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IMAGINARIES OF THE GREAT OUTDOORS:
COMPARING FACEBOOK POSTINGS ACROSS RESOURCE PLACES

A Thesis Presented

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ABSTRACT

Communication across agencies, interested audiences, and the public is central to resource management. While social media expands agencies' communication options, it also may present opportunities for constructing and presenting "imaginaries" – collectively imagined discourses that shape understandings of place and influence the world views of followers. Imaginaries are "socially constructed, taken-for-granted meanings about reality that make everyday social and cultural practices seem obvious and sensible to people" (Stokowski et al., 2021). Extending prior research, we sought to understand whether/how resource management agencies used social media to construct and deploy imaginaries. Data were collected during 2021-2022 from resource management agencies in the New England region; nine federally managed sites and six state agencies were chosen for study. From each Facebook page, agency text posts were analyzed for the presence of imaginaries. An initial content analysis was conducted to evaluate topics of written text posts, then several qualitative research methods were used: thematic analysis to examine text forms and styles; and rhetorical discourse analysis to uncover explicit and implicit claims in the data; and discursive analysis of figurative language to interpret imaginaries. Findings show that both state and federal agency text posts use a variety of imaginaries that draw upon well-established romantic ideals of nature to shape the online discourse of "the great outdoors." The imaginaries observed in the federal study were deployed across agencies and resource units. Imaginaries observed in the state study were agency specific. Findings illuminate the processes of communication used by agencies to reflect their ideals of nature and its management.

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CHAPTER 1 INTRODUCTION

Parks and other natural resource places use a variety of traditional and contemporary media to communicate publicly with general audiences as well as with current and potential visitors. Media-based communications that occur between park staff and visitors might be conceived as an ongoing conversation on matters ranging from special events and safety concerns, the cultural and ecological significance of park features, the experiences of visitors, the positions of an agency on various topics, and a range of other issues. In the most general sense, the public communications of an agency provide information and entertainment to shape and enhance visitors' experiences, communicate about management practices and issues, influence visitor behavior, and establish and reinforce the agency image (Marcotte & Stokowski, 2021; Zeng & Gerritson, 2014). Though the dissemination of information is a central function of public communication, natural resource-based agencies also communicate with the public to advance their own positions: they share agency perspectives and worldviews, take positions on issues, interpret history, influence visitor behaviors, and attempt to stimulate and manage visitation.

Over the past twenty years, parks and other resource management agencies have begun to use a variety of social media sites to communicate with the public, identify interested audiences, and connect with visitors. Facebook is the most popular information-sharing platform used by the U.S. National Park Service (Miller & Freimund, 2017; Garrison & Li, 2014) and other federal and state outdoor recreation and

natural resource agencies. These entities' Facebook pages are not only used to communicate important information to the general public (Jarvis, 2011), but to provide news, feature stories, marketing appeals, engagement opportunities, and entertainment (Marcotte & Stokowski, 2021) to distinguish sites. Members of the public, in return, also can interact with managers of outdoor recreation places through comments posted on Facebook and other social media sites (Wilkins et al., 2020; Hausmann et al., 2020). Facebook encourages community building by making it easy for users to post photos, videos, text, and comments on other users' posts (Griffith, 2017). But Facebook is more than just a collection of photos, images, and texts; van Dijck (2013, p.143) refers to Facebook as a database of "engineered online connections" that "powerfully mediate and set the terms of participation, interaction, products, and services development for the activities they depict" (Parris-Piper et al., 2023, p. 2).

Theoretically, the communications between natural resources managers and those interested in using the sites they manage can be understood as discourses – that is, examples of language beyond the sentence level that construct meaning (Lehtonen, 2000). Within these discourses, taken-for-granted beliefs about outdoor recreation places are expressed and perpetuated (Derrien & Stokowski, 2020). At times, these beliefs will incorporate claims and contextual information that generate social, cultural, and spatial imaginaries – that is, the collectively accepted, socially constructed meanings that normalize social practices (Salazar, 2012; Derrien & Stokowski, 2020). The meanings we construct do not exist solely within our own minds, but instead are influenced by our interactions with others and the dynamic society around us (Adams et al., 2015).

Uncovering and studying imaginaries is one way to understand the discourses that shape our understanding of the world around us.

In the past decade, scholars have become interested in the ways that imaginaries affect the behavior and perceptions of visitors, managers, and stakeholders. For example, researchers have begun to study imaginaries of darkness and night skies (Derrien & Stokowski, 2020), tourism destination image and travel incentives (Stokowski et al., 2021; Gravari-Barbas et al., 2017; Forsey & Low, 2014; Zhou, 2014), race and diversity issues (Ho & Chang, 2022), community planning processes (Potter, 2018), resource extraction (Panikkar & Tollefson, 2018), land management and conservation (Walsh, 2020), and natural resource-based community development (Pellegrini, 2018). Among these studies, very few have combined an interest in imaginaries and social media. Analysis of the Facebook pages of natural resource management agencies can potentially offer a rich understanding of how agencies deploy imaginaries to present their resource places and influence audiences.

Facebook is widely used by National Park units, as well as other natural resource places or outdoor recreation managers and sites (Miller & Freimund, 2017; Gutiérrez-Barroso et al., 2019). Much of the research about Facebook and other social media sites and the outdoors has to date emphasized survey research or, more recently, statistical analyses of complex electronic “big data” information about use of outdoor places. These include Miller & Freimund’s (2017) research about Yellowstone National park’s virtual visitors, Pickering’s studies about national park visitors’ social media uses of Twitter (Bhatt & Pickering, 2021; Mangachena & Pickering, 2021; Pickering & Norman 2020),

and other studies of data appearing on social media including Instagram (Fälton, 2021; Hausmann et al., 2020; Tenkanen et al., 2017), Flickr (Väisänen et al., 2021; Sinclair et al., 2020; Wartmann & Mackaness, 2020; Tenkanen et al., 2017; Sonter et al., 2016), and other international platforms. Each of these studies sheds light on social media as both a research and engagement tool, and several analyze the specific processes used by which agencies and individuals to communicate on social media (Parris-Piper et al., 2023; Fälton, 2021; Stanley, 2020).

Facebook is an ever-changing compilation of images and texts that offer users avenues for connection and engagement. Because Facebook is used by millions of people each day, it is an excellent tool for observing and studying the use of imaginaries in public discourse. Imaginaries are representative of the ways humans derive and construct meaning from lived experience through language and can be replicated and built through written and verbal communication. The research described in this thesis involves a comparative study that extends prior research on the strategies used by natural resource agency managers to interact through social media sites with various internal and external, and public, private, and non-profit audiences.

This thesis focuses specifically on the agency-sponsored Facebook pages of natural resource-based state agencies and federal sites (parks, forests, and wildlife areas) in Vermont, Maine, and New Hampshire, states situated in the northeastern region of the U.S. The focus of this research is on how social, cultural, and spatial imaginaries expressed through social media by agency managers interactively constitute and sustain place meanings about “the great outdoors” – a consistent imaginary that often (but does

not exclusively – i.e. land does not *have* to be publicly managed and accessible to be represented by this imaginary) supports the work of resource management agencies (Martin, 2004). This study offers an opportunity to compare agency social media use across different state and federal agencies and regional locations to study how about imaginaries are communicated virtually with visitors, potential visitors, and other social media followers. The research questions are:

1. How do the social media posts of natural resource-based agencies use social, cultural, and spatial imaginaries to convey their meanings of the outdoors?
2. What rhetorical processes are used to construct imaginaries by natural resource-based agencies posting on Facebook?

Imaginaries should be of interest to recreation resource managers because they are representations of how both the agency and the public conceptualize their understandings of the “great outdoors” – places valued in society, and where people go to experience and benefit from nature experiences. Analyzing the rhetorical discursive processes that underlay the construction of imaginaries can help to advance agency/public communication by revealing shared discourses that shape public perception and define appropriate behaviors for visitors. In more practical terms, clarifying the role of social media in the communications between natural resource-based agency managers and the public will allow managers to devise effective public communication strategies and educational efforts. Among consumers of social media, research on imaginaries may also prompt a more critical review of the discourses that are

promoted online and encourage individuals to be more mindful of their online interactions.

CHAPTER 2 LITERATURE REVIEW

Social media research is an emergent area of study within the field of outdoor recreation and tourism. Facebook is used by natural resource-based agency managers around the globe to communicate with the public through a variety of methods, including text posts and images. This literature review provides context for this thesis by evaluating current research on the discursive aspects of online public communication and public lands management, as well as the theory of imaginaries, and their relevance to parks, recreation, and tourism management.

Resource Management Agencies and Public Communications

Research about communication, resource management agencies, and public lands derives from an array of scholarly fields and disciplines, including environmental interpretation (Derrien & Stokowski, 2017; Hvenegaard et al., 2009; Archer & Wearing, 2002); environmental education (Monroe et al., 2008); marketing (Borrie et al., 2002; Archer & Wearing, 2002); and public deliberation in municipal planning (Bohøj et al., 2011). Interpretation has long been a part of park engagement strategies; managers use interpretive materials to aid in communicating information and in storytelling “to assist people in understanding their relationship with the environment” (Archer & Wearing, 2002, p. 32; see also Derrien & Stokowski, 2017). Interpretation historically occurs on-site at natural resource-based places but interpretive strategies are also used off-site to reach a greater number of people (Archer & Wearing, 2002; Derrien & Stokowski, 2017).

Though similar, environmental interpretation and environmental education have distinct differences (Knapp, 1996). For example, environmental education is often conducted as part of a formal curriculum and in a sequential progression, whereas an interpretive program may be short-term (Knapp, 1996). Marketing allows for both public planners and tourism providers to better understand how to captivate and satisfy the needs of their clients (Dolnicar & Ring, 2014; Borrie et al., 2002). Borrie et al. (2002, p. 49) argue that relational marketing not only helps government agencies promote their relationship with the public but builds “confidence in the agency’s ability to guard the short- and long-term interests” of the groups they serve. Despite this, relational marketing cannot protect those in power from rapacious or ill-informed decision-making. An agency’s ability to put a community’s interests into action is often contested in public conversations surrounding tourism planning and community development (Stokowski, 1993), especially in cases where “the public” is not only a stakeholder, but a “shareholder” (Borrie et al., 2002).

Social Media Research in Tourism and Outdoor Recreation

Since its introduction in 2004, Facebook has revolutionized the ways that people connect with one another and with corporate and public entities. Today, Facebook is said to be the “most used and most influential social network site on the Internet” (Stankov et al., 2018, p. 81), and thus plays a vital role in internet marketing worldwide. As originally conceived, Facebook was a website where people could check on the activities of their friends. Today, the social media platform is one of the most popular sites in the world to share information among friends and followers (Ben-Shaul & Reichel, 2018; Ayeh et al.,

2013; Bilgihan et al., 2014; Bronner & de Hoog, 2011). Trailing only Youtube, Facebook is one of the most widely used social media sites on the internet among adults in the United States as of 2021 (Auxer & Anderson, 2021). Auxer & Anderson (2021) found that in the US, 70-77% of adults under 65 years of age and 50% of adults over 65 report using Facebook and claim that most Facebook users check the site at least once a day. Compared to the vast amount of information available on the internet, Facebook claims to offer users a reliable, straightforward, and familiar way to access information (Önder et al., 2020; Azhar et al., 2021). These qualities make Facebook an especially attractive marketing device for tourism destinations. Tourists use Facebook to explore destination accommodations, restaurants, and attractions (Zeng & Gerritsen, 2014) and to share their experiences with those who are part of their online network (Önder et al., 2020).

Facebook is one social media platform and medium of public communication that has become an increasingly important part of the National Park Service's engagement strategy (Miller & Freimund, 2017). Beyond the US National Park Service, federal and state resource management agencies around the globe have developed a significant presence on Facebook and other social media platforms, where they engage with other social media users (Gutiérrez-Barroso et al., 2019; Wilkins et al., 2021). For example, one study stated that the implementation of outreach and education via social media is said to have been one of the greatest successes of Australia's National Park system (Ferretti-Gallon et al., 2021).

Beyond just using social media as an engagement and education tool, outdoor recreation places use various social media sites to monitor and better understand their

visitors (Mangachena & Pickering, 2021; Bhatt & Pickering, 2021; Pickering & Norman, 2020; Marcotte & Stokowski, 2021; Wilkins et al., 2021). Social media sites can help managers and researchers observe what people are posting and commenting about while they are visiting a park, reminiscing about a recent trip, or considering a visit. Conversely, managers can use social media to communicate directly with visitors and prospective visitors.

Facebook is not the only social media site used by public lands managers. Wengel et al. (2022) observed the effect of TikTok consumption on destination development. Du et al. (2022) analyzed the use of TikTok data to consider user engagement with short form travel videos. Bhatt & Pickering (2021), Mangachena & Pickering (2021), and Pickering & Norman (2020) used data from Twitter to gauge public opinion of National Park management issues. Tenkanen et al. (2017) compared data from Twitter, Instagram, and Flickr with visitor statistics to assess “park popularity.” Fälton (2021) deconstructed the “romantic” perception of Swedish National Parks through analysis of text and images from Instagram. Hausmann et al. (2020) used images and text from Instagram to evaluate visitor perception and sentiment related to South African National Parks. Wartmann & Mackaness (2020) collected and analyzed short interview material and images from Flickr to explore what it means to experience “tranquility” in nature. Images from Flickr have also been used to observe visitation rates and recreation trends on conserved land (Wood et al., 2013; Sonter et al., 2016; Sinclair et al., 2020; Väisänen et al., 2021) and to make projections about where public lands visitors hail from (Sinclair et al., 2020). Because many natural resource agencies use

social media to communicate with the public (Miller & Freimund, 2017; Marcotte & Stokowski, 2021), social media is also useful as an observational tool for analyzing the contents and variability of online discourse related to public lands and natural resource agencies.

Imaginaries, Tourism, and Outdoor Places

While there is a growing body of literature that explores the use of social media as a research tool in the context of parks, outdoor recreation behavior, and tourism management, few studies have analyzed the broader societal processes of communication stimulated by social media engagement (Parris-Piper et al., 2023; Fälton, 2021). Imaginaries, or constructed discourses used linguistically to make sense of reality (Derrien & Stokowski, 2020), and have been studied for their potential to inform various tourism and outdoor recreation experiences (Parris-Piper et al., 2023; Fälton, 2021; Stokowski et al., 2021; Gravari-Babas & Graburn, 2012). The concept of imaginaries arose from a variety of social sciences over recent decades. Philosopher Charles Taylor (2004) described imaginaries as the ways that people “imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations that are normally met, and the deeper normative notions and images that underlie these expectations” (p. 23). Imaginaries are constructed and perpetuated at the discourse level of interaction but are reified by individuals and groups to explain the assumed realities of their worlds (Heikkilä, 2007). Imaginaries are “flexible claims” (Stokowski et al., 2021, p. 243), shared and understood through the influence of social

and cultural symbols and significations. Imaginaries not only reflect collective perceptions of reality but mold future perceptions, and this powerful duality can have significant repercussions if left unchecked (Parris-Piper et al., 2023; Youdelis, 2016).

In the realm of tourism specifically, imaginaries “represent a specific sector of the overall worldview of individuals or social groups concerning places outside their primary residence where certain types of leisure activities could take place” (Gravari-Barbas & Graburn, 2012; paragraph 2). The theory of tourism destination development holds that destinations are created by planners, local business owners, various committees, a desire from tourists to visit and the availability of a local population to contribute to tourism infrastructure. But Gravari-Barbas and Graburn (2012) point out that imaginaries also play a role in tourism destination development, as all actors in tourism systems contribute to the creation, persistence, and revision of imaginaries that inform “place, participants, and practice.” Forsey & Low (2014) documents the imaginaries used by exchange students in a study abroad program to examine tourist-perceptions of Australia as a “destination” and the people who inhabit it. Parris-Piper et al. (2023) uncovered a series of imaginaries related to the Palawan people, the coastal lands they live upon and steward, from tourism policy documents, short interviews, and Instagram posts. Parris-Piper et al. (2023, p. 14) linked the prevailing imaginaries observed in the study to a variety of sustainability issues plaguing southeast Asia and argue that “social media has powerfully influenced the rise of eco-branded tourism in ways that interact with and violently reconstitute past and present coastal change dynamics.”

Research on imaginaries related to tourism and public lands has examined constructions of night sky experiences (Derrien & Stokowski, 2020); understandings of landscape and nature-culture relations (Walsh, 2020); the romantic portrayal of camping in media (Young, 2022); and the communications between locals, tourists, and tourism developers (Youdelis, 2016; Boukhris, 2012). Derrien & Stokowski (2020) discursively analyzed interview materials for the use of figurative language by interviewees. The researchers identified imaginaries as patterns of “broad assertions” related to night skies and visitor’s experiences of night skies, which typically manifested as rhetorical claims. Walsh (2020, p. 6) reviewed “grey literature” and interviews with key actors involved with regional conservation efforts for “the construction of meaning and discursive framing of specific themes within the context of specific policy- making episodes.” Youdelis (2016) used a similar combination of interviews and relevant policies, proposals, and consultation protocols to dissect a series of capitalist imaginaries promoted in Jasper National Park and their effects on the people of the First Nations. Young (2022) uncovered discourses that represent and shape society’s cultural and social understanding of camping through analyses of text and images from popular media sources (books, advertisements, magazines, etc.). Boukhris (2012, para. 14) studied a collection of Costa Rican travel brochures to reveal how imaginaries of place and culture can “establish the mythical representations of Costa Rica in the tourist mind,” and use processes of “othering” to distinguish qualities of tourists and local populations.

Facebook Posts as Rhetorical Discourse

Discourse can be defined as “a practical, social, and cultural phenomenon” (van Dijk, 1997, p. 2), that refers to the construction of meanings behind language, text, conversation, and imagery, and is used to help explain social practices and beliefs (Gill, 2000; Lehtonen, 2000; Derrien & Stokowski, 2017). Discourse is more than just communication between two or more parties; rather, the term refers to the meaning-making processes that occur across all levels of interaction (Gill, 2000). One way of understanding the meaning-making process beyond the word and sentence-level of language involves rhetorical analysis.

Imaginariness are not confined to claims – they are discourses, after all – but the use of figurative language is one-way researchers can observe these “simplifications of reality” (Derrien & Stokowski, 2020; Heikkilä, 2007). Rhetorical discourse analysis aims to understand how persuasive strategies are deployed by speakers and writers to influence listeners and readers (Kennedy, 1992; Billig, 1996; Gill, 2000). Kennedy (1991, p. 7) describes rhetoric as “the energy inherent in communication: the emotional energy that impels the speaker to speak, the physical energy in the utterance, the energy level-coded in the message, and the energy experienced by the recipient in decoding the message.” Agency text posts contain “emotion-laden” and informational content that make claims about visitor experience and place (Marcotte & Stokowski, 2021). Arnold (1974 p. 51) defines a claim as “any assertion to which a communicator appears to have committed himself (sic) by seriously offering it as true.” Rodden (2008) argued that rhetoric is demonstrated in claims that assert, bolster, or otherwise support an individual or group’s

perspective by appealing to one's logical, ethical, or emotional reasoning. To understand the rhetorical basis of discourse, then, analysts evaluate the nature of arguments – their form, content, and style – and identify claims within written, spoken, or visual communication. Claims are understood as the “building blocks of imaginaries” (Stokowski et al., 2021) – meaning that through assertions of belief, imaginaries gain power. Derrien & Stokowski (2020) and Stokowski et al. (2021) identified imaginaries by examining uses of figurative language within claims, and the ways it may be used to construct meaning. Patterns of meaning across data are organized to show evidence of the presence and use of imaginaries.

Within the contexts of outdoor recreation and natural resources, rhetorical analysis has been used in a wide variety of ways, from examining the definition of sustainability in higher education (Weisser, 2017), to understanding the objectives of regional planning agencies (Jennings & Moore, 2000), to revealing place-meanings from Facebook posts (Marcotte & Stokowski, 2021). Marcotte & Stokowski (2021) analyzed the content, form, and style of social media texts to learn how a set of large natural resource-based national parks presented claims about place and visitor experience to their social media followers. Their procedures were tested and refined in two later studies (Derrien & Stokowski, 2021; Stokowski et al., 2021) about imaginaries, and we apply them in this study of Facebook posts as well.

CHAPTER 3 METHODS

This thesis presents a study of Facebook posts produced by natural resource management agencies in northern New England, USA to investigate the rhetorical-discursive patterns of language supporting the production of social, cultural, and spatial imaginaries. The study uses the qualitative methods of thematic, rhetorical and discourse analysis of social media texts.

Data were collected from the Facebook pages of federal units and state agencies in Vermont, Maine, and New Hampshire. Vermont, New Hampshire, and Maine were selected because they are the most demographically and geographically similar, with plentiful public lands and strong nature-based tourism industries. These states line the Canadian border and are generally characterized as very rural with several urban centers (Kolodinsky, 2013; Thorn et al., 2017). Out of the three states, Vermont has the smallest population, hovering just above 640,000 (US Census Bureau, 2021). Maine and New Hampshire have nearly the same population sizes, at just under 1,400,000 (US Census Bureau, 2021), despite New Hampshire being nearly three times smaller in area than Maine. Each state is non-diverse racially, with white people making up over 80% of their populations (US Census Bureau, 2021). In terms of the physical landscape, all three states are known for their parks, forests, and other public lands. Vermont, Maine and New Hampshire contain 77% of New England's 3.6 million hectares of protected lands and all are projected to conserve more land over the next century (Meyer et al., 2014).

Each of the northern New England states has a deep, historic connection to recreational activities (Morse et al., 2014; Ednie et al., 2010) – from world-famous ski

mountains in Vermont, to New Hampshire's Mount Washington, said to be home of the "world's worst weather," to the northmost point of the Appalachian Trail in Maine. Millions of visitors come to this region every year in search of outdoor recreational activities (Perry et al., 2018; Moss, 2021), and they can choose from a long list of parks, forests, wildlife areas, and other resource places to visit. In this region, many parks and natural resource-based places use official Facebook pages to regularly communicate with the public. State and federal agencies in Vermont, Maine, and New Hampshire also have Facebook pages, where they share a variety of photos and information from the parks and resource areas they manage. Though not all these agencies and organizations use social media in the same way, they each aim to promote their sites as recreation destinations (Fernández-Cavia et al., 2017; Hayes et al., 2013).

Sample Selection

A scoping review of the Facebook pages of natural resource agencies and the sites they manage was initially conducted to determine sites for inclusion in the study. Federally managed sites (national parks, national forests, and national wildlife refuges) and natural resource places under state management (parks, forests and wildlife management areas) were identified using the official websites of each relevant agency, which also provided links to each site's Facebook pages. Table 1 shows the federal sites with Facebook pages. Several sites shared managerial oversight. For example, Saint Gaudens National Historical Park (NHP) in New Hampshire is managed by Marsh Billings Rockefeller NHP in Vermont. The Green Mountain National Forest (NF) in VT

and the Finger Lakes National Forests in NY are administratively joined by the USFS. The White Mountain NF is primarily situated in New Hampshire but extends into southern Maine. Silvio O. Conte National Wildlife Refuge (NWR) manages a large track of land in Vermont but also manages smaller sites in Massachusetts and New Hampshire. Two other NWRs, Missisquoi NWR (VT) and Maine Coastal Island NWR (ME) had Facebook pages but neither page was active; both were excluded. Given its focus on natural resource-based sites, this study did not analyze national monuments, scenic trails, or international parks.

Table 1: Federal Units with Active Facebook Pages

US National Park Service	Marsh – Billings – Rockefeller NHP (VT) Saint Gaudens NHP (NH) Acadia NP (ME)
USDA Forest Service	Green Mountain & Finger Lakes NF (VT & NY) White Mountain NF (NH & ME)
US Fish & Wildlife Service	Silvio O. Conte NWR (VT, NH, & MA) Great Bay NWR (NH) Rachel Carson NWR (ME) Moosehorn NWR (ME)

The scoping review revealed that just over half of all federally managed sites had active Facebook pages, but very few or the many state-managed sites did, and not all were updated regularly. This meant that the natural resource units managed by state agencies would be too limited in number to be included in the study for comparison with federal units. Instead, we considered the availability of state agencies with Facebook social media discovered that those that had Facebook pages seemed to be quite active on

social media. With this knowledge, we pivoted to including a second, smaller study of state natural resource agencies as part of this thesis research. Thus, the first study analyzed the Facebook pages of federal resource management sites (n=9), while a second study analyzed the Facebook pages of state resource management agencies (rather than specific sites; n=6).

Table 2 outlines the state natural resource agency Facebook pages analyzed in this study. Blank cells indicate that there is no suitable Facebook page, and that agency is not represented in the state study. For example, while Vermont Department of Forest, Parks, & Recreation and State of Maine Parks & Lands Bureau had Facebook pages, both were inactive during the data collection process of this research. New Hampshire Division of Forests and Lands did not appear to have a Facebook page at the time of this study.

Table 2: State Agencies with Active Facebook Pages

State Parks	VT State Parks NH State Parks
State Forests	ME Dept. of Agriculture, Conservation, & Forestry
State Fish & Wildlife	VT Dept. of Fish & Wildlife NH Dept. of Fish & Game ME Dept. of Inland Fisheries & Wildlife

Data Collection

Data were manually retrieved from the Facebook pages of each federal resource place and each state agency. All agency text posts and photos were collected, and follower comments associated with each post were also retrieved over a total of six two-week periods in March, June, September and December of 2021 as well as March and June of 2022. Three national park units, two national forest units and four federal fish and wildlife units were included in the federal study of federal agency Facebook sites. Data were collected from six state agency pages in Vermont, Maine, and New Hampshire. For the purposes of this thesis, only the agency text posts are analyzed.

If agencies shared more than one post one any study day, each post would be numbered and labeled as an individual posting. Several text, video, and photo posts received more than 100 comments each. The total number of comments received on the data of data capture were recorded, but only the first 100 comments of each post were collected for analysis. Several reasons influenced this decision, including the fact that. The public response to agency posts can vary over time. Further, comments (and even postings) might potentially be retracted or deleted by individuals or the agency at any point in the future. Finally, while most posts received a low to moderate number of comments (0-50 comments), there were several outliers across state and federal agencies that received hundreds of comments. Though comments were collected, they were not analyzed in this study.

In the thesis presented here, only agency text posts are analyzed. Videos were not included in this data set, though the presence of videos was noted, and the comments

associated with video posts were collected. Photos, taken by Facebook users and posted in the comment-sections of agency posts were collected, but neither photos nor videos, GIFs (graphic interchange formats, or short video clips that run on an endless loop) and “Facebook Stickers” were analyzed for this study.

The reliability of the data collection process was confirmed in a comparison of this study’s data collection processes and data files for three specific parks (Acadia NP, Marsh-Billings-Rockefeller NHP, and Saint-Gaudens NHP) with data collected for another graduate student’s social media study (Raimondi, 2023) occurring concurrently.

Data Analysis

Once the scoping exercise and data collection efforts had been completed, summary tables were created for each study site and agency, and the number of text posts, photos, and comments published by agencies and followers were recorded. Following the work of Marcotte & Stokowski (2021), social media text posts were then evaluated and categorized according to their primary contents. Content categories were suggested by prior studies (Marcotte & Stokowski, 2021), and included News, Programs & Events, Information, Quotes, Stories, Acknowledgements, and Other.

Once claims were identified, text posts were organized into two categories based on the content of each claim: Claims about People, and Claims about Nature. Claims about People frequently referenced people within the context of nature, through descriptions of outdoor recreation activities (hiking, hunting, fishing, etc.) and stewardship (trash clean-up efforts, environmental education programs, etc.). Claims

about Nature highlighted short, interpretative material on flora and fauna, weather, and more general statements about the landscape and its natural processes.

Evaluation of rhetorical claims is an essential step in uncovering imaginaries from textual discourse. So, following methods used by Derrien & Stokowski (2020), claims were assessed for examples of figurative language and for broad assertions that were presented to convey meanings about reality. Patterns of meaning were revealed across text posts and interpreted as imaginaries. Finally, data were evaluated across agencies, and federal and state results were elaborated.

The author and her advisor worked together across the study to ensure high standards of qualitative research (Lincoln & Guba, 1985). We read and reviewed text posts, comments, and images; discussed trends and patterns; and weighed the details of methods and theories. As part of this interpretive work and as noted above, the details of data collection methods and the date itself were subject to an external audit by comparing results with those of another graduate student collecting data from three overlapping parks. The overall intent was to establish credibility, transferability, and confirmability of our methods and results.

CHAPTER 4 RESULTS

This chapter addresses the federal agency analysis including descriptive data, a content analysis of text posts, a rhetorical analysis of claims, and an interpretation of imaginaries. Then, the state agency data and analysis are discussed.

THE FEDERAL AGENCY STUDY

Descriptive Analysis: Federal Agency Posts

The following tables outline the number of text posts, images and comments collected from the Facebook pages of federal sites.

Table 3: Federal Sites: Text Posts, Images, and Comments

	# Text Posts	# Photos	# Comments
<i>National Parks</i>			
Acadia NP	124	310	1,772
Marsh Billings Rockefeller NHP	18	22	5
Saint Gaudens NHP	42	62	92
<i>National Forests</i>			
Green Mountain & Finger Lakes NF	63	59	10
White Mountain NF	76	102	257
<i>National Wildlife Refuges</i>			
Great Bay NWR	51	108	59
Moosehorn NWR	36	41	65
Rachel Carson NWR	44	42	159
Silvio O Conte NWR	34	48	34
Total	488	792	2,453

Types of Text Posts

Text posts were analyzed for content and then divided into seven categories. The seven categories include: News, Programs & Events, Information, Quotes, Stories, Acknowledgements, and Other. Posts in the News category made announcements about

sites and agencies and were identified by the agency as news items using a box indicating the message as an “alert” for important news information. The Information category contained educational posts, immediate and minor updates, and directives about site or agency happenings, or current events (e.g., the winter solstice) The Quotes category provided sayings from notable authors and public figures, and were typically short in length, often just featuring the quote and identifying the author. The Story category included posts with narrative descriptions of experience from staff members, visitors, or others. Items identified as Acknowledgments contained “Thank You” and “Congratulations” posts, and recognized staff and volunteers for their work. The Other category contained-uncaptioned images, links, and Holiday/Important Day greetings with no corresponding event. The distribution of categories of text post contents for all federal agency social media posts is provided in Appendix A for each agency.

Summary: Federal Agency Text Posts

A comparison of data across the federal agencies (Table 4) shows the preponderance of informational posts, ranging from 36 – 70% of all posts. Approximately 2/3 of all posts from National Forests and National Wildlife Refuges are informational, and together constitute the largest number of posts, across agencies and categories. Posts related to Programs & Events were also common, making up 20.9% of all posts. National Parks had the greatest proportions of Stories (12.5%) and News posts (10.9%).

Table 4: Text Post Contents across Federal Agencies

	NPS	% Frequency	USFS	% Frequency	USFWS	% Frequency
1	Information	34.8%	Information	63.3%	Information	68.5%
2	Events	33.7%	Other	14.4%	Events	18.8%
3	Stories	12.5%	Quotes	7.2%	Stories	4.9%
4	News	10.9%	Events	5.8%	Other	3.6%

Overall, text posts were relatively similar across the federal agencies studied, mainly seeking to provide the public with short excerpts of interpretive material, disseminate important announcements and safety information, and acknowledge the work of park staff and volunteers.

Rhetorical Claims in Federal Site Social Media Posts

Next, following the example provided by Marcotte and Stokowski (2021) and using processes of iterative review, social media written texts were interpreted and analyzed for their rhetorical qualities and claims were identified. Claims were often used to entice Facebook users to participate in agency-sponsored programs and events, to share primary accounts of visitor experiences, to promote the role of the agency, and to interpret the cultural and natural attributes of sites. Statements that lacked claims were discarded. For example, this excerpt from Green Mountain and Finger Lakes NF (March 7, 2022) made general statements about Forest Service job openings and was not included

in the next stage of analysis: *“The Forest Service is hiring hundreds of foresters across the nation. Job postings will be open until March 10.”* Both overt and implicit forms of argumentation were considered. For example, a post from Green Mountain and Finger Lakes NF (September 21, 2021) that was retained made an explicit claim about hiking through national forest lands: *“You can hike a trail that goes through a pasture and less than a mile later be in a forested setting. No matter how many times you may hike a trail, you never see the same thing twice.”* A post from Silvio O. Conte NWR (June 23, 2022) that was retained made an implicit claim about the differences between urban and rural experiences of nature: *“When I moved my junior year of high school to a new town I was able to finally experience the outdoors in ways that I was not in the city.”*

Data were evaluated by agency unit and by content categories. Across the federal agencies, more than 60% of all posts contained claims (Table 5). Claims were found across all categories of text post, but were most common in the Information, Events/Programs, Stories, Quotes, and Acknowledgements categories (Table 6). Since News posts and posts in the “Other” category were less likely to contain claims, they were omitted.

Table 5: Text Posts with Claims, by Federal Agency

	NPS	USFS	USFWS
#Text Posts with Claims	136 (76.4%)	90 (64.8%)	142 (86.1%)
#Text Posts without Claims	42 (23.6%)	49 (35.3%)	23 (13.9%)
Totals	178 Posts	139 Posts	165 Posts

Table 6: Total Claims across Content Categories

	# Posts	# Posts with Claims	% Claims
News	27	5	18.5%
Events/Programs	101	78	77.2%
Information	265	231	81.2%
Stories	33	33	100%
Quotes	13	13	100%
Acknowledgements	16	15	93.8%
Other	33	8	24.2%

Analysis of posts with claims revealed themes that could be aggregated within two broad categories: Claims about Nature and Claims about People. Data showed that National Parks and National Forests were more likely to make claims about people than National Wildlife Refuges, which had a more even distribution of claims (Table 7). Even so, few posts referred to humans without also acknowledging their relationship with the natural world, and few posts with Claims about Nature entirely disregarded humans. In other words, many posts in the Claims about People category described human activity within the context of nature or natural resource-based places – and many posts in the Claims about Nature category acknowledged examples of human intervention. The most prominent claims were used to categorize text posts. Claims about People and Nature were also evaluated by the social media post content categories within each federal agency (Table 8).

Table 7: Federal Agencies: Claims about People & Nature in Text Posts

	NPS	USFS	USFWS
# Claims about People	124 (91.1%)	65 (72.2%)	69 (48.6%)
# Claims about Nature	12 (8.8%)	25 (27.8%)	73 (51.4%)
Totals	136 Posts	90 Posts	142 Posts

Table 8: People/Nature Claims across Federal Agency Content Categories

	NPS Posts	USFS Posts	USFWS Posts
Events/Programs			
<i>People</i>	47	6	21
<i>Nature</i>	0	0	1
Information			
<i>People</i>	47	46	34
<i>Nature</i>	13	21	73
Acknowledgements			
<i>People</i>	6	4	4
<i>Nature</i>	0	0	0
Stories			
<i>People</i>	20	3	8
<i>Nature</i>	2	0	0
Quotes			
<i>People</i>	1	6	1
<i>Nature</i>	0	4	0
Totals	136 posts	90 Posts	142 Posts

Claims about People

Posts containing claims related to people were most numerous in the Facebook pages of National Park and National Forest units. Within this category, text posts tell

stories about historical figures, visitors and staff members; highlight important cultural holidays; and emphasize the variety of activities, events, and research that occurs on federally managed lands. A post from Acadia NP (December 21, 2021) makes a series of implicit claims about qualities of the virtual program, “Artists of Acadia,” the artists involved, and the landscapes represented by the presentation:

Take a journey to Acadia National Park through art inspired by the landscape. This presentation will feature artwork created by individuals that have been a part of the Artist-in-Residence program. Discover how the beauty of Acadia inspired these artists and the variety of mediums they use to express it.

A post from Saint Gaudens NHP (June 19, 2022) makes claims about the meaning of the American Holiday, Juneteenth,

Juneteenth (June 19) is the one of the oldest known commemorations related to the abolition of slavery in the United States. The word “Juneteenth” is a Black English contraction, or portmanteau, of the month “June” and the date “Nineteenth.” Juneteenth celebrates the date of June 19, 1865, when enslaved people of African descent located in Galveston, Texas, finally learned of their freedom from the slavery system in the United States. From 1865 forward, the day has held special meaning for people of African descent in the United States as a day of joy, family, and community.

While posts from the National Park Service and the Forest Service were the most likely to feature Claims about People, posts from National Wildlife Refuges also included claims in this category. A post from Silvio O. Conte NWR (June 22, 2021) describes the ongoing work of the Monitoring Avian Productivity and Survivorship (MAPS) initiative as follows: “Now in its 6th year, bird biologists are collecting and analyzing data that will help us continue to manage for the best habitats possible for migratory birds.” In

addition to referencing birds and their habitats, this text post features a claim about the management implications of the research conducted by MAPS.

Many Claims about People make specific claims about human activity within the context of public lands. For example, all posts in the Events/Programs content category asserted claims about agency-sponsored events and programs that connect people with nature. A post from Great Bay NWR (September 23, 2021) made claims about National Public Lands Day and provided an emotional justification (celebration) for joining the shoreline cleanup:

#NationalPublicLandsDay, the nation's largest single-day volunteer effort is September 25! Celebrate our connection and stewardship of our public lands by joining us at our shoreline cleanup. Head over to Nature Groupie to snag a spot. A perfect end to #nationalestuariesweek!

Posts in the Events/Programs category provide detailed descriptions of agency-sponsored opportunities to learn about and engage with nature. This post from Acadia NP (June 26, 2021) makes implicit claims about the ability of federal agency-sponsored events: “*Enrich your experience of Acadia. Notice, compare, and ask questions about what grabs your attention.*” Beyond just providing people with something to do on public lands, events are promoted as a way for people to have meaningful experiences in nature.

Additional claims about the ways people experience nature are found in Information posts on the federal agency pages. These posts often made claims about the ways in which people experience nature, through descriptions of the current and historic management of federal units, human interactions with wildlife, recreation, indigenous peoples and the changing of the seasons. For example, one post from Silvio O. Conte

NWR (March 9, 2021) makes claims about dog walking on NWR grounds, outlining what is expected appropriate behavior: *“Walking dogs on nature trails is a great way to get outdoors for both you and your furry loved one. But there are good reasons why it’s important to follow rules about keeping dogs on a leash and picking up their waste.”*

Another post from Acadia NP (March 8, 2022) makes claims about the agency’s perspective on the Wabenaki people, who historically lived within the boundaries of modern-day Acadia NP: *“It would be impossible to tell the full story of women who have had a role in caring for the landscape without acknowledging Wabanaki women, both past and present.”*

Posts within the Story category featured authors sharing their experiences of working and recreating on the grounds of federal units. Posts often use descriptions of emotion to explain why certain moments were meaningful, as shown in this posting from Acadia NP (December 5, 2021): *“My daughter loves to go on these small hikes with me. I saw this small section of the trail that had these beautiful yellow flowers, so I ran ahead of her and positioned myself to capture her when she crossed those flowers.”* Emotion is also used in this single-sentence post from White Mountain NF (June 25, 2021), showing how visitors interacted with the newly completed park feature: *“While working on bog bridges at Greely Pond Trail off the Kanc, the Pemigewasset trail crew had the chance to watch a young family enjoy the fruits of their labor.”*

All posts in the Acknowledgments category fell into the Claims about People category. Posts from the Acknowledgments category focused primarily on the agency contributions of notable people. Most Acknowledgment postings specifically emphasized

human work in nature, including this one – from Rachel Carson NWR (September 10, 2021), which states,

We can hardly express how wonderful it is to be a part of this collaboration with the Saltmarsh Habitat & Avian Research Program and Atlantic Coast Joint Venture. Thank you to all of the partners working to save the saltmarsh sparrow and protect our salt marshes.

Although this post does make reference to nature, the author is generally making implicit claims about their evaluation of the work completed by the volunteers.

Claims about Nature

Claims that referenced nature specifically were most common within posts from the USFWS (Tables 10 and 11). Across federal agencies, Claims about Nature were found within all categories except Acknowledgements. Claims about Nature involved persuasive statements about landscapes, plants and wildlife, and emphasized educating readers by interpreting facts about landscapes, plants, and wildlife.

Informational posts in this category primarily provide educational information about the natural processes and qualities of agency-managed landscapes. For example, one post from Green Mountain and Finger Lakes NF (June 9, 2021) makes a claim about a chipmunk’s feeding habits: *“The chipmunk makes a considerable amount of noise for such a small animal, and you can often hear it feeding from a good distance away.”*

Another post, from Moosehorn NWR (September 8, 2021, b) described a park feature: *“Evening view of the Middle Magurrewock Marsh from US Rt. 1 in Calais. The marsh*

provides a great resting area for migratory birds as they move south for warmer weather.”

Many posts within the Claims about Nature category frame important information pertaining to site management with references to human interaction with the landscape. A post from Rachel Carson NWR (December 5, 2021) employs this strategy by first comparing a snow owl’s migration to a human’s vacation, and then providing Facebook users with information on appropriate birdwatching behavior:

It's easy to be drawn to a snowy owl, but they're not just on vacation while they're visiting our coastlines. Many of the snowys that are wintering here are under stress – they're in an unfamiliar place, they need food, and are competing with other owls and birds for it. To help them have a successful winter, keep your distance. If you're looking for an action shot, pack your patience along with your camera/binoculars and resist the temptation to creep closer.

Posts in the Story category often showcase information visitors learn while traveling through federally managed units. For example, one visitor from Acadia NP (June 20, 2021) makes claims about the natural history of the site: *“Did you know that most of Acadia’s landscape was heavily influenced by moving glaciers? While there are are (sic) no glaciers remaining in the park, evidence of their once-presence can be found all over Mount Desert Island.”* Alternatively, agency text posts within the Quotes category use rhetorical devices like personification, hyperbole and metaphor to demonstrate a more romantic perspective of federally managed units. A text post from Green Mountain and Finger Lakes NF (December 8, 2021), for example, uses this strategy with a Lewis Carroll quote: *“I wonder if the snow loves the trees and fields, that it kisses them so gently? And then It covers them up snug, you know, with a white quilt;*

and perhaps it says, 'go to sleep, darlings, till the summer comes again'." Within this description, nature is personified, and the reader is invited to imagine how aspects an ecosystem may interact.

From Claims to Imaginaries

Having analyzed rhetorical claims for patterns of meaning in the form of figurative language, patterns across claims were evaluated to identify and interpret imaginaries. While there may be many kinds of social, cultural, and spatial imaginaries embedded in the agencies' social media texts, this study specifically focuses on imaginaries of "the great outdoors," which can be defined as a set of discourses that shape our relationship to the lands we recreate on and the values we derive from those lands. Results show that three prominent imaginaries were expressed in the agency social media posts analyzed in this study. Each imaginary is built on various social, cultural, and spatial understandings of nature and each is constructed in social media contexts by specific kinds of rhetorical claims.

The Wholeness of Spirit Imaginary

Across federally managed units, agency text posts make claims about the spiritual benefits people gain from spending time in federally managed units. These claims coalesce to reveal an imaginary oriented to the "wholeness of spirit" among (presumably) visitors and managers.

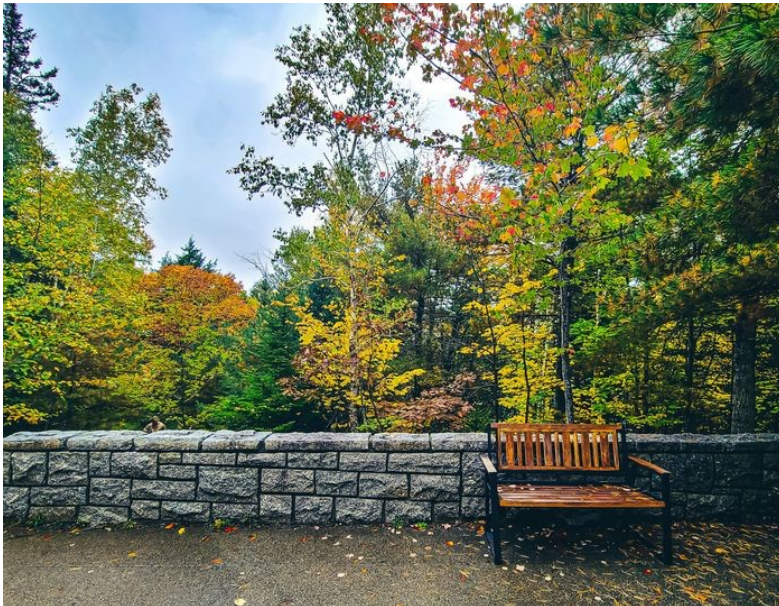
A variety of linguistic techniques were used to develop claims that support the "wholeness of spirit" imaginary. For example, across Story posts authors used the idea of

internal refreshment to characterize their experiences in nature. One post from Acadia NP (December 22, 2021) describes a visitor's experience, stating, "*Acadia cleansed my mind and is now on my list to become an annual autumn tradition.*" Another Story post from Acadia NP (March 23, 2022) echoed that sentiment: "*The colors were so refreshing to my soul and it was totally worth the drive. I have never seen anything so beautiful.*" Here, both visitors (whose Stories were posted by the agency) expressed awe over their experience in nature and emphasized the values they gained from their trips, referencing "worth" and "tradition." Further, Acadia NP is *where* the authors claim they experienced refreshment of their soul and mind; the importance of place is emphasized in both excerpts. The autumn colors of Acadia NP also refreshed their souls. These kinds of claims suggest that Acadia NP itself has internally restorative or healing qualities that are experienced by those who pass through the park. Text posts that exhibited the "wholeness of spirit" imaginary were often paired with images of scenic, tranquil landscapes, as shown in the photographic images presented in Figures 1 and 2 (posted on March 23, 2022, and December 22, 2021).

Figure 1: Acadia NP – December 22, 2021



Figure 2: Acadia NP – March 23, 2022



Posts under the Events/Programs category also allude to the linkage between “spiritual wholeness” and spending time in nature, but often rely on hyperbole to convey

their message. Agency text posts make strong assertions about the ability of agency-sponsored events to provide visitors with a sense of spiritual fulfillment and thus provide guidelines for understanding relationships between humans, nature, and benefits perceived to accrue from interacting with parks. For example, this post from Green Mountain and Finger Lakes NF (March 24, 2022) made an implicit claim about the benefits provided by agency-sponsored events: *“We’ve rounded up a calendar of events and outings to power your mind, body, and spirit this season.”* A post from Rachel Carson NWR (June 6, 2021) detailed the way an art workshop could, *“offer ways we can all express our sense of wonder and love of nature through art, whether it’s your first time picking up a paintbrush, or you are a seasoned pro.”* A story post from Acadia NP (March 24, 2021) called upon its audience directly and encouraged them to *“immerse yourself in nature and the happiness will follow,”* but provided no additional information about the connection between spending time in nature and experiencing happiness.

The imaginary of “wholeness of spirit” is also evident in forest and wildlife area social media posts. Green Mountain and Finger Lakes NF (June 10, 2021) shared a Marie Curie quote that also describes a positive personal connection between nature and the individual: *“All my life through, the new sights of Nature made me rejoice like a child.”* Rachel Carson NWR (March 21, 2021) takes this sentiment one step further, explicitly referencing the necessity of this connection: *“It is a wholesome and necessary thing for us to turn again to the earth and in the contemplation of her beauties to know the sense of wonder and humility.”*

Across the data, agencies posted claims about the ability of people to derive spiritual fulfillment from spending time in nature, blurring the line between social, cultural and spatial imaginary. Here, the spatial qualities of nature and agency presentations of individuals experiences do not factor in equally – the wholeness of spirit imaginary hinges on the belief that spending time in nature is a way to make one’s spirit whole; in other words, experiencing nature is an essential component to achieving human spirituality. However, the context of this discourse cannot be ignored – the natural resource agencies studied here are tasked with managing public lands for the well-being of all people. The assumptions made by agencies about the qualities of nature and how these qualities serve people contribute to and inform the discourse surrounding “the great outdoors,” and how people understand and interact with lands and resources.

The Imaginary of Nature as Powerful Force

Across federal agencies, agency text post authors understand nature as a powerful force, often with capabilities beyond human comprehension. This imaginary is most literally conceived in a Story post from Acadia NP (March 6, 2022) that states, “*I enjoy trying to capture the natural forces of the landscape and seascape,*” as well as in an informational post from Saint Gaudens NHP (March 27, 2021): “*Blow-Me-Up Brook meanders through the ravine at the edge of the park’s historic core area. In spring, it is a powerful force.*” The imaginary of “nature as a powerful force” is constructed through repetitive use of strong adjectives (powerful, wild bulldozing) and allusions to the enigmatic functions of the natural world. Across text posts, agencies use this imaginary to

attribute meaning to nature’s most impressive capabilities, which are presented as unique and worth learning about and preserving. This positions nature as deserving of admiration, respect and curiosity. Text posts that contain the imaginary of “nature as a powerful force” often are paired with images that depict aspects of natural landscapes in motion (Figure 3).

Figure 3: Saint Gaudens NHP – March 27, 2021



Several informational posts characterize federally managed units as “wild,” connoting unpredictability and an absence of human intervention. For example, a post from White Mountain NF (June 10, 2021) invites readers to, “*Take a walk on the wild side along the nature trail at the Androscoggin Ranger District office!*” Another post

from Green Mountain and Finger Lakes NF (September 7, 2021) outlines appropriate behavior in a wilderness area:

A large part of the primitive travel challenge in the Bristol Cliffs Wilderness or any Wilderness is to leave no trace of your visit. If you are traveling off trail in a group, spread out far enough to minimize your travel impacts so that a new trail does not form. Also, never cut or flag anything. Keep it wild and wild looking for others!

In this post, the idea of wild or wildness is framed in a positive light; readers are not only encouraged by agencies to preserve wildness as they come across it but are led to believe that federally managed units are where they can find wildness, despite only alluding to what determines a place's wildness. The Bristol Cliffs Wilderness (Green Mountain and Finger Lakes NF, September 7, 2021) for example, is depicted as a wild place where challenging "primitive travel" occurs, communicating specific expectations to Facebook users. By using this imaginary of a powerful, wild nature, the Forest Service is providing Facebook users with a foundation to understand this specific natural resource site and a point of reference for their expectations of other Wilderness Areas.

Posts within the Events/Programs category often used a combination of alliteration and imagery to characterize nature as wild and unpredictable and imagine the possibilities associated with exploring the natural world. For example, a post from Rachel Carson NWR (June 23, 2021) used hyperbole and subtle alliteration to provide users with details about an upcoming event at a nearby National Monument:

We know the Northeast Canyons and Seamounts Marine National Monument is home to a wide variety of species – including sperm whales, green sea turtles, myriad corals and even Atlantic puffins. But there is so much we don't know about the Monument and its inhabitants.

The defense mechanisms of deep-sea corals could hold the secrets to treating cancer or Alzheimer’s disease. Surprised fishermen have pulled out Pleistocene fossils — including mastodon and mammoth — could prehistoric human remains be next?

Join us to explore the fascinating unknown (and hear about what we do know) with Monument Superintendent, Brittany Petersen, on Facebook Live 11:30 EST on Friday!

This statement walks the line between hyperbole and reality by depicting the nature available at this resource site as “*the fascinating unknown*,” inviting readers to imagine an array of discoveries that could be on the horizon. References to the wonders of the natural world – “*the defense mechanism of deep sea corals*” and “*Pleistocene fossils*” – are used to situate this understanding and to convey the imaginary of a powerful and mysterious nature. A post from Silvio O. Conte NWR (June 7, 2021) also alludes to “*all there is to discover in nature.*” Agency text posts also used vivid descriptions of natural processes to characterize agency-managed landscapes: “*The story of Acadia’s formation involves colliding continents, ancient oceans, intruding magma chambers, and bulldozing glaciers. We will investigate the rocks and the landscape to learn about Acadia’s dynamic story of past and ongoing change.*” (Acadia NP, December 8, 2021). This post simplified Acadia NP’s “natural construction” as a series of dynamic occurrences – nature is imagined as a powerful network of interconnected, moving parts, reminiscent of a human engineering project.

Agency text posts rely on the imaginary of “nature as a powerful force” to shape the discourse surrounding nature; text posts portray the natural processes that underlie

federally managed units as mysterious and untamed and balance imaginings of nature's intrinsic importance with reminders of all nature provides for people.

The Imaginary of Agency Stability

Across agency text posts, authors describe natural and cultural changes to emphasize the stability of federal agencies and the units they manage. Text posts across the social media data use historical and cultural references to construct social-spatial imaginaries that characterize federal agencies as symbols of stability and timelessness within an everchanging, modern world. Several posts include black and white images that emphasize this sense of timelessness (Figures 4 and 5).

Figure 4: Acadia NP – June 24, 2021



Figure 5: Acadia NP – March 22, 2022



Agency posts reference historical figures and short interpretive descriptions to encourage readers to fully immerse themselves into the experience of spending time in a federally managed unit. An informational post from Acadia NP (March 11, 2022), uses vivid imagery to invite the reader to imagine what their experience of Acadia might be like:

*Our walk with the #WomenofAcadia takes us to a stunning display of the park's geological features along Ocean Path. Florence Bascom, the first woman employed by the United States Geological Survey (USGS), also became the first female geologist to survey the island. Following Acadia's original designation as Sieur de Monts National Monument in 1916, she published *The Geology of Mount Desert Island* which was reprinted by the Village Improvement Societies of Mount Desert Island in 1919.*

As you walk along the Ocean Path overlooking the waves crashing against the pink, rocky granite cliffs, consider Florence Bascom's landmark career in the field of geology and her scientific contributions to Acadia.

In this text post, readers are encouraged to imagine themselves interacting with the same landscape that Bascom worked on. The National Park Service seems to promote the idea that despite the passage of time, the importance of Bascom's work is still relevant to Acadia NP's story and the experience of those who work and play on site. Acadia NP is understood not only as a site where research occurs, but where individuals like Bascom can have a lasting impact on the natural resources protected by the agency. While visitors come and go, the "crashing waves" and "pink, rocky granite cliffs" of Mount Desert Island remain, as does the application of Bascom's research. Another post from Acadia NP (March 22, 2022) acknowledges the "*talented and skilled wives of park service employees*" who often "*worked full-time without compensation*" before the passage of the 19th amendment, and tells the story of Margaret Stupka, and was accompanied by Image 6, which depicts Stupka and her friends enjoying the outdoors.

Acadia National Park hired its first Ranger-Naturalist in 1932, Arthur Stupka. His wife, Margaret, was herself a trained botanist... The Stupka's would work as a team on many projects including the park naturalists' bimonthly bulletin, "Nature Notes" ... Though Margaret's work may have been unrecognized compared to formal employees, Arthur applauds her talents in an annual report, "For two summers Mrs. Stupka has donated her entire time aiding the cause of the Ranger-Naturalist Service in a very capable and enthusiastic manner. Without her assistance it would have been impossible to carry out the one-man Ranger Naturalist Service in the manner it has been done.

In this text post, Acadia NP seems to emphasize change experienced by society over time – and the ability of the agency to embrace change, by acknowledging Stupka's previously unpaid labor.

Agencies use their text posts to position federal lands as venues for observing and interacting with history in their descriptions of interpretive events and programs. A post from Silvio O. Conte NWR (June 9, 2022), balances the connection between important cultural and natural history resources and modern issues:

Wood from black ash trees has been used by generations of Native American cultures as a high quality pliable product that can be woven into baskets and other needed products. Community members at our Nulhegan Basin division recently had a chance to observe, learn and participate in a black ash pounding event led by Abenaki craftspeople and basket makers.

The post concludes by acknowledging a modern issue that may threaten the future of this cultural artform: *“The event also provided a platform to inform people of the looming threat to this species of tree due to the invasive emerald ash borer, an insect that will damage and kill these sacred trees.”* By sponsoring this event, the USFWS provides a space for individuals to learn about both the natural and cultural history of this site, while also advocating for invasive species mitigation.

In acknowledging the intersection between cultural and natural heritage, the USFWS is also depicting NWRs as places for this type of education to occur. That is, despite the passage of time, federally managed units are places where the public can gain a better understanding of what and who came before and how natural and cultural history shape the modern world. Despite the potential for learning implicit in this event, Silvio O. Conte NWR ironically seems to depict “the community” and the Abenaki people as two separate groups – “community members” were invited to watch and participate in a cultural event that celebrates generations-old practices of those first inhabited this region.

The role of the agency, as presented in this excerpt, is to not only manage the land and visitor activity, but to make relevant connections between the past and the present to interpret the story of a specific unit. By making these connections, natural resource agencies present themselves as resilient and transparent, and timeless in value.

A post from Acadia NP (June 24, 2021) exhibits the imaginary of agency stability most explicitly, “*Whether it’s summer 1937 or 2021, you can always find a ranger preparing their nature program! From night skies to bike rides, birdwatching to Wabanaki art, our summer program schedule is filling up.*” This post juxtaposed the past with the present; it alludes to a sense of timelessness regarding park operations. While aspects of the site and its offerings have modernized, the core function of natural resource agencies – to conserve and manage public lands and to facilitate human interaction on public lands – persists.

Summary: Imaginaries of the “The Great Outdoors”

Across federal agencies, text posts characterize the landscapes managed by federal agencies as “the outdoors.” Across Information, Story, and Event posts, the agency makes claims about the qualities of people and place. Many claims outline the activities that engage people on federally managed lands, linking people and place overtly, as shown in this post from Silvio O. Conte NWR (March 9, 2021): “*Walking dogs on nature trails is a great way to get outdoors for both you and your furry loved one.*” Situating social behaviors in natural places can also be observed in this post from White Mountain NF (June 11, 2022): “*We think National Forests are the perfect place to*

get outdoors and #GoPlay! How will you get outside and experience the outdoors today?" Other posts rely on the reader's cultural understanding of nature. Text posts use the "outdoors" as a symbol of recreation lands generally, as shown in this post from the Green Mountain and Finger Lakes NF (June 5, 2022): *"No need to be intimidated by the most experienced hikers, we were all first-timers once! If you're new to the outdoors, check out these tips for beginners."* National Parks also use this imaginary in the same way, as shown in this post from Acadia NP (September 24, 2021): *"What is your favorite outdoor activity? Whether it's hiking, biking, climbing, paddle sports, wildlife watching, or maybe just napping in the sun, public lands give us opportunities for countless experiences."* Across agency text posts, the imaginary of "the outdoors" represents the way federal agencies understand people within the nature within the context of the natural resources they manage.

THE STATE AGENCY STUDY

The second study provided in this thesis addresses analysis of state agency claims and imaginaries. Though analysis followed the same procedures as used for the federal agency sites, the primary difference between the federal study and the state study is that social media posts derive from agency Facebook sites in the state study – not from individual units within those agencies, as shown in the federal study.

Descriptive Analysis of State Agency Posts

The following tables outline the number of text posts, images and comments collected from the Facebook pages of state agencies. As Table 12 shows, a total of 414 text posts, 568 images, and 4,257 comments were collected from the Facebook social media accounts of the state agencies studied.

Table 9: State Agencies: Text Posts, Images, and Comments

Name of Agency/Unit	# Text Posts	# Images	#Comments
<i>State Parks Agencies</i>			
Vermont State Parks (VTSP)	90	101	312
New Hampshire State Parks (NHSP)	54	146	774
<i>State Fish and Wildlife Agencies</i>			
Vermont Department of Fish & Wildlife (VTFW)	58	90	537
New Hampshire Fish and Game (NHFG)	70	80	1,242
Maine Department of Inland Fisheries & Wildlife (MEDACF)	64	57	1219
<i>State Forests Agencies</i>			
Maine Department of Agriculture, Conservation, and Forestry (MEDIFW)	78	94	173
Totals	414	568	4,257

Rhetorical Claims in State Agency Social Media Posts

Text posts were sorted into the same seven categories outlined in the federal study. As Table 10 shows, more than half of all the posts for all state agencies studied contained claims. The Facebook posts of Vermont and Maine land management agencies

averaged from 72-87% with claims, while New Hampshire agencies had 54-64% of posts with claims. The distribution of categories of text post contents for all state agency social media posts is provided in Appendix A for each agency.

Table 10: Claims within State Agency Text Posts

	MEDIFW	MEDACF	VTSP	VTFW	NHSP	NHFG
# With Claims	52 (81.3%)	56 (71.8%)	67 (74.4%)	51 (87.9%)	29 (53.7%)	45 (64.3%)
# Without Claims	12 (18.7%)	22 (28.2%)	23 (25.6%)	7 (12.1%)	25 (46.3%)	25 (35.7%)
Total Posts	64 Posts	78 Posts	90 Posts	58 Posts	54 Posts	70 Posts

After sorting posts into content categories, texts were reviewed for evidence of rhetorical claims. All content categories (except “Other”) contained 50% or more posts with rhetorical claims (Table 11); thus, posts in the “Other” category were omitted.

Table 11: State Agency Posts: Claims within Content Categories

	# Posts	# Posts with Claims	% Claims
News	19	17	89.5%
Events/Program	116	71	61.2%
Information	222	175	78.8%
Quotes	12	12	100%
Stories	6	6	100%
Acknowledgements	11	10	90.1%
Other	28	2	7.1%

Claims within state agency text posts featured a wide variety of rhetorical devices and strategies to present arguments about visitors, agency-sponsored activities and events, agency staff, site features, and wildlife. Posts with claims were evaluated and sorted into the same two broad categories developed earlier: Claims about People and Claims about Nature (Table 12).

Table 12: State Agencies: Text Posts with Claims about People and Nature

	VTSP	VTFW	NHSP	NHFG	MEDIFW	MEDACF
# Posts with Claims about People	42 (65.6%)	40 (78.4%)	16 (59.3%)	30 (66.7%)	42 (80.8%)	52 (92.9%)
# Posts with Claims about Nature	22 (34.4%)	11 (21.6%)	11 (40.7%)	15 (33.3%)	10 (19.2%)	4 (7.1%)
Total Posts	64 Posts	51 Posts	27 Posts	45 Posts	52 Posts	56 Posts

As Table 16 shows, most state agency posts (65-93%) contained evidence of Claims about People, while only 7-41% of posts provided Claims about Nature. Like federal agency posts, state agency posts presenting Claims about People also did so in the context of nature, and vice versa. For example, one post from Maine DACF (June 10, 2022) states: *“Trees support one out of every 25 jobs in the forest products sector alone.”* Here, the subject of the claim is “trees,” and it was therefore sorted into the Nature category, even though the claim articulates the way trees “*support*” people. Alternatively, a post from Vermont SP (March 11, 2021) describes the mission of Vermont Habitat Stamp Fund: *“Loss of habitat is an enormous threat to wildlife and the Vermont Habitat Stamp Fund works to protect and restore crucial habitat throughout the state.”* Although

the phrase “*Loss of habitat is an enormous threat to wildlife*” refers specifically to wildlife, this phrase is an example used to support the second half of the sentence, which details how the (people-oriented) Vermont Habitat Stamp Fund “serves” wildlife through habitat restoration. Because this claim primarily discusses the Vermont Habitat Stamp Fund, created by people, and their contributions, this post was sorted into the Claims about People category.

Imaginarities: State Agencies

Imaginarities related to the Facebook posts of state land management agencies were less expansive than those identified for federal agencies. Below, two agency-specific examples are examined.

The Imaginary of Nature, the “Divine”

Posts from Vermont State Parks use a variety of rhetorical devices to depict nature as a divine entity. Most state agency text posts contained evidence of an imaginary of nature as an entity or place with divine qualities, though some posts referenced in this section also allude to “wholeness of spirit” imaginaries, which influence the perceived values people gain from spending time in nature. Posts that featured the imaginary of “nature as the divine” often featured serene natural landscapes (Figure 6).

Some posts that use wholeness of spirit imaginaries use quotes from notable figures to present metaphors of human experiences in nature. For example, this quote, attributed to the author Mary Davis, states (June 11, 2021), “*A walk in nature, walks the soul back home,*” suggesting that spending time in nature provides one with a significant,

spiritual experience. The idea that spending time in nature “walks the soul back home” relies on the assumption that time spent without access to nature is particularly “draining” to one’s spiritual self. Davis’ claim, “*nature walks the soul back home,*” suggests a linkage between one’s perception of “spirit” and the outdoors; Nature is where our souls truly belong.

Figure 6: Vermont SP – June 11, 2021



Another quote from VT State Parks (March 20, 2022) that upholds the idea of nature as divine argues that “*Spring is far more than just a changing of seasons; it’s a rebirth of the spirit.*” This quote was presented as a stand-alone sentence, so it is unclear if the poet (or the agency) is referring to the rebirth of one’s personal spirit or alluding to the rebirth of nature’s spirit – but either way, there is a clear association between springtime and the “rebirth of spirit.” Quotes are also used to make claims about the nature’s transcendent qualities. A post from March 7, 2021, features a J.R.R. Tolkien quote that uses “light” to symbolize nature’s divine beauty, “*Look, up at the sky. There is*

a light, a beauty up there, that no shadow can touch.” The light, described as “a beauty up there” has a heavenly (divine) connotation, especially when contrasted with the imagery of a dark “shadow.” In this context, the sky (and the light it bestows) is understood as an omnipotent presence over the natural landscape, representative of pureness and goodness.

Other posts use strong adjectives to portray human interaction with the landscape, like this post from June 11, 2021: “*No matter your age or background, you can be inspired and see things in new and amazing ways through a program by a Park Interpreter.*” This text post features an argument about the values accrued from spending time specifically in “nature managed by the State Parks.” The text posts argue that regardless of demographic background, one can have a particularly rewarding and emotionally stimulating experience, as facilitated by a “Park Interpreter.” Another post (September 24, 2021) characterizes a specific park feature in a similar way: “*A small child delights in the awe – inspiring beauty of Ricker Pond.*” The use of the word “delight” denotes a positive experience, despite the lack of detail on the exact activity the child is engaging in. Ricker Pond is not only beautiful, but its beauty is awe-inspiring – suggesting the pond is so beautiful, it triggers an emotional response. A post from June 22, 2021, likens the benefits of nature to that of poetry: “*The transformative virtues of nature and poetry have long been known to humankind. Fostering a deeper appreciation of the natural world while uniting us to our humanity, these poems have been uniquely chosen for each site.*” Vermont SP depicts the internally experienced benefits of nature and alludes to its deeply transformative properties. The use of “wholeness of spirit”

imaginaries to characterize time spent on agency land is a method of argumentation, used to garner interest in agency-sponsored activities and to affirm the public's perspective of agency managed land.

The Imaginary of Maine Agriculture as a Cornerstone Industry

Text posts from Maine DACF use a variety of cultural, economic, and spatial imaginaries to depict the Maine agricultural industry as central to the identity and economy of the state. Maine DACF was the only state agency that included “agriculture” under its governing umbrella of responsibilities and was the only agency to discuss agriculture at length in its Facebook posts. Text posts in this section are often paired with images of agricultural products or production. Figure 7 shows an image featuring Maine Governor Janet Mills posing with a maple sap bucket. Figure 8 features an individual in attendance of a Maine DACF maple sugaring event wearing a sweatshirt that states, “this is what it all boils down to.”

Figure 7: Maine DACF – March 23, 2021



Figure 8: Maine DACF – March 11, 2022



Text posts characterize Maine’s agricultural industry as “diverse and dynamic” (March 22, 2021) and encourage readers to “*Learn more about the Maine agricultural organizations leading the industry into the future*” – a claim that was repeated five times across Maine DACF’s social media posts in March 2021 and 2022. Positioning the Maine agricultural organizations as the ones “leading” the industry into the future reveals an economic imaginary of progress. By claiming that organizations are leading an industry into the future, Maine DACF is framing them as visionary and powerful. Text also posts emphasize the economic power of Maine agricultural industry with statistics, proclamations, and quotes from Governor Janet Mills. For example, one post (March 23, 2021) cites the governor stating, “*With the industry supporting more than 800 jobs in Maine, I encourage Maine people to get out this March 27-28 and safely celebrate Maine Maple Sunday Weekend.*” Here, Governor Mills uses a claim about the industry’s job market to support her request of Facebook users to “*celebrate Maine Maple Sunday,*”

contributing to the idea that Maine's agriculture industry is expanding, important, and economically powerful. Another post from March 24, 2022, features a proclamation from the governor, calling upon citizens to support Maine's agricultural industry once more:

WHEREAS, Maine's farmers are a cornerstone of our great state and provide numerous benefits to Maine's residents and visitors, we all must continue to support our agricultural producers to ensure Maine's working landscapes thrive, agriculture remains a foundation of our state, and Maine-grown farm products are accessible and available for generations to come.

In this post, Mills calls upon Facebook users to participate in the local agricultural economy, linking their participation to the success of Maine's working landscapes and thus the identity of Maine as a state. In the same text post, another portion of the proclamation is quoted, "*Maine's agriculture sector fuels our economy, contributing more than \$3.6 billion in economic impact, employing over 27,000 people, and supporting approximately 1.3 million acres of farmland.*" Thus, according to Governor Mills, Maine agriculture is a vital component of Maine's identity and economic system. Mills names the industry as the "*foundation of the state,*" and emphasizes the importance of accessible "Maine-grown" products for future generations, seeming to communicate that even the highest level of state authority believes in the dynamism of Maine's agricultural industry. Text posts also use descriptions of tradition to highlight the same point. One post (June 11, 2022) describes the annual Blaine House tree tapping: "*Thanks again to Scott Dunn of Dunn Family Maple and the Maine Maple Producers Assoc for meeting Governor Mills and Commissioner Beal today for the longstanding traditional tapping of the Blaine House Maple tree.*"

Text posts also use a variety of strong adjectives to describe agricultural products produced by Maine farmers. The strategic use of adjectives is represented most simply in a post from March 22, 2022, which describes learning “*from and about good people and things from Maine’s agricultural community*” during an episode of a virtual education series. In another post, Maine DACF celebrates Agriculture Week by putting a spotlight on “*Maine’s iconic potato industry.*” Another post (March 7, 2022) discusses the nuances of Maine maple syrup, produced across the state: “*One of the benefits of maple syrup in Maine is that we have a diverse climate – colder in the north and warming up in the south – along with mineral enriched soils. This leads to unique syrup flavors, depending on the sugarbush you visit.*” Another (March 23, 2021) asks readers, “*Where will you buy your fresh batch of pure Maine Maple Syrup?*” emphasizing the quality of this product. Maine blueberries are also the epitome of quality, according to Governor Mills,

For generations, the wild blueberry industry has been at the heart of our economy, the center of our culture, and the forefront of food production worldwide. July may be National Blueberry Month, but we don’t have to wait to honor the importance of Maine’s wild blueberries and the hardworking homegrown companies like Wyman’s who produce them... I encourage everyone in Maine to enjoy a wild blueberry product produced in our great state and to keep an eye out for the Bee Wild Mobile this summer. (June 8, 2021)

Thus, Governor Mills depicts the blueberry industry as an important facet of Maine’s economy, worthy of honor and a hallmark of the state’s culture. Maine DACF uses the cultural-economic understanding of agriculture as “the cornerstone industry” to popularize these claims about the industry, the state, and its farmers.

CHAPTER 5 DISCUSSION

This thesis focuses on the cultural, spatial, and social imaginaries related to “the great outdoors” and revealed in the Facebook text posts of natural resource agencies. There is a large body of research that examines the visitor behavior associated with state and federal natural resource-based places (Crompton & Kim, 2004; Asah et al., 2012; Groshong et al., 2020), and the public communications of agency managers (Borrie et al., 2002; Davenport et al., 2007; Derrien & Stokowski, 2020; Marcotte & Stokowski, 2021). But the study presented here is innovative in examining data from different levels of management, building on only a limited number of published examples (Sotomayor et al., 2014; Derrien & Stokowski, 2017).

In this study, imaginaries were interpreted as patterns of meaning, revealed within examples of figurative language, and supported by rhetorical claims embedded within agency text posts. This study focused on texts posted by federal and state agency managers to their Facebook pages. Results show that agency text posts construct meanings related to shaping the discourse around public lands, their use, and their place in society. Across federal agencies, imaginaries that relate to “the great outdoors” were illustrated in text posts that reflected romantic ideals of nature.

The findings show that agency text posts use several imaginaries (wholeness of spirit, nature as divine, nature as a powerful force, agency stability), influenced by romantic ideals regarding nature and the connection between humans and nature, likely to shape online discourses about resource places and about the role of these places in

society. The idea of romanticism has been supported by other scholars (Hull, 2000; Daniels, 2009), who also align wild nature with “godliness.” Further, Daniels (2009, p. 121) describes the “timelessness” of nature as one of the National Park Service’s greatest assets, easily disrupted by the “shortsighted, hurried, human-imposed time of meetings, schedules, routines, and brief vacations.” Marcotte & Stokowski (2021) also discuss timelessness as the idea relates to national parks, suggesting that agency-produced Facebook posts use references of timelessness to give places a sense of sacredness.

Romanticism and the romantic ideals of this movement have produced a long-standing, Euro-centric perception of the relationships between humans and nature. As explained by Barsham & Hitchcock (2012, p. 56), those involved with the romantic movement imaged themselves as participants in a dialogue with nature and made sense of nature by constructing “knowable symbols of a transcendent language that embraced human life.” A wide body of literature critiques public acceptance and application of the romantic ideals of nature and authors have suggested that this this kind of language has implications for modernity (Hull, 2000; Cronon, 1996).

Several differences were observed in the results of the data collection for both the state and federal studies. Nearly double the number of comments were collected from the Facebook pages observed in the state study, compared to the federal study. However, the units analyzed in the federal study posted a greater number of photographic images. Even with these differences, though, results show that both federal units and state agencies studied produced imaginaries in their social media posts.

It is also important to note that the management structure of state agencies (and the resources they manage) differ considerably from that of federal agencies. For example, unlike any of the other agencies observed in this study, Maine DACF oversees agricultural production of crops and civilian access to farm-fresh food. A unique imaginary related to the state's agriculturally driven economy was observed from the Maine DACF's posts. While this imaginary may not align with the romantic ideals perpetuated by other agencies, it does contribute to the construction of Maine's "outdoors." Agritourism – or tourism involving farms or ranches – is a blossoming industry in Maine and it provides opportunities for millions of visitors foster a greater connection with the landscape and the products they consume (Boys et al., 2017; Allen et al., 2006).

The Importance of Imaginaries

Over the past 200 years, a markedly American variety of romanticism has arisen, influenced by the transcendentalism movement and the establishment of the US National Park system (Daniels, 2009; Nash, 1970). The findings of the study presented here confirm that US natural resource agencies, at multiple levels of governance, uphold romantic ideals of nature through the on-line reproduction of imaginaries related to sublimity and the power of nature. By depicting nature through a romantic lens, natural resources agencies provide Facebook users with a framework to construct meaning from agency-managed lands. But this construction of meaning also necessarily serves the greater mission of land management agencies, who rely on tourists for visitation dollars.

Emphasizing the relationship between timeless nature and the belief that nature has divine qualities promotes an inaccurate understanding of how public lands serve society. Adhering to ideals that reinforce society's conceptualization of humans and nature as separate entities ignores the most foundational principles of public lands, which are mandated to exist, at least in part, for the recreational use of the public. In response to the societal promotion of romantic ideals, Hull (2000, p. 55) urges individuals to "debate and construct alternative ideals that might replace the weakened romantic ideal and better stand up to the powerful market-driven arguments of wise use and progressive conservation." Natural resource agencies should adopt this approach and consider the discourses they participate in online, given that their use of communication has the power to shape the public's understanding of resource places, the activities that occur on sites, and who is welcome to visit (Finney, 2014).

It is also important to consider how constructions of nature and public lands as powerful, timeless, and godly may factor into the discourse of climate change, especially considering that conserved land may also suffer the ill effects of climate change (Gonzalez et al., 2018). A variety of literature calls for science-based management solutions to mitigate the effects of climate change on public lands (Baron et al., 2009; Hansen et al., 2014), but this begs an important question: how will resource management solutions account for people? While the romantic constructions of nature have long driven people to enjoy "the great outdoors," these constructions of nature could widen the disconnect between society and the natural world. If public lands are imagined to be godly, representative of "pure nature" or as untrammelled by man, an influx of people

(and their environmental impacts) is a threat to the perceived timelessness of conserved public places. Intentionally dismantling the romantic, Euro-centric perspective on nature could stimulate more equitable solutions in promoting “the great outdoors” for all in an uncertain future. Future research about natural resource agency imaginaries could show how these affect modern management decisions regarding climate change and visitation.

Beyond the examination of well-established ideals about the perception of nature, prior research also demonstrates the ways in which people construct spiritual meaning from their outdoor experiences (Buttimer, 1985), especially in the field of cultural ecosystem services (Gould et al., 2020; Cooper et al., 2016; von Heland & Folke, 2014; Gould et al., 2014). Researchers have used an array of methods (qualitative as well as quantitative) to analyze constructions of meaning at the intersections of culture, social behavior, and place to quantify the benefits humans derive from nature (Cheer et al., 2022), and there is a developing body of literature that specifically uses the theory of imaginaries to uncover place meanings related to ecosystem services (von Heland & Folke, 2014). Studying the imaginaries that underly cultural ecosystem services could provide valuable insights for sustainable development (Cheer et al., 2022) by providing a methodological framework to understand both the values individuals derive from natural areas and the processes they use to construct these values. Embracing the methods associated with the discursive analysis of imaginaries could allow for a more nuanced understanding of the cultural ecosystem services associated with public lands. For example, analyzing the spiritual fulfillment people obtain from spending time outdoors as a “wholeness of spirit” imaginary would allow researchers to unravel the constructions of

meaning behind important cultural ecosystem services, like spiritual fulfillment and sense of place. As Kolinjivadi et al. (2019) argue, the very idea of an ecosystem service is a construction of reality: “we inadvertently give the neoliberal ecosystem service performative agency to socially construct the world to make things happen in preordained ways and which attempt to make an external reality conform to the theory constructed.” Additional research about how social groups and other collectives construct imaginaries of “the great outdoors” could provide a more nuanced understanding of the values different populations of people associate with nature and how they use public lands. Social media provides a promising source of data whose analysis may contribute to advances in this area (Wartmann & Mackaness 2020; Marcotte & Stokowski, 2021; Oteros-Rozas et al., 2018).

The imaginaries revealed in the text posts of both state agencies and federal sites explore the role of natural resource agencies in society and illuminate their management choices. Despite the differences in mission between agencies, rhetorical evidence of imaginaries was found within text posts from all federal and state agencies and units. Imaginaries are powerful because they simplify reality (Heikkilä, 2007), and those who operate the Facebook pages of federal units should be aware of the taken-for-granted meanings they promote (Derrien & Stokowski, 2020). Given that society itself has been conceptualized as an “imaginary institution,” where networks of individually and collectively assumed beliefs build upon each other to form our understanding of reality (Arruda, 2015), agencies should be encouraged to pay attention to the implicit messages shaping their discourses.

Research Issues for Future Studies

The data examined in this study were collected over a quarterly series of two-week periods to ensure that text posts represented each season. Given the time period selected, some posts were influenced by holidays or special weeks of observation promoted by the various agencies. For example, “National Get Outdoors” week, which falls at the end of September, was observed across most federal agencies, and contributed to a large collection of claims about outdoor recreation. Collecting a wider range of data over the course of one year might provide more detailed insights about the ways in which imaginaries are constructed over time on the social media pages of sites or agencies. There is, of course, a trade off in terms of the ability of researchers to qualitatively analyze very large collections of textual data.

In this study, imaginaries were identified by examining the figurative language presented in rhetorical claims posted by natural resource agencies to Facebook. A liberal approach was taken in determining which texts were considered as claims – and perhaps future research should consider how to refine the process of identifying claims in textual data. This would also suggest that claims need to be carefully specified into unique categories with overlap reduced. For example, a more detailed array of thematic subcategories under the two broad categories of claims studied here (People, Nature) might provide for a more nuanced view of the imaginaries presented in the posts collected. Finally, textual data exist within broader communicative contexts, and issues beyond texts should be considered in future research as well. As Haas & Flower (1988,

p.167) point out, “when readers construct meaning, they do so in the context of a discourse situation, which includes the writer of the original text, other readers, the rhetorical context for reading, and the history of the discourse.”

An important aspect of social media is that it can potentially reach millions of people with relative ease. Despite this ability, likely not everything posted on social media reaches its intended audience because algorithms help shape a user’s social media feed. The Facebook algorithm specifically uses a complex system that constantly monitors user engagement patterns to determine which posts show up in which user feeds (Kite et al., 2016). The extent to which social media users understand (or care about) how algorithms shape their online experience is disputed by scholars (Bucher, 2017). Elsami et al. (2015) claim that most people who regularly use Facebook or Instagram are unaware of the presence of algorithms on social media sites. Rader and Gray (2015), however, found that Facebook users may have an advanced understanding of how the algorithm worked. The variable nature of the algorithm does represent an unknown source of error in studies using Facebook as a data source.

Though the federal and state studies presented here were separate, future research comparing federal and state results across agencies or units might provide useful. Comparing the comments sections of different levels of land management could also reveal a more nuanced understanding of Facebook users’ perceptions of place and of the online communities that interact with natural resource agencies on Facebook. While differences in numbers of images collected for different studies might be attributable to differences in management objectives, agencies may have varying resources to offer

managers tasked with operating social media accounts. Conducting interviews with social media managers across natural resource agencies would provide a clearer understanding of the choices made regarding social media postings.

On the topic of user comments, there is an emerging body of literature that discusses the ethics of social media research (Moreno et al., 2013; Pagoto et al., 2019). Given that the research presented in this thesis was concerned with the social media posts of government agencies operating in the public sphere, we did not seek IRB approval. The data discussed in this thesis were collected from the public Facebook pages of natural resource agencies and no intentional interaction occurred between the researcher and the agency, or with followers, during the data collection and analysis process. Additionally, we took care to protect the identities of any individuals mentioned in text posts, referencing only agency posts. The issue of how social media studies should be conducted to protect the privacy of communicators, even in the public sphere, remains an on-going issue.

Understanding the communicative processes used by natural resource agencies to interact with their online audiences may provide an understanding of contemporary and emergent discourses surrounding public lands management. Natural resource agencies use established constructions of “the great outdoors” to convey ideals to both protect sites and reinforce these ideals across members of the public. The popularity of resource places shows the centrality of these discourses across at least some sectors of society.

Analyzing the discourses of natural resources agencies illuminates the power of imaginaries of the outdoors – imaginaries that agencies use to shape the sentiments and understandings of the audiences they wish to retain. The romantic ideals perpetuated by natural resources agencies reinforce and extend decades of knowledge and myth about the role of these agencies in society, but their utility for contemporary times is not assured. Natural resource agencies should carefully consider the discourses they choose to promote on social media and align those with their goals in addressing the needs of a modern, diverse society, to whom public lands belong.

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APPENDIX A

**INDIVIDUAL AGENCY DATA TABLES
(FEDERAL AND STATE AGENCY STUDIES)**

Text Post Categories for National Park Sites

Most posts across National Park units fell into the Information or Programs & Events categories (Table 13). Saint Gaudens NHP had the highest proportion of informational texts (61.9%), while Marsh - Billings - Rockefeller NHP has the most posts related to Programs & Events (55.6%). Acadia NP's social media presence was characterized by a considerable number of texts categorized as Stories (16.9%) and News (15.3%) posts.

Table 13: NPS Text Post Categories

	Acadia National Park (ME)	Marsh- Billings - Rockefeller NHP (VT)	Saint Gaudens NHP (NH)
News	19 (15.3%)	0 (0%)	1 (2.4%)
Programs & Events	45 (36.3%)	10 (55.6%)	7 (16.7%)
Information	32 (25.8%)	7 (38.8%)	26 (61.9%)
Quotes	0 (0%)	1 (5.6%)	0 (0%)
Stories	20 (16.1%)	0 (0%)	2 (4.8%)
Acknowledgements	4 (3.2%)	0 (0%)	3 (7.1%)
Other	4 (3.2%)	0 (0%)	3 (7.1%)
Total (N = 184)	124 posts (67.4%)	18 Posts (9.8%)	42 Posts (22.8%)

Text Post Categories for US Forest Service Sites

Information was the most common category for National Forest unit text posts: informational posts made up most of the posts from Green Mountain and Finger Lakes NF and White Mountain NF. Both National Forests had more than 10% of posts within the Other category. Green Mountain and Finger Lakes NF had a high proportion of posts in the Quote Category.

Table 14: USFS Text Post Categories

	Green Mountain & Finger Lakes NF (VT & NY)	White Mountain NF (NH & ME)
News	0 (0%)	5 (6.6%)
Programs & Events	3 (4.8%)	5 (6.6%)
Information	40 (63.5%)	48 (63.2%)
Quotes	9 (14.3%)	1 (1.3%)
Stories	1 (1.6%)	2 (2.6%)
Acknowledgements	0 (0%)	5 (6.6%)
Other	10 (15.9%)	10 (13.2%)
Total (N = 139)	63 Posts (45.3%)	76 Posts (54.7%)

Text Post Categories for US Fish and Wildlife Sites

Social media posts from the NWRs are the most similar across all categories.

Most posts were informational or related to Programs & Events. Great Bay NWR had the highest proportion of information text posts (72.6%), and Silvio O. Conte NWR had the highest proportion of posts related to Programs & Events (20.6%).

Table 15: USFWS Text Post Categories

	Moosehorn NWR (ME)	Rachel Carson NWR (ME)	Silvio O. Conte NWR (VT & MA)	Great Bay NWR (NH)
News	1 (2.8%)	0 (0%)	0 (0%)	1 (2%)
Programs & Events	6 (16.7%)	8 (18.2%)	8 (23.5%)	9 (17.7%)
Information	26 (72.2%)	30 (68.2%)	20 (58.8%)	37 (72.6%)
Quotes	0 (0%)	1 (2.3%)	0 (0%)	0 (0%)
Stories	1 (2.8%)	1 (2.3%)	3 (8.8%)	3 (5.9%)
Acknowledgements	0 (0%)	1 (2.3%)	2 (5.9%)	1 (2%)
Other	2 (5.6%)	3 (6.8%)	1 (3%)	0 (0%)
(N = 165)	36 Posts (21.8%)	44 Posts (26.7%)	34 Posts (20.6%)	51 Posts (30.9%)

Text Post Categories for State Agencies

State agency text posts were categorized into the same groups used in the federal agencies study, with most text posts appearing in either the Information or Programs/Events categories. Among state agencies, only two had text posts in the Quotes category (Vermont SP; Maine DACF). Across agencies, text posts were relatively similar, with most disseminating important announcements and safety information, promoting agency-sponsored events, presenting virtual educational and interpretive materials, and acknowledging the work of staff and volunteers. Text posts from the Fish and Wildlife agencies of all three study states provided information about hunting and fishing licenses and hunting lotteries. Text posts from Maine DACF featured information about Maine’s agricultural industry.

Table 16: State Agency Text Post Categories

	ME DCAF	ME DIFW	VT SP	VT FW	NH SP	NH FG
News	9 (11.5%)	3 (4.7%)	2 (2.2%)	2 (3.5%)	0 (0%)	3 (4.3%)
Programs & Events	24 (30.8%)	25 (39.1%)	24 (25.6%)	16 (27.6%)	10 (18.5%)	17 (24.3%)
Information	40 (51.3%)	34 (53.1%)	39 (43.3%)	33 (56.9%)	39 (72.2%)	36 (51.4%)
Quotes	1 (1.3%)	0 (0%)	12 (13.3%)	0 (0%)	0 (0%)	0 (0%)
Stories	0 (0%)	0 (0%)	0 (0%)	4 (6.9%)	0 (0%)	2 (2.9%)
Acknowledgements	4 (5.1%)	2 (3.1%)	3 (3.3%)	0 (0%)	1 (1.9%)	1 (1.4%)
Other	0 (0%)	0 (0%)	10 (11.1%)	3 (5.2%)	4 (7.4%)	11 (15.7%)
(N = 414)	78 Posts (18.8%)	64 Posts (15.5%)	90 Posts (21.7%)	58 Posts (14%)	54 Posts (13%)	70 Posts (16.9%)