprehensive, quantitative analysis of microbial populations, it noted lint and organic input from the Underground Lunchroom contributed negatively to microbial populations.[460]

The second section of the Environmental Assessment addressed Abiotic Elements, including impacts to water quality. This section assessed the effects of human-

---

[457] Renewal of Concession Contract Environmental Assessment, Part I. Biological Elements, June 8, 1988, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 6: Environmental Assessment.
[458] Ibid.
[459] Ibid.
[460] Renewal of Concession Contract Environmental Assessment, Part I. Biological Elements, Section II-Biological Elements, Part C—Assess Impacts of Underground Lunchroom on Cave Pool Bacterium and Algae Populations, Final Report, December 1988, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 6: Environmental Assessment.

caused materials in the cavern pools. The materials found included raisins, chicken bones, toothpicks, gum, plastic and rubber, paper products, trail epoxy, and lint. The report recommended annual lint removal, addition of specific cans for disposed chewing gum, and removal of toothpicks from the lunches served in the Underground Lunchroom.[461]

Finally, the Environmental Assessment considered Socio-Economic Elements by comparing the concession activities at Carlsbad Caverns to other public caves in order to determine the degree of necessity of its facilities. The Resource Management Assistant of Carlsbad Caverns spoke with personnel at thirteen other caves to determine the degree of development, facilities, and pest-problems their cave possessed. This element of the assessment determined Carlsbad Caverns by far had the highest annual visitation total, approximately 740,000, surpassing the next highest totals by almost 240,000. The findings also indicated Carlsbad Caverns likely had the "highest development of food/drink services, combined with a dining area, gift shop, telephone and underground desk." Only three other caves provided underground restrooms, while only two others sold food and drink underground. Staff from five other caves reported seeing or trapping non-native mammals inside the caves.[462]

The Environmental Assessment resulted in a finding of "No Significant Impact" of renewing the concession contract.[463] This finding indicated the contract renewal would not significantly affect the quality of the environment, and therefore federal

---

[461] Renewal of Concession Contract Environmental Assessment, Part I. Biological Elements, Section II- Abiotic Elements, Part A- Assess Impacts to Water Quality, Final Report, December 1988, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 6: Environmental Assessment.
[462] Renewal of Concession Contract Environmental Assessment, Part I. Biological Elements, Part III Socio-Economic Elements, Final Report, December 1988, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 6: Environmental Assessment.
[463] Finding of No Significant Impact, June 2, 1989, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 6: Environmental Assessment.

regulations would not require the Park Service to prepare an environmental impact statement. While the survey allowed the concessionaire to continue operation of the underground lunch facility, the concession contract the National Park Service offered the Cavern Supply Company did not lead to a long-term agreement, but rather a series of one-year letters of authorization, due to inability to agree on terms. The National Park Service continued to investigate the possibility of removing the Underground Lunchroom.[464]

Coupled with the preliminary environmental assessment, the National Park Service partnered with Texas A&M University in 1989 to produce a visitor survey to determine the effect possible removal of the lunchroom would have on visitors, as well as to determine how well visitors followed park regulations regarding cavern protection. The survey involved a brief on-site questionnaire, along with a lengthy survey mailed to the visitor one week after his or her visit.[465] The researchers contacted 1,278 visitors, and out of those visitors, 84.2 percent returned a completed questionnaire. Since the researchers prepared this survey while the National Park Service undertook a more thorough environmental assessment, the researchers provided visitors with choices based on prospective findings, asking their opinions of proposed actions if the lunchroom proved to cause substantial environmental damage, as well as if it did not. Their findings indicated most visitors supported mitigating action, by reducing or removing the lunchroom, if they could be convinced the Underground Lunchroom caused serious

[464] Renewal of Concession Contract Environmental Assessment, December, 1988, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 6: Environmental Assessment; Environmental Assessment, Underground Concession Carlsbad Caverns National Park, (U.S. Department of the Interior, National Park Service, Carlsbad Caverns National Park, April, 1993), 1, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 31, Underground Lunch Removal.
[465] James H. Gramann and William P. Stewart, "Visitor Response to Concession Management Alternatives at Carlsbad Caverns National Park," Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 6: Environmental Assessment.

damage, while they strongly opposed action if the findings did not strongly indicate substantial damage.[466] This finding indicated most visitors surveyed would consider removal of the Underground Lunchroom appropriate only if it caused significant material damage to the environment, thus threatening the protection mission of the National Park Service.

In 1993, the National Park Service released an extended Environmental Assessment. Based on the recommendations of the 1991 Vail Agenda, the 1993 Environmental Assessment of Carlsbad Caverns reconsidered the appropriateness of the Underground Lunchroom and again attempted to determine whether to renew the contract of the Cavern Supply Company to operate the lunchroom after April 1994. In light of the Vail Agenda, the assessment sought to determine whether visitors experienced the Underground Lunchroom in a manner consistent with the mission and goals of the National Park Service, and whether it hindered the protection of the natural resources within the cave.[467] The assessment focused on three major environmental issues the lunchroom presented: the effect of non-native animals entering and displacing native cave animals, the effect of food and debris on water quality in the cave pools, and the effects of lights, heat, and introduced gases on the cave atmosphere.[468] Along with the ecological concerns, the Environmental Assessment also addressed the visual impact on visitors entering and exiting through the elevators, for whom the lunchroom presented the

---

[466] James H. Gramann, William P. Stewart, and Yong-geun Kim, Visitor Response to Concession-Management Alternatives at Carlsbad Caverns National Park, Final Report Prepared for Carlsbad Caverns National Park, National Park Service (Southwest Region), April, 1989, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V Folder 9: Visitor Survey Final Report, iii-v.
[467] Environmental Assessment, Underground Concession Carlsbad Caverns National Park, (U.S. Department of the Interior, National Park Service, Carlsbad Caverns National Park, April, 1993), 2, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 31, Underground Lunch Removal.
[468] Ibid., 8.

first or last impression of the cave.[469] The Environmental Assessment presented three alternatives: no action, reducing the size of the concession to a snack bar with no additional merchandise, or complete removal of the underground lunch facility.[470] Following protocol, the National Park Service invited public comment upon the assessment, and, due to the controversial nature of the report, extended the comment period several times. The responses of visitors regarding the issue help illuminate the ways in which late twentieth and early twenty-first century environmental attitudes at Carlsbad Caverns relate to those from the 1920s and 1930s.

Between the reactions recorded in the 1989 Texas A&M Survey, formal responses to the Environmental Assessment of 1993, and those freely given on visitor response cards, through letters, and through other avenues, thousands of visitors commented on the issue. Independently, the Carlsbad Chamber of Commerce, of which George Crump, President of the Cavern Supply Company, served on the Board of Directors, conducted a poll of their membership on the issue in 1993. The Chamber of Commerce mailed 768 surveys and received 327 responses from local residents, 306 of which indicated preference for leaving the lunchroom intact. The Chamber of Commerce also circulated a petition and gained 1787 signatures supporting the "no action" alternative. Many of these people likely responded to pressure from George Crump, who in addition to his position as president of the Cavern Supply Company and board member of the Chamber of Commerce, also served as a Councilman of the City of Carlsbad and a member of the Board of Directors of Carlsbad National Bank.[471]

---

[469] Ibid., 9.
[470] Ibid., 11-12.
[471] Appendix A Summary of Public Comments and National Park Service Responses, Underground Concession, Carlsbad Caverns National Park Environmental Assessment, Draft June 23, 1993, Carlsbad

Predictably, aside from the respondents to the Carlsbad Chamber of Commerce survey, many Americans commented supporting the environmental agenda of the National Park Service, citing biological and geological damage as their primary concerns and as ample justification for the lunchroom's removal. One respondent to the 1989 survey wrote succinctly and emphatically, "If the underground restaurant is harming the cave—remove it!"[472] Clearly reflecting the newly popular belief in interrelated ecosystems, another visitor to Carlsbad Caverns commented, "The underground restaurant should be taken out of operation if it is destroying the balance."[473] Official public comments directed towards the Carlsbad Caverns Administration and the National Park Service regarding the proposed action of removal also reflected the same tone. A man named Richard Zopf wrote, "It is difficult to imagine that the dining activities underground are not creating significant changes in the cave's delicate ecosystem."[474]

Professionals from other parks and organizations also commented regarding potential environmental damage and the Park Service's responsibility to prevent such damage. Meghan Hicks of Big Bend National Park in Texas commented after a visit, the

---

Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 32: Underground Lunch Removal Correspondence May-June; George Crump also participated in a council vote to back the concession, "Council Vote To Back Caverns Concessions," *Carlsbad Current-Argus*, May 10, 1993 Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.

[472] James H. Gramann, William P. Stewart, and Yong-geun Kim, Visitor Response to Concession-Management Alternatives at Carlsbad Caverns National Park, Final Report Prepared for Carlsbad Caverns National Park, National Park Service (Southwest Region), April, 1989, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 8: Visitor Survey Final Report, 134.

[473] Visitor Comment, April 18, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.

[474] Richard Zopf, Appendix A Summary of Public Comments and National Park Service Responses, Underground Concession, Carlsbad Caverns National Park Environmental Assessment, Draft June 23, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 32: Underground Lunch Removal Correspondence May-June.

operations underground "disfigure[ed] the natural elements of the cave."[475] Similarly, Jennifer Fowler-Propst, Field Supervisor of U.S. Fish and Wild Life Service voiced her support, on behalf of the organization, for removing the Underground Lunchroom in a letter to Superintendent Frank Deckert. The organization detailed concern for arthropod and microorganism populations in the cave due to the effects of food material and atmospheric changes.[476]

Visitors and respondents also expressed concern the Underground Lunchroom did not visually conform to the natural surroundings. While the first concern, that of ecosystem preservation, can be attributed to newly developed scientific notions non-existent during the early development phase of the caverns, the aesthetic concern demonstrates shifting mindsets about the appropriateness of such a facility in a natural area. During the early years of development, the modernity of the facility was celebrated, and accounts detailed the way in which visitors viewed the introductions to the caves as harmonious. By the late twentieth century, attitudes had changed. One respondent to the 1989 visitor study targeted the commercialization, writing, "Too much commercialization around and in the caverns is tearing the caverns down."[477] Another requested, "Please eliminate the underground souvenir stand. It is ugly and tacky. If people need to buy such trash, let them do it above ground."[478]

---

[475] Meghan Hicks, June 28, 2002, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 12: Visitor Comments 1996-2006.
[476] Jennifer Fowler-Propst to Frank Deckert, May 10, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.
[477] James H. Gramann, William P. Stewart, and Yong-geun Kim, Visitor Response to Concession-Management Alternatives at Carlsbad Caverns National Park, Final Report Prepared for Carlsbad Caverns National Park, National Park Service (Southwest Region), April, 1989, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 8: Visitor Survey Final Report, 130.
[478] Ibid.,142.

Many visitors filling out evaluations repeated these sentiments as well. A visitor by the name of J. Michael Orley asked the park service to "Please remove the 'underground shopping mall.' I visit national parks to see natural beauty, not to be hawked cheap tourist souvenirs."[479] Another visitor, Gabriel Fenigsohn wrote, "The beauty and grandeur of the caverns is compromised by the presence of a gift shop and snack bar at the bottom of the natural treasure. Visitors can purchase souvenirs and consume sandwiches above in your spacious visitors center there is no need for these services in the cavern itself. Please consider removing the unsightly blemish on the otherwise awe-inspiring park."[480] Unlike visitors eighty years earlier, visitors now felt the Underground Lunchroom "detract[ed] from the appreciation visitors should come away with of the beauty, awe and respect for nature," and "destroy[ed] the ambiance of being in a fabulous cavern."[481] One visitor compared the lunchroom to "building a large concession stand halfway down the Bright Angel Trail in the Grand Canyon. It does not enhance the natural experience of the visitor, but is rather a gross distraction."[482] Contrasting earlier metaphorical language regarding man's improvement on nature's work, a respondent named Jean T. Blanchard wrote, "Some things cannot be improved

---

[479] J. Michael Orley, September 9, 2001, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 12: Visitor Comments 1996-2006.
[480] Gabriel Fenigsohn, May 29, 2002, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 12: Visitor Comments 1996-2006.
[481] Visitor Comment, March 29, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993; K. K. Sinker, April 24-25, 2003, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 12: Visitor Comments 1996-2006.
[482] David Jagnow to Senator Pete V. Domenici, September 1, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 34: Underground Lunch Removal Correspondence Aug-Oct 1993.

upon by the addition of man-made 'conveniences.' Carlsbad Caverns is one of those places."[483]

Some visitors felt quite passionately about this issue, describing their antipathy towards the Underground Lunchroom in extreme language. One visitor in 1998 urged the Park Service to "Remove the cafeteria—This is a terrible blight!"[484] Another in the same year wrote, "THE SNACK-BAR IS HORRIBLE PLEASE REMOVE IT—HOW CAN YOU ASK PEOPLE NOT TO DISTURB THE CAVE WITH THIS HYPOCRITICAL MONSTROSITY???" [emphasis original][485] In a letter responding to the environmental assessment, visitors named Neil and Nina Reich described the lunchroom as a "blight," an "abomination," and as a form of "desecration."[486] These impassioned reactions show, by the end of the twentieth century, many visitors viewed the high level of accommodation and modernity present in Carlsbad Caverns, which in the early years helped draw visitation, as ideological threats to their enjoyment of nature at the caves. These views, while not held by all visitors, represent a marked change in environmental attitudes from earlier generations.

In contrast, many visitors and respondents supported the option of leaving the lunchroom intact. One common reason, particularly noted in the 1989 survey where many people voiced no strong opinion on the issue prior to the survey, involved the

---

[483] Jean T. Blanchard, Appendix A, Summary of Public Comments and National Park Service Responses Underground Concession, Carlsbad Caverns National Park Environmental Assessment, DRAFT June 23, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 32: Underground Lunch Removal Correspondence May-June.
[484] No Name, No Date, 1998, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 12: Visitor Comments 1996-2006.
[485] No Name, No Date, 1998, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 12: Visitor Comments 1996-2006.
[486] Neil and Nina Reich, Appendix A, Summary of Public Comments and National Park Service Responses Underground Concession, Carlsbad Caverns National Park Environmental Assessment, DRAFT June 23, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 32: Underground Lunch Removal Correspondence May-June.

convenience of the stopping point, especially for families traveling with children or for tourists with medical needs. The report noted 53.2 percent of the sample traveled with children under the age of twelve, and more of these visitors than those without children purchased food underground.[487] One respondent described the particulars of her situation:

> I walked downed with a 7 yr. &10 yr. old. At the bottom we were all starved—they were tired. We sat for 30 min—had a boxed lunch—admired the surroundings and talked about the Caverns while we sat eating. Children need to eat, mom's [sic] need to sit, it worked out great. Everyone was "renewed" with minimum effort and time lost. The box lunches were filling with no fuss and there was plenty of room to sit.[488]

Another parent noted his or her children were "frantic for something," and argued anyone traveling with children needs to be able to feed them.[489] One person even suggested prohibiting small children from undertaking the full trip through the caves if the lunchroom were removed.[490] Along with concern for young children, some respondents also expressed worry over diabetics making the trip.[491] One man, a diabetic himself, wrote a lengthy letter to the superintendent about the necessity of having the lunch stop for diabetics.[492] However, the National Park Service stated they would still provide a "rest area" with benches, and would monitor the results regarding health and well-being,

---

[487] James H. Gramann, William P. Stewart, and Yong-geun Kim, Visitor Response to Concession-Management Alternatives at Carlsbad Caverns National Park, Final Report Prepared for Carlsbad Caverns National Park, National Park Service (Southwest Region), April, 1989, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 8: Visitor Survey Final Report, iii, vii.
[488] James H. Gramann, William P. Stewart, and Yong-geun Kim, Visitor Response to Concession-Management Alternatives at Carlsbad Caverns National Park, Final Report Prepared for Carlsbad Caverns National Park, National Park Service (Southwest Region), April, 1989, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 8: Visitor Survey Final Report, 133.
[489] Ibid., 142.
[490] Ibid., 134.
[491] Ibid., 127, 146.
[492] Jim Cobble to Frank Deckert, September 30, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, 34: Underground Lunch Removal Correspondence Aug.-Oct. 1993.

if the lunchroom were removed, and adjust the decision if necessary.[493] David J. Simon of the National Parks and Conservation Association also rebutted the idea of the lunchroom as a necessity, questioning, "Where else in the National Park Service is there a concession smack in the middle of a three-mile hike through the prime park resource. How about putting concession stands every three miles along the Colorado River in the Grand Canyon?"[494]

In addition to necessity as a motivation for retaining the lunchroom, many people who embraced the new ideals of environmentalism and prioritized resource protection in Carlsbad Caverns expressed their concern removal might actually cause more damage. This concern surfaced among survey respondents, as one participant responded he or she would like to see "whatever option keeps the cave in the most natural state. Problems arise with food & drink thus litter being carried in through. I'd hate to see this beauty marred!"[495] Others expressed the same opinion, particularly focusing on the fact that families with young children would need to bring snacks, which might lead to an increase of litter.[496] One man wrote to the superintendent with this concern; he stated, regardless of rules prohibiting it, people eat along the trails, leading to the influx of raccoons in the caves.[497]

---

[493] Finding of No Significant Impact Decision Record for the Underground Concession Carlsbad Caverns National Park, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 32: Underground Lunch Removal Correspondence, Aug.-Oct. 1993.
[494] David J. Simon, "Carlsbad Cave, Concessions, and National Parks," Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 38: Underground Lunch Removal Correspondence Oct. 1993-Mar. 1994.
[495] James H. Gramann, William P. Stewart, and Yong-geun Kim, Visitor Response to Concession-Management Alternatives at Carlsbad Caverns National Park, Final Report Prepared for Carlsbad Caverns National Park, National Park Service (Southwest Region), April, 1989, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 8: Visitor Survey Final Report, 143.
[496] Ibid., 130, 143.
[497] Miles M. Caddell to Frank Deckert, May 12, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 32, Underground Lunch Removal Correspondence May-June.

A representative of the "Carlsbat Cavers Restoration Crew," Larry Weston, wrote a letter to Superintendent Deckert substantiating the claim food carried into the caves from the surface contributed substantially more to the total trash in the caves than items purchased at the lunchroom. As a representative of an organization providing volunteers to clean up trash from the caves, Weston claimed in the Big Room, virtually none of the trash his group removed could be directly attributed to lunchroom sales. Carried-in snacks, Weston warned, would be "covertly consumed and covertly trashed."[498] Reactions such as this, although disagreeing with the National Park Service's plan for action, show the increased concern for environmentalism.

Some visitors believed the excessive development within the caves removed Carlsbad Caverns from the definition of a "natural" site, and therefore, viewed efforts to remove the lunchroom as useless in the face of all the other developments. As one respondent to the Carlsbad Chamber of Commerce survey stated, "I find it amusing that the NPS would consider the removal of the concession facilities to give a better 'impression of a natural cave,' and yet leave elevators, man-made rails, and other added facilities. If the man-made facilities were removed, there would be no visitation."[499] Similarly, another visitor wrote, in a letter to the Superintendent, "I sympathize with the idea of maintaining the cave in as natural a state as possible, but with paved trails, lights, restrooms, and elevators, that just isn't possible…"[500] Several respondents claimed the presence of the nearby undeveloped Lechuguilla Caves and the unaltered lower portions

[498] Larry Weston to Frank Deckert, May 11, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993; The spelling of "Carlsbat" is correct, as this was the name of the organization.
[499] Results of the National Park Service Proposal to Reduce or Remove the Underground Lunchroom Facilities at Carlsbad Caverns Survey as of 5/17/93, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 33: Underground Lunch Removal Correspondence, June-Aug. 1993.
[500] Jim Cobble to Frank Deckert, September 30, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 34: Visitor Comments Aug.- Oct. 1993.

of Carlsbad Caverns, negated the need to preserve a previously altered cavern as "pristine."[501] One visitor insistently pointed out the contradiction of the desire to remove the tourist accommodations, noting "visitors themselves are 'out of place in this natural setting' and if you intend to accommodate visitors then you need to remember they are human."[502] In a letter to the *Carlsbad Current-Argus*, a man named Jim Pryor sarcastically voiced the same opinion: "If the National Park Service wants everything to be just like nature made it, I say build a 10-foot tall chainlink—or better yet, a great wall—around all national parks."[503]

In addition to the concern for the consequences of removing the lunchroom and the feeling Carlsbad Caverns no longer qualified as a truly "natural" site, therefore rendering it not worth restoring to a more natural condition, other motivations for resisting the removal of the Underground Lunchroom speak to different contemporary perspectives of the environment and its value. Many people, particularly residents of Carlsbad, wrote about concern for the local economy and the financial well-being of the Cavern Supply Company.[504] Many respondents to the Carlsbad Chamber of Commerce

---

[501] Ibid.; "The Right to Eat Lunch at Caverns," May 5, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.
[502] Paula Moore, May 12, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.
[503] Jim Pryor, "Give us Land, Give Us Lunch," *Carlsbad Current-Argus*, May 11, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993; Environmental historian William Cronon also points out this paradox of environmental opinions in William Cronon, "The Trouble with Wilderness; or, Getting Back to the Wrong Nature," in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Company, Inc., 1996), 69-90; Cronon states, "If nature dies because we enter it, then the only way to save nature is to kill ourselves… The tautology gives us no way out: if wild nature is the only thing worth saving, and if our mere presence destroys it, then the sole solution to our own unnaturalness, the only way to protect sacred wilderness from profane humanity, would seem to be suicide. It is not a proposition that seems likely to produce very practical or positive results," 83.
[504] As Samuel Hays explains, the environmental movement met opposition from its inception based on economic motivations; those committed to "material-development objectives" often viewed environmental objectives as superfluous and often extreme, Samuel Hays, "The Environmental Movement," 221.

Survey indicated residents feared jobs would be lost as a result of a closure.[505] The National Park Service noted the "Community Forum" radio talk show on the local radio station speculated up to forty jobs would be lost if the Underground Lunchroom closed, which particularly agitated residents, as local potash mines had just announced layoffs of up to 200 miners.[506] One resident commented the youth of Carlsbad greatly benefited from the available jobs in the Underground Lunchroom, stating, "For many of these youth, it is their first job experience which is valuable to them. In a time when people need jobs, it is irrational for the government to eliminate jobs that are provided by private enterprise."[507] Another, in an article for the *Carlsbad Current-Argus*, mentioned thousands of students helped pay their way through college by serving tourists in the Underground Lunchroom.[508]

Along with the concern for the economy, many respondents turned their concerns towards politics and anti-environmentalism. One respondent described his fear of political interference in a letter to the Superintendent:

> The environment has become a very popular flag to wave. Since the new president [Bill Clinton] is having serious difficulty with his economic package, we assume the word is out to divert attention by going after environmental issues, no matter how ridiculous. For over 60 years, the underground lunch room has presented no adverse environmental influence. Suddenly it becomes a hazard and the sale of postcards and T-shirts presents a serious danger. Really, now![509]

---

[505] Untitled, *Carlsbad Current-Argus*, May 3, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.
[506] Appendix A Summary of Public Comments and National Park Service Responses, Underground Concession, Carlsbad Caverns National Park Environmental Assessment, Draft June 23, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 32: Underground Lunch Removal Correspondence May-June.
[507] Carl J. Manganaro to Superintendent, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.
[508] "The Right to Eat Lunch at the Caverns," May 5, 1993 *Carlsbad Current-Argus*, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.
[509] Robert A. Spencer to Superintendent, May 7, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.

Responses to the Chamber of Commerce poll repeated this tone, and rather than responding to the issue, Carlsbad citizens attacked the consideration of lunchroom removal as part of Bill Clinton's political agenda. The residents responding to the polls used derogatory language towards those interested in supporting the Park Service's agenda, referring to anyone in favor of removal of the lunchroom as "tree huggers," "eco-freaks" and "more of Al Gore's 'Save the Earth' folks."[510] The political angle of resistance towards removing the Underground Lunchroom proved to be the most polarizing and suggests, although a significant portion of Americans shifted their thinking towards environmentalism in the late twentieth century, another faction remained uninterested in environmental issues, especially when they were at odds with economic agendas. This reflected larger ideological divisions within American political culture during these years.

More interesting than this refrain of pitting the environment against the economy, a significant amount of resistance to the removal of the Underground Lunchroom centered around ideas reflecting environmental attitudes from the early years of the cave's development. Numerous visitors and respondents argued the Underground Lunchroom, in fact, fit harmoniously within the natural setting, enhanced visitor experience, and became part of the experience at Carlsbad Caverns. Amid the changing attitudes towards the environment, split between the focus on ecosystem protection and the dismissal of "the environment" as a political buzzword, notions from the unique

[510] Results of the National Park Service Proposal to Reduce or Remove the Underground Lunchroom Facilities at Carlsbad Caverns Survey as of 5/27/93, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 33: Visitor Comments June- Aug. 1993

period of Carlsbad Caverns' development resurfaced, arguing modernity and nature could still exist harmoniously.

One of the most frequently repeated claims from this perspective asserted dining 750 feet underground constituted a novelty, especially to children. In the 1989 survey, one visitor responded that by removing the Underground Lunchroom, "you would lose the joy of eating down in the caverns. That is something that the children love to tell there [sic] friends about." Another respondent repeated this sentiment, noting many visitors "look forward to eating 750 feet underground—to tell their friends at home."[511] Residents of Carlsbad also utilized this justification; one contributor to the local newspaper wrote, "Generations of kids from all over the country have returned to their schools in the fall to proudly proclaim, 'Hey, man, I ate lunch 750 feet beneath the earth's surface. It was b-a-a-a-a-d!'"[512] Another visitor detailed a personal experience with his own children, in an attempt to gain sympathy for the cause of retaining the lunchroom; Tom Anderson of Bedford, Texas, in a letter signed also by his wife and two sons wrote,

> Both of my children were thoroughly excited when they toured the caverns at a young age when they learned they were going to be able to "eat lunch with the bats" after their walk. Eating lunch 700 feet underground is a unique experience for a young child—one which they looked forward to eagerly. It was one way of keeping their attention focused on the trail ahead. I can't tell you how many times I've answered the question "how far is it daddy to the bat lunchroom?" It was a question

[511] James H. Gramann, William P. Stewart, and Yong-geun Kim, Visitor Response to Concession-Management Alternatives at Carlsbad Caverns National Park, Final Report Prepared for Carlsbad Caverns National Park, National Park Service (Southwest Region), April, 1989, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 8: Visitor Survey Final Report, 128, 129.
[512] "The Right to Eat Lunch at the Caverns," May 5, 1993 *Carlsbad Current-Argus*, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.

> I never minded answering no matter how many times it was asked because I knew my children were taking an interest in the caverns.[513]

By using the rhetoric of children's enjoyment, these respondents attempted to latch onto the idea of preserving National Parks for future generations by claiming this element of the park, which they considered enjoyable, must also be preserved for their children.

Many viewed their own experiences in the lunchroom as children nostalgically, as the Executive Vice President of Carlsbad National Bank wrote,

> As a child, one of my fondness [sic] memories of going to the Caverns was having one of those box lunches 750-feet below ground. I went back to my elementary school in Clovis and told stories about having lunch that far down under the ground. If the lunch concessions are removed, you will be depriving kids, such as I was, of that opportunity of having that experience.[514]

Another, repeating the same refrain, stated his favorite part of the cave trip in 1953 when he visited as a young boy was "picnicking underground."[515] One reviewer on Yelp, a website where people can share their experiences at restaurants, businesses, and tourist sites, reviewed his trip at Carlsbad Caverns stating, "one of my biggest thrills was having lunch with my boy in the underground lunchroom where I ate with my dad forty years ago."[516]

Along with the memory of dining underground, many respondents had other memories of unique experiences within Carlsbad Caverns. One man who wrote to the Superintendent had memories of the 1968 State Student Council Convention, which

---

[513] Tom Anderson, Cheryl Anderson, Trey Anderson, and John Anderson to Honorable Bruce Babbit, August 23, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 34: Underground Lunch Removal Correspondence Aug-Oct 1993.
[514] Ronnie Firestone to Superintendent, May 12, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.
[515] Jim Cobble to Frank Deckert, September 30, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 34: Underground Lunch Removal Correspondence Aug-Oct 1993.
[516] Ross W., Yelp Review of Carlsbad Caverns National Park, December 29, 2008, http://www.yelp.com/biz/carlsbad-caverns-national-park-carlsbad.

involved a dance in the Underground Lunchroom. He referred to this event as "the most remembered event of that era."[517] Another woman, Nancy Jones Welch, recalled a birthday celebration for her sister, during which her family "smuggled in" a birthday cake "with the help of a Parks employee." The employees in the lunchroom lit the candles, and her family, along with other diners in the lunchroom sang "Happy Birthday" to her sister. She acknowledged her tale had nothing to do with the environmental impact of the lunchroom, but she still requested its preservation due to this happy memory from the lunchroom.[518]

Some respondents also cited the historical significance of the lunchroom.[519] The National Park Service rebutted this claim by noting the original 1927 lunchroom had previously been removed when the lunchroom relocated in 1929-1930. Furthermore, the National Park Service removed the 1930 facilities in 1975-1976, to modernize the facility, and therefore, while "the 'idea' is historic, the actual facilities are not considered historic."[520]

In addition to the defense of novelty for the sake of children and nostalgic memories, many respondents argued the experience of eating in the lunchroom became an integral part of the cavern's identity and added to the attraction of the caves. This idea echoes the sentiment apparent in news coverage after the installation of the first elevator

---

[517] Dave Sepich to Frank J. Deckert, N.D. Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30: Visitor Comments Mar-May 1993.
[518] Nancy Jones Welch, May 29, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 38: Underground Lunch Removal Correspondence, Oct. 1993- Mar. 1994.
[519] Miles M. Cadell to Frank Deckert, May 12, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 32, Underground Lunch Removal Correspondence May-June;
[520] Results of the National Park Service Proposal to Reduce or Remove the Underground Lunchroom Facilities at Carlsbad Caverns Survey as of 5/27/93, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 33: Visitor Comments June- Aug. 1993; Appendix A Summary of Public Comments and National Park Service Responses, Underground Concession, Carlsbad Caverns National Park Environmental Assessment, Draft June 23, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 32: Underground Lunch Removal Correspondence May-June.

and reflects a perspective of the environment as integrated with modern elements. Residents of Carlsbad, in particular, viewed the lunchroom as an added draw for visitors. A resident from Carlsbad wrote to the *Carlsbad Current-Argus* asserting the lunchroom's role in advertising the caves: "The lunchroom in Carlsbad Caverns is a big attraction to the tourists that visit us every day. It's advertised world-wide, and I feel that without the underground lunchroom that Carlsbad Caverns would suffer more damage."[521] A resolution passed by the City Council repeated the connection between the lunchroom and tourist dollars, stating the city would lose an important attraction if the lunchroom closed.[522] Jack White, Jr. of White's City, a nearby commercial facility which accommodated many visitors to the caverns, addressed the Superintendent, claiming the inherent value of the lunchroom as an addition to the natural experiences, noting, "Not everyone has a complete aversion to concessions and commercial facilities in National Parks. In fact the commercial facilities at some National Parks, i.e. Grand Canyon and Yosemite hotels, are attractions in their own right. The underground lunchroom in Carlsbad Caverns is in this class also. It is not merely a convenience to visitors, but rather an experience not available anywhere else in the world."[523] While White's business position likely influenced his opinion, his assertion of the lunchroom as a complementary part of the experience runs parallel to earlier rhetoric surrounding the caves.

---

[521] Untitled, *Carlsbad Current-Argus,* May 4, 1993 Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30 Visitor Comments Mar-May 1993.
[522] "Council Vote To Back Caverns Concessions," *Carlsbad Current-Argus*, May 10, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30 Visitor Comments Mar-May 1993.
[523] Jack White, Jr. to Frank Deckert, May 11, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 30 Visitor Comments Mar-May 1993.

Visitors to Carlsbad Caverns similarly described the Underground Lunchroom as part of their experience. One visitor described her attachment to the lunchroom, noting "I do not see why the Lunch[room] has to close. It is a nice, fun experience to eat 750 ft underground. People need a place to rest, eat, drink, and buy souvenirs. I do not see it as an environmental problem. I do not see it as any kind of problem. The Luncheon room is a good experience. It is ½ the fun experience" of visiting the Caverns.[524] Another visitor stated, "It's simply part of Carlsbad, albeit manmade."[525]

Some tourists continued to view the elevators in this way as well, repeating the type of descriptions present in the early era, evincing this rhetoric as not unique to the lunchroom issue. Yelp reviewer, Kelly C. of Irvine California remarked on the beauty of the caves, as well as the "cool" elevator, noting,

> This is nature at … its BEST. The caves were amazing. Just like the ones you see in the movies. You can either hike in and out of the cave or take the elevator ride. It was very peaceful and relaxing hike. The hike is not too steep, so it is a good walk… The elevator ride going back up was very cool. You can have the attendant turn on the external light. The walls will light up, so you can see the layers of rocks and colors as you rise back up to the surface.[526]

This visitor's enthusiastic perspective also mirrored the manner in which earlier visitors perceived technology's capability to enhance nature; she noted the opportunity to view the geological striations the elevator provided, similar to when Frank Ernest Nicholson noted the inherent colors only electric lighting revealed. Another visitor, Sandy N. of Sacramento, California described the elevator ride as "really fast and cool to see us flying

---

[524] Farrah Garcia, Visitor Comment, August 23, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 37: May 1993- Jan 1994 Underground Lunch Removal; Based on the handwriting, this evaluation seems to be written by an adolescent girl.
[525] Tom Anderson, Cheryl Anderson, Trey, Anderson, and John Anderson to Honorable Bruce Babbit, August 23, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 34: Underground Lunch Removal Correspondence, Aug.- Oct. 1993.
[526] Kelly C., Yelp Review of Carlsbad Caverns National Park, February 1, 2015, http://www.yelp.com/biz/carlsbad-caverns-national-park-carlsbad.

up between the rocks."[527] While a large portion of the population shifted towards embracing a more natural experience, the contemporary descriptions of the elevators as an added attraction at the caves show a sub-set of the American population continued to view the natural and technological features as harmonious. The contemporary perspective of the elevators as an added attraction to the caves signifies the descriptions of the lunchroom as such transcended economic and political motivations, and indeed provided evidence a significant minority of the population continued to view nature and modernity as compatible.

Supporters of the National Park Service's ideals rebutted the idea of the cave as a suitable location for modern features, stating while people might find this type of attraction interesting or thrilling, a National Park is not a suitable location for an Underground Lunchroom. One visitor wrote in a letter to the Superintendent:

> Just this morning I read an article by a Russian visiting Carlsbad Caverns in which he describes his first moment in an American cave as being met by "the bright lights of souvenir shops" and not "the darkness and huge forces of Nature" he expected. He had just entered the Caverns by the elevator. What a sad introduction to one of America's finest natural features and National Parks! … I want to express my support of your efforts to minimize the "Disneyland" environment of the Lunch Room area and I hope that all souvenirs and food vending within the cave will be stopped in the near future. All visitors, including the elderly and physically impaired, should be entitled to experience the Cavern as a monument to the beauty and nature of geologic processes and not as a tribute to capitalism.[528]

Other visitors utilized the language of Disney as well, boldly stating the National Park Service should not maintain "thrills" better suited to a theme park. A Carlsbad resident stated, in response to the Chamber of Commerce Survey, "I think if visitors want a novel

---

[527] Sandy N., Yelp Review of Carlsbad Caverns National Park, September 7, 2011, http://www.yelp.com/biz/carlsbad-caverns-national-park-carlsbad.
[528] Loise D. Hose to Frank Deckert, October 10, 1993, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 37: May 1993- Jan. 1994 Underground Lunch Removal.

experience, they should go to Disneyland. The park should be a natural and geological park—not a place where you can buy an expensive t-shirt underground."[529] One visitor responding to the 1989 visitor survey suggested the "Disney people" might actually integrate the lunchroom into the natural scenery better than the National Park Service, to "accomplish naturalness."[530] The Park Service even reported a visitor once asked rangers how long Walt Disney took to make the caves.[531] The comparison between Carlsbad Caverns and a Walt Disney theme park mimics the positive associations earlier visitors made between the elevators and an amusement park. In the early period no visitors complained about the theme park-like elements, whereas in the 1980s and 1990s visitors split on whether this issue presented an attraction or a detriment to the caves. This evolution shows a definitive shift in environmental perspectives, yet evinces remnants of the older ways of thinking.

David J. Simon of the National Parks and Conservation Association authored an important essay on the need to remove the "thrills" from the parks to better focus on preservation. He compared the lunchroom to the "firefalls" that historically presented a major attraction at Yosemite National Park. The National Park Service ended the firefalls in 1968, and Simon noted while people found these thrilling, the National Park Service's end to the practice constituted a "positive step for preservation and a major symbolic victory over the deeply-entrenched and powerful park concessioner." Simon referred to

---

[529] Results of the National Park Service Proposal to Reduce or Remove the Underground Lunchroom Facilities at Carlsbad Caverns Survey as of 5/17/93, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series 5, Folder 33: Underground Lunch Removal Correspondence, June-Aug. 1993.
[530] James H. Gramann and William P. Stewart, "Visitor Response to Concession Management Alternatives at Carlsbad Caverns National Park," Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 6: Environmental Assessment, 140.
[531] "'Is the Whole Cave Underground? And Other Unanswerable Gems- Actual Visitor Questions Carlsbad Caverns National Park," 1981, Carlsbad Caverns Administrative Records, Series VII, Folder 1: Interpretive.

the underground concession at Carlsbad as "a vestige of a bygone era," which continued to exist long after the Park Service terminated the firefalls, as well as ended many other practices such as "shooting predators, … sowing the parks with non-native plant and animal species, … using most deadly pesticides, … and for the most part, stopped locating visitor and concessions facilities in sensitive areas—like the middle of world-class caves like Carlsbad Caverns." Simon pointed out, while many people enjoyed the firefalls, and continued to enjoy the lunchroom, "there's plenty to do in national parks aside from pyrotechnics and shopping."[532]

In February of 1994, Superintendent Frank J. Deckert spoke at Motel Stevens in Carlsbad, explaining the park's ultimate decision to remove the underground lunch facilities. He recounted the Concessions Policy Act of 1965, which limited public facilities and service in national parks to those proving "necessary and appropriate for public use and enjoyment" of the park in which they existed, and limited the developments to locations causing the least damage to the park's valued elements. After outlining the policies, he announced the National Park Service determined the lunch facilities neither necessary, nor appropriate for that location, because the elevator provided instantaneous transportation to above-ground facilities, and because the underground lunchroom was "located in the heart of the primary resource of the Carlsbad Caverns itself." He therefore announced the decision to remove "all commercial concession facilities underground [including] sales of t-shirts, film, candy, postcards, and many other items." Similar to Simon, Deckert likened the lunchroom to the defunct firefalls, stating:

---

[532] David J. Simon, "Carlsbad Caves, Concessions, and National Parks," Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 38: Underground Lunch Removal Correspondence, Oct. 1993-Mar. 1994.

> I won't be able to take my children and grandchildren to see the firefall, but I can tell them about it and explain to them the difference between natural attractions and manmade attractions and what national parks are really set aside to preserve. The reason Congress set aside Carlsbad Caverns National Park was not so that people could eat 750 feet underground. The reason was to enable people from all over the world to stand in awe and to be inspired by the natural beauty and the forces that created it.[533]

Deckert's statement spoke to the changes in environmental thought regarding natural and man-made attractions and the departure from the unilateral feeling of compatibility evident in Carlsbad's early history.

Despite the National Park Service's decision in 1994 to close the Underground Lunchroom, the lunchroom remained open and continues to operate in 2016, albeit on a reduced scale (Fig. 7 and Fig. 8). New Mexico Congressman Joe Skeen and Senators Pete Domenici and Jeff Bingaman resisted the removal of the lunchroom, both on the grounds of insufficient evidence the lunchroom caused significant damage, and because they believed the lunchroom played a large role in visitor experience and served as an additional draw to the caves. Due to these issues, along with the abundance of political and economic issues expressed particularly by the local residents of Carlsbad, Joe Skeen recommended the Congressional Subcommittee dealing with the appropriations for the National Park Service work language into the appropriation prohibiting removal of the lunchroom.[534] Following this recommendation, Congress wrote an amendment into the

---

[533] Frank J. Deckert, Statement by Frank J. Deckert, Superintendent Carlsbad Caverns National Park at Public Meeting Regarding the Decision to Remove the Underground Concession Facilities at Carlsbad Caverns National Park, Motel Stevens, Carlsbad, NM, February 7, 1994, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 37, Visitor and Public Comments, May 1993-Jan. 1994, Underground Lunch Removal.

[534] Congress of the United States, Skeen, Domenici, and Bingaman Seek Further Explanation of Cavern Lunch Room Decision, February 28, 1994, Carlsbad Caverns National Park Concessions Records, 1927-2008, Series V, Folder 37, Visitor and Public Comments, May 1993-Jan. 1994, Underground Lunch Removal; Joe Skeen to Chairman Yates, May 19, 1994, Carlsbad Caverns National Park Concessions

1995 Fiscal Year Department of the Interior Appropriations Act, stipulating, "None of the funds made available by this Act may be obligated or expended by the National Park Service to enter into or implement a concession contract which permits or requires the removal of the underground lunchroom at Carlsbad Caverns National Park." This prohibition continued with subsequent appropriations.[535] In 2007, the National Park Service awarded the concession contract to a new company, Carlsbad Cavern Trading, owned by Armand Ortega, who bid in competition with the Cavern Supply Company. As one of the criteria for selection, the National Park Service analyzed the capability of the concessionaire to protect and conserve park resources.[536]

On the Carlsbad Caverns Trading Company's website, the company made a point to emphasize their consciousness of the environment and their potential impact upon the caverns. The company explained the reduced offerings of the lunchroom as an attempt to protect the natural resources, stating:

> It is still possible to eat in the Caverns to this day. Visitors can purchase a meal and eat at a personal lantern lit table. To protect the cave, food service is limited to sandwiches, salads, yogurt, parfaits, and other food that does not involve cooking in the caverns. The days of cooking in the caverns have given way to a greater sense of protecting the cave eco-system with less impactful food. However, visitors can still enjoy much needed warm drinks such as coffee or hot chocolate. Sweatshirts, t-shirts, and a small selection of other items are for sale, though underground selections are somewhat limited to protect the cave.[537]

Records, 1927-2008, Series V, Folder 37, Visitor and Public Comments, May 1993-Jan. 1994, Underground Lunch Removal.

[535] Department of the Interior Appropriations Act, FY 1995, Public Law 103-332, September 30, 1994, 108 Stat. 2537, Sec. 311, 204, http://www.nps.gov/legal/parklaws/Supp_VII/volume_3-02_appropriations.pdf.

[536] "Carlsbad Cavern Trading Selected for Award of Concession Contract," June 26, 2007, http://www.nps.gov/cave/learn/news/20060626_concessions_contract.htm.

[537] "Underground Lunch Room," Carlsbad Caverns Trading Company: Responsible Retailing & Sustainable Foodservice, 2010 Ortega Family Enterprises, http://www.carlsbadcavernstradingco.com/underground.php.

The Carlsbad Caverns Trading Company also noted on their website they intend to take steps to reduce their environmental footprint, as well as to remodel their underground facilities in a manner proving sustainable in the protection of Carlsbad Caverns.

In addition to the description of the company's environmentally conscious activities at Carlsbad, the company made a further point of detailing their "green" efforts at large. Among their "environmental commitments," the Carlsbad Caverns Trading Company lists: purchasing electricity from renewable sources, utilizing environmentally friendly products and packaging, reusing or recycling boxes and packing material, and instituting water preservation procedures.[538] By making the company's "green" efforts so conspicuously part of their identity, the Carlsbad Caverns Trading Company demonstrates while the lunchroom continues to exist, enough concern mounted surrounding its potential harms to warrant substantial response from the concessionaire.

While the political and economic issues certainly represented the most influential factor in the ultimate decision to preserve the Underground Lunchroom, the lingering idea that the manmade features complemented and enhanced the natural experience cannot be ignored. Despite the shift towards environmental preservation and eco-system awareness, numerous visitors and respondents showed a preference for leaving the Underground Lunchroom intact because they considered it part of the attraction of Carlsbad Caverns. Eating lunch 750-feet underground presented a unique experience in a natural site, which visitors fought to retain. The battle for the Underground Lunchroom demonstrates a carry-over in environmental attitudes from the earlier period of development at Carlsbad Caverns, during which visitors valued modernity and

---

[538] "Environmental Protection," Carlsbad Caverns Trading Company: Responsible Retailing & Sustainable Foodservice, 2010 Ortega Family Enterprises, http://www.carlsbadcavernstradingco.com/wethinkgreen.php.

technology to such a degree they viewed these values as harmonious and complementary with nature.

Figure 7

“Underground Lunchroom,” Photo by Author, January 2015.

Figure 8

"Underground Concession Stand," Photo by Author, January 2015.

CONCLUSION

The case study of the development of Carlsbad Caverns demonstrates a significant cultural penchant in the 1920s and 1930s for integrating modernity and technology into natural spaces. During a time when many Americans continued to significantly value nature in the face of rising industrial developments within the country, many also demonstrated a fascination with modernity. The enthusiastic embrace of developments along modern lines in this particular national park, to such an extent as to make the technological and modern features of the cave into part of the attractions, signifies a view of nature and technology as fully compatible and equally impressive during this particular era.

As a remote location, whose scenic features reached public knowledge only slowly, locals of the Carlsbad region placed heavy emphasis upon drawing tourist attention, and thus made swift developments to encourage visitation. Once the National Park Service took control of Carlsbad Cave as a national monument, the administration of the cave, first under William McIlvain, and later under Thomas Boles, focused not only on developing the caverns, but also on spreading knowledge of those developments. The earliest descriptions of the cave made by Robert Holly and Willis T. Lee suggested significant opportunity for development and included subtle references to the cave as a potentially modern space. By introducing trails, a lighting system, and an underground lunchroom, the local management of Carlsbad Cave and the National Park Service devoted significant energies and resources to making visitation seem feasible, and making the dark underground space, which required up to six hours to traverse, seem welcoming. Whereas visitors challenged development at other National Parks, and the

National Park Service itself generally focused on integrating any manmade features harmoniously to achieve the lowest degree of interruption, the impressive scale of the developments at Carlsbad led to their acceptance and even led visitors to view them as attractions to the caves.

News of the developed character of the caves reached the public slowly, since the National Park Service lacked advertising budget. For this reason, once Thomas Boles took over as Superintendent of the monument, he focused his energies not only on physical development, but also on forging relationships to make his progress well-known throughout the country. By impressing important newsmen and businessmen with advertising potential, Boles conferred his image of the caves' modernity to the *Los Angeles Times*, the Santa Fe Railway, and even the Coca Cola Company. Despite the bias East Coast media outlets held towards the caves as primitive and undeveloped, in a remote region of the country considered the last "uncivilized" area, Boles secured significant publicity in the *New York Times* by 1930, with the expedition of adventure-journalist Frank Ernest Nicholson. Though Nicholson's journalistic antics did not impress Boles and though Nicholson stretched the truth numerous times throughout his series, Boles recognized the importance of Nicholson's writings in spreading the word about Carlsbad Caverns. While Boles worried Nicholson's articles portrayed the caves as undeveloped and thoroughly un-modern, Nicholson utilized industrial language to describe the caves features and many times suggested "Nature" anticipated and even intended man's developments in this cave. His references to technology's rightful place within nature lay foundations for the public to appreciate, rather than oppose, developments at this site.

Shortly after Congress reclassified Carlsbad Cave National Monument as Carlsbad Caverns National Park, the Park Service began working towards the largest and most momentous development of the caves: the 750-foot elevator, completed in 1931. Whereas agitation for the elevator focused on the difficulty of the cave trip and the inability of city-dwelling Americans to complete a six-mile hike underground, reactions to the elevator's installation demonstrate its significance beyond necessity. The extremely limited degree of opposition to the elevator's installation, as well as the high proportion of visitors who utilized this feature, evince the popularity and acceptance of the elevator, but descriptions of this feature in the press show it as a triumphant accomplishment, one that rivaled the natural features of the caverns for tourist attention. The extremely successful reception of the large-scale elevator, along with the positive descriptions of the lighting system and lunchroom, demonstrate visitors embraced and celebrated modern and technological developments, and indeed integrated them into their ideological definition of what nature appropriately encompassed.

In the late twentieth century and into the twenty-first, many Americans' environmental attitudes changed, and the Park Service in particular shifted towards more thorough protection of biological resources. However, attitudes embracing the connections between nature and technology continued as a noticeable undercurrent during this period. During the controversy over the potential removal of the Underground Lunchroom, many visitors challenged the facility as inappropriate and detrimental to the cave's environment, yet many others argued it as a significant component of the cave's attraction. Visitors wrote to the National Park Service claiming children enjoyed the unique experience of dining underground and speaking of their own

enjoyment of this feature as a component of their understanding of what Carlsbad Caverns means. While economic and political factors certainly played into the desire to preserve the lunchroom, visitors' responses clearly demonstrate their arguments for the lunchroom went beyond those factors and encompassed an ideological conflation between the park's natural and manmade attractions.

This case study proves, contrary to popular views and several scholarly works defining technology and nature as opposing factors, Americans who toured the National Parks in the 1920s and 1930s, and a less significant subset of tourists from the 1980s to the 2010s viewed nature and modern features as fully compatible. This adds an important dynamic to understandings of American cultural attitudes towards the environment in these time periods, and further complicates the study of Americans' changing perspectives towards the environment.

BIBLIOGRAPHY

Archives:
Carlsbad Caverns National Park Administrative Records
Carlsbad Caverns National Park Concession Records, 1927-2008
Carlsbad Caverns National Park Facilities/ Maintenance Records, 1939-2002
Carlsbad Caverns National Park Historic Photograph Collection, 1863-2004
Carlsbad Caverns National Park Thomas Boles Papers, 1927-1971
Governor Seligman Papers, State Records Center and Archives, Santa Fe, New Mexico
National Archives, College Park Maryland

Government Documents:
Department of the Interior Appropriations Act, FY 1995, Public Law 103-332, September 30, 1994, 108 Stat. 2537, 204, http://www.nps.gov/legal/parklaws/Supp_VII/volume_3-02_appropriations.pdf.
The National Park Service Organic Act (16 U.S.C. sec. 3). 25 August, 1916. http://www.nps.gov/grba/parkmgmt/organic-act-of-1916.htm.
U.S. Congress, House. 71st Congress, 2nd sess. *Congressional Record* LXXII, Part 1 (December 2, 1929-December 21, 1929).

Magazines, Newspapers, and Newsletters:
Albuquerque Journal
Boise Statesman
Canyons & Caves: A Newsletter from the Resources Stewardship & Science Division
Carlsbad Argus
Carlsbad Current-Argus
Cavern City Chronicle
The Craftsman
Christian Science Monitor
El Paso Herald
El Paso Times
Los Angeles Times
Montana Post
Montana Standard
National Geographic
New Mexico State Tribune
New York Herald-Tribune
New York Times
Pacific Mutual News
Popular Mechanics Magazine
Santa Fe New Mexican
San Jose Mercury Herald
Scientific Monthly
Stockton Record

Wall Street Journal
Washington Post

Selected Websites:
http://www.carlsbadcavernstradingco.com/
http://www.facebook.com/Carlsbad-Caverns-National-Park
http://www.kob.com/
http://www.krqe.com/
http://www.nps.gov/cave/
http://www.shenandoahcaverns.com/
http://www.yelp.com/biz/carlsbad-caverns-national-park-carlsbad

Books, Theses, and Journal Articles:
Abbey, Edward. *Desert Solitude*. Tuscon, The University of Arizona Press, 1988. Third Edition.

Adams, Judith A. *The American Amusement Park Industry: A History of Technology and Thrills*. New York: Twayne Publishers, 1991.

Albright, Horace M., Marian Albright Schenck, and Robert M. Utley. *Creating the National Park Service,: The Missing Years*. Norman, OK: University of Oklahoma Press, 1999.

Albright, Horace M. and Robert Cahn. *The Birth of the National Park Service: The Founding Years, 1913-33*. Salt Lake City and Chicago: Howe Brothers, 1985.

Anderson, A. W. *The Carlsbad Caverns of New Mexico: Its History and Geology*. Gaby L. Bingham, 1928. Eighth Edition, ca. 1934.

Anderson, Nancy K. and Linda S. Ferber. *Albert Bierstadt: Art and Enterprise*. New York: Hudson Hills Press, 1990.

Anderson, Warwick. "The Trespass Speaks: White Masculinity and Colonial Breakdown." *The American Historical Review* 102, No. 5 (December 1997): 1343-1370.

Aron, Cindy S. *Working at Play: A History of Vacations in the United States*. New York: Oxford University Press, 1999.

Barringer, Mark Daniel. *Selling Yellowstone: Capitalism and the Construction of Nature*. Lawrence: University Press of Kansas, 2002.

Bastian, Robert W. "Tall Office Buildings in Small American Cities, 1923-1931." *Geografiska Annaler. Series B, Human Geography* 75, No. 1 (1993): 31-39.

Bednarek, Janet R. Daly. "The Flying Machine in the Garden: Parks and Airports, 1918-1938," *Technology and Culture* 46, No. 2 (April, 2005): 350-373.

Blodgett, Peter. "Selling the Scenery: Advertising and the National Parks, 1916-1933." In *Seeing & Being Seen: Tourism in the American West*, Edited by David M. Wrobel & Patrick T. Long. Lawrence: University of Kansas Press, 2001, 271-298.

Bogener, Stephen. *Ditches Across the Desert: Irrigation in the Lower Pecos Valley*. Lubbock, Texas: Texas Tech University Press, 2003.

Briggle, William J. and Henry L. Diamond, et al. *National Parks for the 21st Century: The Vail Agenda.* Vail, Colorado: Our National Parks: Challenges and Strategies for the 21st Century, and International Symposium, 1992.

Brown, Adrienne R. "Between the Mythic and the Monstrous: The Early Skyscraper's Weird Frontiers." *Journal of Modern Literature, 35*, No. 1, Re-assessing, Breaking, Transcending Genres (Fall, 2011): 165-188.

Brown, Dee. *The Gentle Tamers: Women of the Old West*. Lincoln: University of Nebraska Press, 1958.

Carlsbad Caverns: General Information for the Guidance of Visitors. Carlsbad, NM: Cavern Supply Company, 1932.

"Carlsbad Caverns New Mexico." Santa Fe Railway. July, 1928. Center for Southwest Research. University Libraries. University of New Mexico. http://elibrary.unm.edu/cswr/.

Carney, George O. "Grain Elevators in the United States and Canada: Functional or Symbolic?" *Material Culture* 27, No. 1 (Spring, 1995): 1-24.

Carr, Ethan. *Mission 66: Modernism and the National Park Dilemma.* Amherst, MA: University of Massachusetts Press, 2007.

----------. *Wilderness by Design: Landscape Architecture and the National Park Service*. Lincoln: University of Nebraska Press, 1998.

Catton, Theodore R. *National Park, City Playground: Mount Rainer in the Twentieth Century*. Seattle: University of Washington Press, 2006.

Chase, Alston. *Playing God in Yellowstone: The Destruction of America's First National Park*. New York: Harcourt Brace & Company.

Chew, Matt. "A Theme Park Grows Beneath the Ground." *The Boston Globe*. 6 February, 2000.

Clements, Kendrick A. "Politics and the Park: San Francisco's Fight for Hetch Hetchy, 1908-1913." *Pacific Historical Review* 48, No. 2 (May, 1979): 185-215.

Condit, Carl W. "Sullivan's Skyscrapers as the Expression of Nineteenth Century Technology." *Technology and Culture* 1, no. 1 (Winter, 1959): 78-93.

Cooper, Gail. *Air Conditioning America: Engineers and the Controlled Environment, 1900-1960*. Baltimore: Johns Hopkins University Press, 2002.

Corn, Wanda M. *The Great American Thing: Modern Art and National Identity, 1915-1935.* Berkeley, CA: University of California Press, 1999.

Cronon, William. *Changes in the Land: Indians, Colonists, and the Ecology of New England*. New York: Hill and Wang, 1983.

----------, ed. *Uncommon Ground: Rethinking the Human Place in Nature*. New York: W. W. Norton & Company, Inc. 1996.

Currell, Susan. *The March of Spare Time: The Problem and Promise of Leisure in the Great Depression.* Philadelphia: University of Pennsylvania Press, 2005.

Davidson, Lisa Pfueller. "Iceberg Rock Staircase." Washington, D.C.: Historic American Building Survey, National Park Service, Department of the Interior. 2013.

Deloria, Philip. *Playing Indian*. New Haven: Yale University Press, 1998.

De la Peña, Carolyn Thomas. *The Body Electric: How Strange Machines Built the Modern American*. New York: New York University Press, 2003.

Duchemin, Michael. "Water, Power, and Tourism: Hoover Dam and the Making of the West." *California History* 89, no. 4 (2009): 60-78, 87-89.

Enstad, Nan. *Ladies of Labor, Girls of Adventure, Working Women, Popular Culture, and Labor Politics at the Turn of the Twentieth Century*. New York: Columbia University Press, 1999.

Gelber, Steven M. *Hobbies: Leisure and the Culture of Work in America*. New York: Columbia University Press, 1999.

Gray, Lee E. *From Ascending Rooms to Express Elevators: A History of the Passenger Elevator in the Nineteenth Century*. Mobile, AL: Elevator World, Inc., 2002.

Grusin, Richard. *Culture, Technology, and the Creation of the National Parks.* New York: Cambridge University Press, 2004.

Harkin, Michael E. and David Rich Lewis, eds. *Native Americans and the Environment: Perspectives on the Ecological Indian*. Lincoln: University of Nebraska Press, 2007.

Harrison, Blake A. *The View from Vermont: Tourism and the Making of an American Rural Landscape*. Lebanon, NH: University Press of New England, 2006.

"Harvey Cars, Indian-detours." Santa Fe Railway. 1930. Center for Southwest Research. University Libraries. University of New Mexico. http://elibrary.unm.edu/cswr/.

Hays, Constance L. *The Real Thing: Truth and Power at the Coca-Cola Company*. New York: Random House, Inc., 2004.

Hays, Samuel P. "The Environmental Movement." *Journal of Forest History* 25, No. 4 (Oct., 1981): 219-221.

Henderson, James D. "Meals by Fred Harvey." *Arizona and the West* 8, No. 4 (Winter, 1966): 305-322.

Hirshler, Erica E. "The 'New New York' and the Park Row Building: American Artists View an Icon of the Modern Age." *American Art Journal* 21, No. 4 (Winter, 1989): 26-45.

Hughes, Donald J. *American Indian Ecology*. El Paso: Texas Western Press, 1983.

Irish, Sharon. "A 'Machine That Makes the Land Pay': The West Street Building in New York." *Technology and Culture* 30, No. 2 (April 1989): 376-397.

Jameson, Elizabeth. "Women as Workers, Women as Civilizers: True Womanhood in the American West." *Frontiers: A Journal of Women Studies* 7, No. 3, Women on the Western Frontier (1984): 1-8.

Jenson, Joan M. and Darlis A. Miller. "The Gentle Tamers Revisited: New Approaches to the History of Women in the American West." *Pacific Historical Review,* 49, No. 2 (May, 1980): 173-213.

Johnson, Jenny Marie, ed. *Exploration and Mapping of the National Parks*. American Library Association, Map and Geography Round Table, Occasional Paper No. 4. Winnetka, IL: Speculum Orbis Press, 1994.

Jones, Karen R. and John Wills. *The Invention of the Park: Recreational Landscape from the Garden of Eden to Disney's Magic Kingdom*. Cambridge: Polity, 2005.

Kaplan, Wendy, ed. *Designing Modernity: The Arts of Reform and Persuasion, 1885-1945.* New York: Thames and Hudson, 1995.

Kasson, John F. *Amusing the Millions: Coney Island at the Turn of the Century*. New York: Hill and Wang, 1978.

Kimmel, Michael. *Manhood in America: A Cultural History*. New York: The Free Press, 1995.

Kinsey, Joni L. *Thomas Moran's West: Chromolithography, High Art, and Popular Taste*. Lawrence: University Press of Kansas, 2006.

Krech III, Shepard. *Ecological Indians: Myth and History*. New York: W. W. Norton & Co., 1999.

Kroom, Jr., Joseph J. *The American Skyscraper, 1850-1940: A Celebration of Height.* Boston: Branden Books, 2008.

Kuzmiak, D. T. "The American Environmental Movement." *The Geographical Journal* 157, No. 3 (Nov., 1991): 265-278.

Louter, David. *Windshield Wilderness: Cars, Roads, and Nature in Washington's National Parks*. Seattle: University of Washington Press, 2006.

Lowitt, Richard. "The Hetch Hetchy Controversy, Phase II: The 1913 Senate Debate." *California History* 74, No. 2 (Summer, 1995): 190-203.

MacVaugh, Frederick Earle. "Preserving the Underground: The Creation of Carlsbad Caverns National Park, 1922-1930." M.A. Thesis, University of Texas at El Paso, 2000.

Maher, Neil M. *Nature's New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement*. New York: Oxford University Press, 2009.

Manno, Lois. *Visions Underground: Carlsbad Caverns Through the Artist's Eye*. Los Ranchos, NM: Rio Grande Books, 2009.

Marchand, Roland. *Advertising the American Dream: Making Way for Modernity, 1920-1940*. Berkeley, University of California Press, 1985.

Marx, Leo. *The Machine in the Garden: Technology and the Pastoral Ideal in America*. 35th Anniversary Edition. New York: Oxford University Press, 2000.

Mason, Kathy S. *Natural Museums: U.S. National Parks, 1872-1916*. East Lansing, MI: Michigan State University Press, 2004.

McClelland, Linda Flint. *Building the National Parks: Historic Landscape Design and Construction*. Baltimore: The Johns Hopkins University Press, 1997.

McLean, J. S. *The Microclimate in Carlsbad Caverns, New Mexico*. Albuquerque: United States Department of the Interior Geological Survey, May 1971.

Mechling, Jay. *On My Honor: Boy Scouts and the Making of American Youth*. Chicago: University of Chicago Press, 2001.

Melzer, Richard. *Coming of Age in the Great Depression: The Civilian Conservation Corps in New Mexico, 1933-1942*. Las Cruces, NM: Yucca Tree Press, 2000.

Moudry, Roberta, ed. *The American Skyscraper: Cultural Histories*. New York: Cambridge University Press, 2005.

Muir, John. *Our National Parks*. New York: Houghton, Mifflin, and Company, 1901. http://vault.sierraclub.org/john_muir_exhibit/writings/our_national_parks/.

Mumford, Kevin J. "'Lost Manhood' Found: Male Sexual Impotence and Victorian Culture in the United States." *Journal of the History of Sexuality* 3, No. 1 (Jul., 1992) 33-57.

Murola, Priscilla and A. B. Chitty. *The Folks who Brought You the Weekend: A Short Illustrated History of Labor in the United States.* New York: The New Press, 2001.

Nash, Roderick. "The American Invention of National Parks." *American Quarterly* 22, No. 3 (Autumn, 1970): 726-735.

----------. *Wilderness and the American Mind*. New Haven: Yale University Press, 2001. Fourth Edition.

Noel, Linda C. "'I am an American': Anglos, Mexicans, Nativos, and the National Debate over Arizona and New Mexico Statehood." *Pacific Historical Review* 80, No. 3 (August, 2011): 430-467.

Nye, David E. *America as Second Creation: Technology and Narratives of New Beginnings.* Cambridge: MIT Press, 2003

----------. *American Technological Sublime*. Cambridge, Mass.: The MIT Press, 1994.

----------. Electrifying America: Social Meanings of a New Technology, 1880-1940. Cambridge, MA: The MIT Press, 1990.

----------. "Technology, Nature, and American Origin Stories." *Environmental History* 8 no. 1 (January 2003): 8-24.

Nymeyer, Robert and William Halliday. *Carlsbad Cavern, The Early Years: A Photographic History of the Cave and Its People*. Carlsbad, NM: Carlsbad Cavern, Guadalupe Mountain Association, 1991.

Peiss, Kathy. *Cheap Amusements: Working Women and Leisure in Turn-of-the-Century New York*. Philadelphia: Temple University Press, 1986.

Pitcaithley, Dwight T. "A Dignified Exploitation: The Growth of Tourism in the National Parks." In *Seeing & Being Seen: Tourism in the American West*, Edited by David M. Wrobel & Patrick T. Long. Lawrence: University of Kansas Press, 2001, 299-312.

Poling-Kempes, Leslie. *The Harvey Girls: Women Who Opened the West.* New York: Marlowe & Company, 1991.

Rettie, Dwight F. *Our National Park System: Caring for America's Greatest Natural and Historical Treasurers*. Champaign, IL: Univeristy of Illinois Press, 1996.

Richardson, Elmo R. "The Struggle for the Valley: California's Hetch Hetchy Controversy, 1905-1913." *California Historical Society Quarterly* 38, No. 3 (Sep., 1959): 249-258.

Ridenour, James M. *The National Parks Compromised: Pork Barrel Politics and America's Treasures.* Merrillville, Ind: ICS Books, 1994.

Righter, Robert. *The Battle over Hetch Hetchy: America's Most Controversial Dam and the Birth of Modern Environmentalism*. New York: Oxford University Press, 2005.

----------. *Crucible for Conservation: The Creation of Grand Teton National Park*. Boulder: Colorado Associated University Press, 1982.

----------. "National Monuments to National Parks: The Use of the Antiquities Act of 1906." *The Western Historical Quarterly* 20, No. 3 (Aug., 1989): 281-301.

Rome, Adam. "'Give Earth a Chance': The Environmental Movement and the Sixties." *The Journal of American History* 90, No. 2 (Sep. 2003): 525-554.

----------. "The Environmental Movement." *Major Problems in American Environmental History: Documents and Essays*, Third Edition. Edited by Carolyn Merchant. Boston: Wadsworth Centage Learning, 2012.

Rothman, Hal. *Devil's Bargains: Tourism in the Twentieth Century American West*. Lawrence: University Press of Kansas, 1998.

----------. "Forged by One Man's Will: Frank Pinkley and the Administration of the Southwestern National Monuments, 1923-1932." *The Public Historian* 8, no. 2 (Spring, 1986): 83-100.

----------. *Promise Beheld and the Limits of Place: A Historic Resource Study of Carlsbad Caverns and Guadalupe Mountains National Parks and the Surrounding Areas*. Washington, DC: Department of the Interior, National Park Service, 1998, http://www.nps.gov/history/history/online%5Fbooks/CarlsbadCav/toc.htm.

----------. "Second-Class Sites: National Monuments and the Growth of the National Park System." *Environmental Review: ER* 10, No. 1 (Spring, 1986): 44-56.

Rugh, Susan Sessions. *Are We There Yet?: The Golden Age of American Family Vacations*. Lawrence: University Press of Kansas, 2008.

Runte, Alfred. "Joseph Grinnell and Yosemite: Rediscovering the Legacy of a California Conservationist." *California History* 69, No. 2, Yosemite and Sequoia: A Century of California National Parks (Summer, 1990): 170-181.

----------. *National Parks: The American Experience*. Lincoln: University of Nebraska Press, 1997. Third Edition.

----------. *Trains of Discovery: Railroads and the Legacy of Our National Parks*. New York: Robert Rinehart, 1998. Fourth Edition.

Russell, Edmund, James Allison, Thomas Finger, John K. Brown, Brian Balogh, and W. Bernard Carlson. "The Nature of Power: Synthesizing the History of Technology and Environmental History." *Technology and Culture* 52, no. 2 (April 2011): 246-259.

Rydell, Robert W. and Laura Burd Schiavo, eds. *Designing Tomorrow: America's World's Fairs of the 1930s*. New Haven: Yale University Press, 2010.

Schatzberg, Eric. "Technik Comes to America: Changing Meanings of Technology before 1930." *Technology and Culture* 47, no. 3 (July 2006): 486-512.

Sears, John F. *Sacred Places: American Tourist Attractions in the Nineteenth Century*. New York: Oxford University Press, 1989.

Sellars, Richard West. "Manipulating Nature's Paradise: National Park Management under Stephen T. Mather, 1916-1929," *Montana: The Magazine of Western History* 43, No. 2 (Spring, 1993): 2-13.

----------. *Preserving Nature in the National Parks: A History*. New Haven: Yale University Press, 1997.

----------. "The National Parks: A Forum on the 'Worthless Lands' Thesis National Parks: Worthless Lands or Competing Land Values?" *Journal of Forest History* 27, No. 3 (July, 1983): 130-134.

Shaffer, Marguerite. *See America First: Tourism and National Identity, 1880-1940*. Washington, D.C.: Smithsonian Books, 2001.

Slotkin, Richard. "Nostalgia and Progress: Theodore Roosevelt's Myth of the Frontier." *American Quarterly*, 33, No. 5, Special Issue: American Culture and the American Frontier (Winter, 1981): 608-637.

Spence, Mark David. *Dispossessing the Wilderness: Indian Removal and the Making of the National Parks*. New York: Oxford University Press, 1999.

----------. *Passages through Many Worlds: Historic Resource Study of Wind Cave National Park*. Washington, DC: Department of the Interior, National Park Service, 2011. http://www.nps.gov/wica/historyculture/upload/WICA_HRS-2.pdf.

Story, Isabelle F. *Carlsbad Caverns National Park*. Washington, D.C.: United States Government Printing Office, 1934.

Sutter, Paul S. *Driven Wild: How the Fight Against Automobiles Launched the Modern Wilderness Movement.* Seattle: University of Washington Press, 2002.

Swain, Donald C. *Wilderness Defender: Horace M. Albright and Conservation*. Chicago: University of Chicago Press, 1970.

"The Koshare Book about New Mexico and Albuquerque: The Hub of the Indian Land." The Koshare Tours. University of New Mexico. http://elibrary.unm.edu/cswr/.

Tichi, Cecelia. *Shifting Gears: Technology, Literature, Culture in Modernist America*. Chapel Hill: University of North Carolina Press, 1987.

Turner, James Morton. "From Woodcraft to 'Leave No Trace' Wilderness, Consumerism, and Environmentalism in Twentieth-Century America." *Environmental History* 7, No. 3 (Jul., 2002): 462-484.

Yochim, Michael J. "Snow Machines in Gardens: The History of Snowmobiles in Glacier and Yellowstone National Parks." *Montana: The Magazine of Western History* 53, No. 3 (Autumn, 2003): 2-15.

Weigle, Marta. "Canyon, Caverns, and Coordinates: From Nature Tourism to Nuclear Tourism in the American Southwest." *Journal of the Southwest* 39, no. 2 (Summer, 1997): 165-182.

----------. "Carlsbad Caverns, the Eighth Wonder," in *Alluring New Mexico: Engineering Enchantment 1821-2001*. Edited by Marta Weigle. Santa Fe: Museum of New Mexico Press, 2010.

----------. "Exposition and Mediation: Mary Colter, Erna Fergusson, and the Santa Fe/ Harvey Popularization of the Native Southwest, 1902-1940." *Frontiers a Journal of Women's Studies* 12, No. 3 (1992): 116-150.

----------. "From Desert to Disney World: The Santa Fe Railway and the Fred Harvey Company Display the Indian Southwest." *Journal of Anthropological Research* 45, No. 1, University of New Mexico Centennial 1889-1989 (Spring, 1989): 115-137.

White, Jim. *Jim White's Own Story: The Discovery and History of Carlsbad Caverns*. Ghostwritten by Frank Ernest Nicholson. 1940.

Wolner, Edward W. "The City-within-a-City and Skyscraper Patronage in the 1920's." *Journal of Architectural Education* 42, No. 2 (Winter, 1989): 10-23.

Wrobel, David M. *Seeing and Being Seen: Tourism in the American West*. Lawrence: University Press of Kansas, 2001.

----------. *The End of American Exceptionalism: Frontier Anxiety from the Old West to the New Deal*. Lawrence: University of Kansas Press, 1993.

VITA

Full Name:	Emily Ariele Marlowe
Place and date of birth:	Livingston, NJ—September 12, 1989
Parents Names:	James Marlowe and Robin Marlowe

Educational Institutions:

School	Place	Degree	Date
Secondary:			
Morris Hills High School	Rockaway, New Jersey	HS Diploma	2007
Collegiate:			
Ramapo College of New Jersey	Mahwah, NJ	BA	2011
Graduate:			
Drew University	Madison, NJ	MA	2013
Drew University	Madison, NJ	PhD	2016