



The dynamics of trail use and trip reporting: Understanding visitor experiences within social-ecological systems

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ABSTRACT

In recent decades, digital communications have assumed an influential role in public discourse, including online forums where contributors write about their recreation and tourism experiences. Systematic study of the language practices used on these forums offers a tool to access and assess the complex social and cultural systems in which recreation takes place, deepening our understanding of how people construct meaning of outdoor experiences and how these meanings function collectively in society. In this article, we use thematic and discursive approaches to study how people represent their trail experiences through an online forum serving trail users in Washington, USA. Informed by focus groups held with forum contributors, we systematically analyzed the content and style of thousands of crowdsourced texts from six trails written over a five-year period (2015–2019). We examine the social observations and interactions commonly reported on the forum, offering insights into how online forums establish recreation norms, create systems of power and authority, reproduce assumptions about people and place, and form insider and outsider groups. Understanding these dynamics is a critical foundation for management frameworks that reach beyond site-specific contexts to consider the interconnections among cultural identities, social networks, economic influences, and ecological knowledges within social-ecological systems. We conclude that trip reporters use particular rhetorical strategies and “power moves” to assert authority over the trail space and characterize who belongs in recreation communities, discussing how language practices might be used to promote more diverse, inclusive, and accessible outdoor spaces.

Management implications: The perspectives shared on online forums can increase managers’ abilities to grapple with the complexities of recreation, facilitating responsive management decisions that represent public interests. Our research shows that online forums are a space where people learn and reinforce recreation norms, lending insight into why people make certain recreation decisions, what people expect while recreating, and how they engage with others in hopes of meeting those expectations. In partnership with researchers, managers can take advantage of these pre-existing qualitative data sources, helping inform planning for recreation spaces and services that promote equitable and inclusive access.

1. Introduction

Language holds power in normalizing how people interact with the world around them (Foucault, 2007; Wight, 2019). Using language, humans create the frameworks and metaphors through which we understand the world, building knowledge, ideologies, and ultimately the material spaces where we live, work, and play. Thus, the ways people speak and write about their outdoor experiences have bearing on who recreates where and how, ultimately shaping the complex social-ecological systems within which recreation happens.

Systematic study of the language practices surrounding recreation and nature-based tourism offers a tool to access and assess the dynamics of recreation systems. Recreation discourse research has potential to elucidate the strategies people use to understand, value, and explain their activities, both within the broader spaces of recreation and tourism

and as part of the community and cultural identities they carry. Such research has the potential to inform management frameworks that reach beyond site-specific contexts to consider the interconnections within human-nature relationships, diverse cultural identities, social networks, economic influences, and ecological knowledges.

Language practices encompass both spoken and written communication, and the record of each is accessed in different ways. These communications emerge from specific social contexts and are always directed toward a perceived audience of one or many. People have long written about their outdoor experiences in a variety of formats, from personal letter writing and journaling to formal publication. In recent decades, digital communications have assumed an influential role in public discourse, including social media platforms focused on recreation and tourism experiences (Calcagni et al., 2019; Gretzel and Yoo, 2018). The Internet provides countless forums to say, “I was here and this is

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what it was like.” These various forums offer opportunities for others to learn and plan for their activities (part of the “anticipation” phase of recreation experiences) and reflect on their activities (the “recollection” phase), two types of engagements that have long been recognized as the first and last parts of a five-phase recreational experience, bracketing travel to the site, the recreation activity itself, and travel home (Clawson & Knetsch, 1966; Hammit, 1980). These writings and other forms of sharing can also be seen as part of “extended leisure experiences”—activities in and of themselves that usually take place after (and in reference to) the primary recreation activity (Scott & Harmon, 2016).

While the sheer volume of social media data can be both enticing and overwhelming to managers and researchers, they hold high potential to deepen an understanding of how people enter outdoor recreation worlds, what they experience while recreating, and how they talk about those encounters with others. Studying perspectives shared on online forums can increase managers’ abilities to grapple with the complexities and diversity of human experiences, facilitating responsive and informed management decisions. The forums themselves also may offer ways for managers to enhance visitor opportunities in the anticipation and recollection phases of recreation experiences. To date, however, most research has not explored discursive dimensions of these forums, instead focusing on the spatial and temporal patterns of recreation activities (Wilkins et al., 2021).

To advance new understandings of the discursive construction of recreation spaces—both physical and virtual—we designed a study to investigate how people represent the social dimensions of their outdoor experiences online, specifically exploring two research questions in the context of a popular online forum for trails in Washington, USA:

- What types of social observations and interactions are commonly reported in online trip reports, and how are these presented?
- How do contributors use online trip reports to engage with other trail users, and establish or reinforce trail rules and norms?

Our exploration of these questions helps us consider the utility of online forums as data sources for scholars and managers to observe the social dynamics of outdoor recreation in the physical spaces of trails, and consider how forums themselves also function as a virtual social space that may reproduce and expand broader dynamics of power, authority, and inclusivity. Through a qualitative analysis of crowdsourced online trip reports, conceptually guided by theories of discourse and social construction (Berger & Luckmann, 1966; Fiske, 1993; Potter & Wetherell, 1987), we begin to untangle the web of language, knowledge, and power that shapes recreation communities, normalizing recreation behaviors, and ascribing meanings and values to specific recreation experiences and landscapes.

1.1. Digital communications lend insight into recreation experiences

Recreation managers recognize online writings may increase their knowledge about the populations they serve and the experiences people seek and value, but understanding how to interpret these is a challenge. Anecdotally, managers explain using social media platforms to learn about changing physical conditions, such as a washed-out road or a tree obstructing a trail. But understanding dynamic social conditions requires a more systematic and thorough consideration of data. To meet these interests and needs, research using crowdsourced and social media data in environmental research has proliferated (Ghermandi & Sinclair, 2019). Scholars across disciplines are using a variety of methods and theoretical frameworks to access preferences, values, viewpoints, and interests of social media users and non-users (Calcagni et al., 2019; Ilieva & McPhearson, 2018; Ladle et al., 2016; Oteros-Rozas et al., 2018; Toivonen et al., 2019). This type of user-generated information has traditionally been attained at considerable cost and difficulty through surveys, focus groups or interviews; digital media bring distinct advantages including the ability to access large volumes of data that extend

across greater space and time (Eagles, 2014; Fisher et al., 2018; Pickering et al., 2018).

The landscape of social media recreation and tourism research has taken shape in distinctive ways. For example, sites like Twitter and Flickr have dominated the research landscape (in part because of data availability) with global platforms and text-heavy sources such as blogs and online forums appearing less frequently (Ghermandi & Sinclair, 2019). Furthermore, most research has focused on spatial and temporal aspects of recreation experiences, using associated geolocation or time stamp information to understand visitation patterns (Fisher et al., 2018; Sonter et al., 2016; Wood et al., 2020). Beyond answering “where?” and “when?”, qualitative analysis of textual data has high potential to lend insight to the ways visitors’ recreation experiences unfold and the motivations, expectations, explanations, and evaluations they associate with their activities. This lends perspective to the connectivity between space and identity, particularly as it relates to the ways people interact with the physical environment (Dunkel, 2015).

In this body of research using social media to investigate recreation experiences, analyses relying primarily upon text are rare, and most content analysis approaches focus on image content (Teles da Mota & Pickering, 2020). Studies have been used to identify what attracts ecotourists to sub-Saharan protected areas (Hausmann et al., 2017), how satisfied tourists were with giant panda encounters (Cong et al., 2014), seasonal variations in how tourists valued the Australian mountain (Pickering et al., 2020), and sentiment about the Great Barrier Reef (Becken et al., 2017). Studying the role of forums more specifically, researchers have also explored the intersections of self, narrative, and wilderness on online forums (Champ et al., 2013) and considered how social media can be used to uncover public values that might not be attained through formal public comment processes, potentially balancing the powerful voices of special interest groups (Barry, 2014).

The search for objective understandings of recreation behaviors using crowdsourced media data should be complemented by study of how people create knowledge (Hatchuel, 2005). To do this, social media need to be approached as a dynamic human and cultural space, where online users are subjects, knowledge-creators, and interpreters of meaning (Conti & Lexhagen, 2020; Kozinets, 2015). Study of online media can illuminate not only how recreation activities contribute to the social work of values creation and meaning making, but also how online spaces expand those cultural effects.

1.2. Understanding the social space of online forums

Not only do social media platforms generate data that offer insights into “on-site” recreation experiences, but the platforms themselves are spaces where meanings are made and negotiated. These meanings, in turn, shape recreation practices and behaviors, along with visitors’ (and non-visitors’) expectations, experiences, and satisfaction (Bordelon & Ferreira, 2017). While not every recreationist is a producer and/or consumer of social media content, its widespread use influences the community of recreationists and the recreation landscape.

Creators and consumers of online content have diverse motivations for participating in recreation and tourism-oriented forums. Studies of travel reviews identify creators’ motivations ranging from promoting the well-being of others to helping others mitigate risk, increasing personal satisfaction, and feeling needed (Gretzel & Yoo, 2008; Munar & Jacobsen, 2014). Munar and Ooi (2012) describe a sense of community empowerment created by the rituals of the forum, such as exchanging advice and sharing reviews, arguing that one social effect of online forums is the potential to upend power structures that have characterized the tourism industry. They describe a virtual space where knowledge that is accessible and shared frequently attains value, which builds community around online-specific systems of reward and value.

Studies of online recreation communities therefore offer insight into the strategies and approaches used to create and police recreation norms. A Foucauldian analysis brings focus to the relationships between

language, knowledge and power and how discursive practices impose behavioral expectations both within the forum and on the trail (Wight, 2020). Control over social resources, including discursive spaces and information itself, forms the basis of power (Fiske, 1993), as does the perceived ability to control such resources, influence others, or change outcomes (Chun & Lee, 2017). People and groups influence, create, resist and reproduce power through discourse, a form of social power that is amplified in media communications (Fairclough, 1989; Lillqvist et al., 2016; van Dijk, 1995). Online settings do not necessarily upend social hierarchies, but create another space for negotiating power. Our study identifies key discursive “power moves” in order to explore the social effects of power enactments in the online space. We analyze how the things people say become knowledge or truth, and contribute to the formation of identity or “subjectification” (Wight, 2020; Skinner, 2012).

Our analytical attention to the social space of the online forum aims to uncover the diverse and subtle ways powerful user groups attain and maintain power over the recreation space and the social effects in delineating who belongs and may not belong in a recreation community. Because they are not focused on finding consensus and can accommodate multiple perspectives, social media have potential to be dialogic (Bakhtin, 1981), but the expressions of viewpoints online are still highly influenced by social contexts (Kelsey & Bennett, 2014; Lillqvist et al., 2016). For example, people are more likely to share ideas online when they perceive others’ comments to align with their own perspectives (Lee & Chun, 2016). Thus, the potential for a range of viewpoints to emerge online is influenced by power moves that affirm and reproduce prominent ideas without making space for divergent or contrary expressions. In online information-sharing forums, participation comes in the form of giving or taking knowledge, which bestows social status around the amount or type of knowledge one possesses. A key power move is demonstrating the amount of knowledge one has to attain a higher social position on the forum (Matsuda, 2002). Because information is the currency of the crowdsourced data platform, controlling information enacts social power with effects that extend beyond the online space.

1.3. Using peer-to-peer shared information as crowdsourced data

This research uses textual data in the form of written reports posted on a popular online forum whose primary purpose is peer-to-peer sharing of trail information. Recreationists use the forum to communicate their experiences using a particular trail, and also to seek information about others’ experiences. Using media from “the crowd” to investigate how visitors experience the recreation space has particular benefits, but parameters surrounding the use of crowdsourced data also must be acknowledged. First, the data researchers often characterize as crowdsourced are typically not created for the purpose of being integrated into a distinct data set. While voluntarily shared on the social media platform, these data are not generated for research purposes. Second, the term “crowdsourced” may imply collaborative creation on the part of the online users, while in practice the work to transform the online content into a set of data for solving problems is performed by the researchers (Dunkel, 2015).

Strengths of crowdsourced data lie in their potential to undermine power structures that traditionally characterize the research landscape, where interviewers and survey-creators, for example, set the study parameters, create the questions, and define the pathway to analysis. Such data also may expand the range of viewpoints researchers and managers can access (Dunkel, 2015), and the public may perceive such crowdsourced viewpoints as more legitimate or fair (Erickson, 2011).

Finally, there are research challenges around who is and is not represented in online platforms. As public land managers are re-thinking how they can sustainably manage recreation to serve the diverse interests of the diverse public (Cerveney et al., 2020), attention to this limitation is critical in interpreting research results based in crowdsourced data. More subtly, social media have been shown to have a

positivity bias, portraying positive recreation experiences more than negative ones (Toivonen et al., 2019). The work of the qualitative researcher is to systematically investigate the crowdsourced data in ways that access the nuances of online media, acknowledge the limitations of the data set, and illuminate the method; the challenge is doing this in ways that managers and others who use the findings can understand and operationalize (Di Minin et al., 2015). The research presented here uses crowdsourced data as a starting point to investigate the recreation experience as it is observed, related and negotiated in both an online and on-site recreation community.

2. Methods

2.1. Study context

Our study area is located in the Seattle, Washington Metropolitan Area (USA). We studied area trails through trip reports hosted on the Washington Trails Association (WTA) online forum. Established in 1966, WTA is a non-profit organization headquartered in Seattle that runs a state-wide volunteer trail stewardship program, advocates for trails, offers educational opportunities, and hosts an online hiking guide for almost 4000 trails (WTA 2021a, WTA 2021b). Linked to its hiking guide, WTA has hosted an online forum for trip reports since the late 1990s, in which trail users are invited to post text and photographs describing their experiences, including trail conditions and other details about their hike. Users can award others’ reports a “thumbs up” for being useful; they can also reply to trip reports in a public “comments” section. As of April 2021, 187,842 trip reports had been posted to the forum, with over 23,000 trip reports posted in 2020 (WTA 2021c).

We selected six trails for the analysis, under various management jurisdictions and located across a gradient of urban to wildland settings (Table 1). We consulted with local land managers and WTA staff to ensure the inclusion of a range of management interests. We also hosted four focus groups in January 2020 at the University of Washington in Seattle to inform our study design. WTA advertised the focus group via a targeted email to people who had posted a trip report on the platform in the prior 12 months. Forty-one participants engaged in groups of 10 or 11 in hour-long focus groups. We used group-listing and ranking activities to understand participants’ motivations to contribute to the trip report forum, the audience they envisioned for their posts, and how they decided what information to include. We also explored how participants used the platform as consumers of information, including what they sought when reading others’ trip reports. These aspects of trip reporting behaviors guided the selection of trails, leading us to consider trails with a range of characteristics (more and less: visited, reported on, urban-proximate, challenging, etc.). It also helped refine our research questions.

2.2. Sample and analysis

We acquired five years of the full-texts of trip reports (January 2015–December 2019) for the selected trails, and randomly selected half of the trip reports for each trail to include in our analysis (we used all reports for one trail [Discovery Loop Trail], which had many fewer reports during the years sampled) (Table 1). The 2084 reports in our sample ranged from 1 to 991 words, with an average length of 133 words.

Insights from the focus groups laid the foundation for our qualitative analysis of trip report texts; participants’ self-described and observed practices, considerations, concerns, and other dynamics informed the design and focus of our codebook. We first conducted a thematic analysis of the trip reports (Braun and Clark, 2006), considering elements of content, emotional valence, and type of communication in the trip reports. This resulted in coding trip reports both for their explicit content (what people were writing about), as well as how this content was communicated (e.g., whether commentary was *about* others or advice

Table 1

Details about trails included in study.

Trail	# of trip reports analyzed	Round-trip trail mileage ^a	Elevation gain ^a	Trail management type	Miles from downtown Seattle
Discovery Loop Trail	79	2.8	140 ft.	City-managed trail in park	6
Poo-Poo Pt. - Chirico Trail	300	3.8	1760 ft.	State-managed trail in conservation area	19
Mt. Si Trail	495	8.0	3150 ft.	State-managed trail in conservation area	35
Lake 22 Trail	604	5.4	1350 ft.	Federally managed trail in national forest	56
Talapus- Olallie Lakes Trail	363	6.2	1220 ft.	Federally managed trail in national forest	48
Mt. Dickerman Trail	243	8.2	3950 ft.	Federally managed trail in national forest	71
Total	2084				

^a From WTA hiking guide (WTA 2021b).

given to others). Our codebook included 22 overall codes: 12 parent codes and 10 child codes. The codebook was designed to identify segments of text—at the sentence or multiple-sentence level—that provided insight into the social space of the trails and the trip reporting forum. This included codes applied to capture descriptions of interactions within groups and between groups on the trail, observations about other trail users, commentary about oneself and companions, and advice offered to other readers. For example, an “advice/tips” parent code (applied to text that offered direct suggestions for readers to act or think in particular ways) had three child codes: “gear descriptions and recommendations,” “cautions,” and a general “encouragement and recommendations.” A “rules/etiquette” parent code (applied to text that offered commentary on whether rules, norms, or etiquette were being followed on the trail) had “positive” and “negative” child codes, to characterize the emotional valence of the commentary, often related to whether the reporter perceived that rules were being upheld or violated.

Qualitative coding of the trip reports was completed in Dedoose (8.3.47b) by one author. Following the practical guidelines described by O'Connor and Joffe (2020), we refined code definitions and application of the codebook incrementally, using inter-coder reliability testing to improve our tool and process. We were satisfied with our team's internal consistency when a second author's tests of inter-coder reliability for 10% of the code applications for each of the six trails neared or surpassed a pooled Cohen's Kappa score of 0.90 (range: 0.84–0.92), which is within the range researchers generally judge as acceptable agreement (O'Connor & Joffe, 2020). Once coding was complete, we analyzed code applications and the coded excerpts, examining discursive patterns within the excerpts' content and form. Our discourse analysis sought to discern strategies commonly used to engage with others through the forum, which were identified and examined within the trip report data to understand their form and function, as well as how multiple approaches were used together to advance particular social interests.

3. Results

We present our results in four sections. In the first two, we present our findings about the types of descriptions trip reporters offered about other trail users, including who they were, how many there were, and what they wore (research question 1). In the third section, we present our results that examine others' trail behaviors and the styles of language used to institute and uphold them (research questions 1 and 2). Finally, we describe how trip reporters used the forum to engage with others (research question 2).

3.1. Who and how many: describing other trail users

Describing other trail users was a dominant mode through which trip reporters constructed and communicated about the social space of the trails. These included descriptions of how old other trail users were, the size and composition of others' groups, others' trail behaviors, and how

trip reporters perceived the dispositions of others they encountered.

Trip reporters used a matter-of-fact style to talk about the number of people they encountered on the trail, which they sometimes gave numerically, and sometimes summarized qualitatively. Just under one third of the trip reports in our sample included commentary about how many people they encountered; this proportion would be higher if it also included accounts of how many cars were parked or spaces were available at trailhead lots (we excluded these counts from analysis because they were so pervasive). A common discursive pattern involved an assessment of how many people were encountered paired with an overall evaluation of their experience. For example, one Mt. Si trip reporter wrote, “We got to the trailhead around 8:45am and was pretty crowded but still got a spot. We knew this is a super popular one so expected lots of people, and indeed there were tons! Still had fun and everyone was pleasant.”

As in the prior example, trip reporters offered brief, positive commentaries about the demeanors of other groups, often just as a passing remark or adjective (nice, pleasant, friendly). Few described the interactions with people from outside their group that led to these positive assessments. Those that did generally described talking or hiking with others they encountered; for example, one Talapus-Olallie Lakes trip reporter wrote, “A quick shout out to George who I meet on the trail today. It was nice talking to you and hope we can meet up again on some other trail. KEEP HIKING!!”

Negative commentaries commonly described details of trip reporters' encounters with specific people or groups on the trail. Reporters offered this type of critical commentary by describing groups as too big, too young, too inexperienced, or having poorly controlled dogs. These were often offered in practical terms, such as describing the trail as unsafe for particular visitors. But, we cannot interpret such commentary as simply objective or neutral, when it in practice might be interpreted as exclusionary by those who disagree with the trip reporter's assessment of who belongs on the trail. For example, one Lake 22 trip reporter wrote,

“Most annoying was the hundreds of hikers on the trail nearly colliding into each other in disregard for the terrain. Seriously, parents with small children should reconsider easier hikes in the area. We actually saw a toddler in diapers tripping and slipping through the rocky talus. Additionally, the rocks are extremely ridged and sharp - not a place for small lap dogs. I love the fact that hiking has become so popular both for families and their pets, however people need not put their young babies and toddlers or small pets in danger and hike this trail. Please leave them home with a baby sitter or pick an easier hike. Safe trails to everyone.”

In contrast to this trip reporter's authoritative assessment (and described annoyance), other trip reporters for the same trail wrote about the trail as a family-friendly hike, recounting their positive experiences with young children or small dogs. This illustrates how trail users not only judge each other, but also attempt to control and influence others who are considering the suitability of particular hikes for themselves or

their groups. Despite the negative commentary, however, the rhetorical framing in this example illustrates the social pressure trip reporters may experience to couch such complaints in positive or encouraging terms (e. g., “*I love the fact that hiking has become so popular, however ...*” “*Safe trails to everyone.*”). Furthermore, it calls into question what kinds of negative commentary might not be able to overcome social pressures to keep trip reports positive, raising questions about positivity bias in this kind of dataset.

Less favorable observations about the characteristics of other trail users were also offered in more general forms. For example, one Poo Poo Point trip reporter wrote, “*There were a lot of people on this trail to whom I would have never recommended go on this trail.*” Similarly, a Lake 22 trip reporter wrote, “*However, because the route is both relatively short and close to populated areas, this is an insanely crowded hike, and many of the hikers are types that you don’t find in wilderness areas.*” These general observations about “types” of hikers did not state what constituted these types or what made them less suited for the particular trail. The use of these and other superficial or vague descriptors can be interpreted as a strategy to avoid overt discussions of who they believe trails should serve, while maintaining a stake in what “types” of people they believe should be on trails. This could be related to perspectives on race, ethnicity, ability, gender, group size, or other personal characteristics that might be outwardly visible, and that trip reporters might be hesitant to name explicitly.

3.2. Gear: what other trail users wore and used

In addition to describing other trail users in terms of “who and how many,” one of the most pervasive and elaborate ways trip reporters described other trail users was by commenting on the gear they wore or used on the trail. The observations trip reporters made about those they encountered included mentions of gear, including footwear, traction devices, trekking poles, raingear, and other material goods. Gear was often used by trip reporters as a visible indicator of how experienced or prepared others were on the trails, which also served as an entry point for advising others on what they should expect and how they should equip themselves.

First, and most simply, reporters sometimes offered commentary about others’ gear with direct, concise statements of what people they encountered on the trail were wearing or using. These observations were often coupled with brief commentary about how others seemed to be faring with their gear choices. For example, one Talapus-Olallie Lakes trip reporter wrote, “*A couple patches of snow and mud, but there were a few people managing in tennis shoes.*” A second and more elaborate version of this commentary combined observations about others’ gear choices with descriptions about their own equipment. For example, one Mt. Si trip reporter wrote, “*You start seeing dry snow on and off until you hit 2.5 mile point. Dry snow is gradually increasing by the time you reach the boulder view point. I used my micro spikes from 2.5 mile point. I have noticed many young people not using any traction devices.*”

Third, and most often, trip reporters used these observations of their own and others’ gear as a foundation for offering explicit advice to readers. Advice is common currency in trip reports; 54% of trip reports in our sample include some sort of explicit advice to readers, and 32% of trip reports included gear recommendations (as a specific form of advice). A common formula was for trip reporters to offer a negative judgement of others they encountered as ill-prepared and a positive evaluation of their own gear choices as the foundation for the advice they were offering. This infused a tone of expertism in trip reports. For example, one Lake 22 trip reporter adopted this formula, using sarcasm for added effect. Pairing their own “no problems at all” with the observation of “quite a few people slipping,” the reporter wrote,

“The first half of the trail is mostly running water, puddles, or mud so wear something waterproof/resistant. We saw A LOT of people in shoes, shorts, and sandals. It was awesome. To each their own I

suppose. The last half had snow that gradually became deeper and more prevalent. We wore snow boots with icetrekks and had no problems at all. We did notice quite a few people slipping on the switchbacks on their way up as we came down. It’s always better to over prepare than under.”

Through such techniques, trip reporters used gear to describe the physical conditions of trails and social characteristics of other trails users, and also to characterize and define what is appropriate for hiking and other trail experiences. In these ways, gear was a dominant and recurring symbol in trip reports. More specifically, footwear became an overarching symbol of preparedness. About two thirds of the gear recommendations made in the trip reports mentioned footwear. Micro spikes (traction devices for icy conditions), for example, are mentioned 324 times in gear recommendations; boots are mentioned 266 times; and sneakers and tennis shoes are mentioned 67 times. For context, other types of gear are mentioned less often: trekking/hiking poles were the next most mentioned item in gear recommendations (224 times), and gear such as coats, jackets, and shells were only mentioned 33 times.

There was some variation and ambiguity in reports about whether trip reporters offered suggestions out of concern for others’ safety or in the interests of others’ comfort. While the two may be connected (wet feet might just be unpleasant in some conditions or could lead to hypothermia in others), trip reporters used this type of commentary about gear to demonstrate expertise and make examples of others they judged poorly for their decisions.

3.3. Behavior: what other trail users did

In addition to gear, critical commentary was well-developed in trip reporters’ descriptions of others’ behaviors, with about 11% of trip reports referencing adherence to trail rules or etiquette. Topically, this commentary most often referred to trail regulations and norms that the trip reporter did not perceive were being followed.

The behaviors of dog owners and their dogs were a common subject of trip reports: dogs are mentioned in 39% of excerpts about trail rules or etiquette. While trip reporters sometimes praised the good behavior of dogs and their owners, these are generally in the context of frustrations with a lack of leashes, control, or courtesies toward other trail users. In addition, general noisiness and playing music was a common criticism of others. Speakers and music are mentioned in about 10% of the commentary about rules or etiquette. One Talapus-Olallie Lakes trip reporter wrote, “*When we got to Talapus Lake there didn’t appear to be any obvious signage about how to find the campsites like I’ve seen on other Wilderness hikes. This was interesting to us because there were some people at the near end of the lake who weren’t there for the peace and quiet (they were talking loudly and playing music).*” As is shown in this excerpt, the behaviors of others were used to make overall judgments of groups; the reporter concludes that the group they encountered wasn’t “there for the peace and quiet” because they were talking and playing music. Speakers are used as symbols of undesirable “others” on the trail; interestingly, in only one trip report in our sample does the reporter mention using a speaker himself (in this trip report, the writer notes that a ranger asked that they turn down the speaker).

Other commentary seemed to police the social space of trails more directly, describing people or activities they didn’t think should be there. One flagrant example of this is shown in a trip report from Lake 22, in which the writer describes: “*Ran into a group of Asian kids (not kids, they were all in their mid 20’s) playing dress-up, trying to change into a bunch of random Disney character costumes right on the bridge that goes around the lake. If any of you read this, save that sh*t for Times Square in NYC - it was rather annoying.*” The trip reporter is seeking to regulate the social space of the trail, prioritizing their own conception of appropriate activities in the space over others’.

3.3.1. Rules and etiquette language

In addition to understanding topically what behaviors were being scrutinized on the platform, we also sought to better understand the discursive strategies trip reporters were using to achieve their desired outcomes for others' behaviors. We analyzed the 345 excerpts in which reporters commented about others' adherence to rules, etiquette, and social norms on the trail. These excerpts offer insights into complex social dynamics and goals that are advanced by commenting on, describing, or demanding particular ways of behaving on the trail. Because the writer has a persuasive objective in writing about others' behaviors, this subset of trip reports lends insight into the strategies trip reporters employ to regulate and police others' behavior in order to foster a particular kind of trail culture.

Table 2 identifies the rhetorical strategies trip reporters used to communicate about norms, rules, and etiquette, and the prevalence of these strategies in the trip reports (trip report excerpts may demonstrate more than one strategy). Many of these were based in direct observations of others' behaviors, or the outcomes of their behaviors. More than 60% of the excerpts in this subset of trip reports included a negative evaluation of a behavior the reporter had observed on the trail. This included the most common rhetorical strategy, which was tying a negative evaluation—using words like “disappointed” (8 occurrences), “sad” (9 occurrences), or “unfortunately” (10 occurrences)—to others' specific trail behaviors (159 excerpts), and the less common but more elaborate strategy of offering rant-like complaints about others' behaviors (47 excerpts). Positive language, offering appreciation for others' desirable behaviors, was used less frequently (62 excerpts). Notably, excerpts with negative sentiment regarding rules and etiquette outnumbered positive ones in this subset, possibly indicating a particularly strong social or cultural incentive to share negative impressions about others' behaviors. Other strategies included requesting certain behaviors of future trails users, describing one's own behavior as a model, and authoritatively explaining the rules, why they exist and how to follow them.

This discourse has the social effect of characterizing specific behaviors on the trail as appropriate or inappropriate, normalizing trail behaviors by establishing which actions are deviant, and creating expectations for what one “should” and “should not” see on the trail. This positive/reinforcing or negative/discouraging discourse has an effect of celebrating people who belong on the trail and identifying those who should alter their behavior in order to belong. The use of jargon in trip reports has a similar effect in creating in-groups and out-groups. Using professionalized language about gear (“microspikes”), actions (“give trail”), or trail qualities (“switchbacks”), or applying common terms in context-specific ways (“trail etiquette” or “Leave No Trace”), characterizes who is within and who is outside the hiking community by their ability to discern the meaning.

Another rhetorical strategy in the trip reports was stating the rule or norm, turning the forum into a space for re-articulating rules written in other places (e.g., “the sign clearly states ...”). The forum was also a space for explaining details about norms or rules, for example instructing downhill hikers that “giving trail” means stepping aside to yield to uphill hikers. Similar details were included in reporters' descriptions of their own behavior, a subtle form of instruction with a comparable effect in establishing social norms. Because outdoor recreation has few venues for formal education and instruction, norms are created through dispersed venues, such as person-to-person instruction or written communications. Online forums are a space for establishing norms, by policing behavior, explaining how to comply with the rules or protocols, and bringing awareness that other people are watching trail behaviors. Because recreation activities might be perceived to be solitary, anti-social, and done away from people, knowing deviant behavior could be noted and publicly shared (if somewhat anonymously), brings a new type of sociality to the recreation space, along with an understanding that violating rules might have consequences beyond fines and tickets.

Table 2

Rhetorical strategies used to communicate rules and etiquette in trip reports. The “%” column refers to the percentage of 345 excerpts that used the strategy. Excerpts may demonstrate multiple strategies.

Rhetorical strategy		Explanation of style	Example excerpt	%
Description + Negative Evaluation	General	Offering a negative evaluation of others' behaviors without examples.	<i>Trail etiquette is not a thing on this hike so be prepared.</i> [Lake 22]	4.3
	Specific	Offering a negative evaluation tied to specific behaviors.	<i>I was very disappointed to see so much trash at the lakes, including piles of feces with toilet paper next to it, it was truly disgusting.</i> [Talapus-Ollalie Lakes]	46.1
	Forceful	Elaborating on a judgement of others' behaviors, using strong personal or emotional reaction.	<i>The “young crowd” have discovered this hike (now I’m sounding like an old curmudgeon). But seriously, it was like a party up there! People blasting their music, trash and dog poop bags strewn about, people yelling and whooping it up (wanting to see if they could hear their echo I think), dogs galore and many off leash. Ok, I’m finished complaining (sorry).</i> [Lake 22]	13.6
Description + Positive Evaluation	General	Offering a positive evaluation of others' behaviors without examples.	<i>Also everyone had really good trail etiquette which was nice to see on such a popular trail.</i> [Mt. Si]	7.8
	Specific	Offering a positive evaluation tied to specific behaviors.	<i>There were a lot of people on the trail, but the parking area didn’t seem to be full during the day. All hikers seemed friendly and well-behaved: no poop bags ‘to pick up later’, dogs generally on leash, not loud, no music. I might almost reconsider my lack of enthusiasm for popular hikes!”</i> [Mt. Dickerman]	10.1
Description: Neutral	Fact-based observation	Describing others' behaviors, without an evaluation.	<i>Lots of people on the trail and half of the dogs were not on a leash.</i> [Mt. Si]	9.6
	Model behavior	Describing personal actions to illustrate trail behaviors.	<i>It took us almost an equal amount of time to descend because we were using our trail courtesy and stepped aside to allow about 20 large</i>	15.4

(continued on next page)

Table 2 (continued)

Rhetorical strategy	Explanation of style	Example excerpt	%
		<i>groups to pass us and our dogs (who we kept on leash).</i> [Lake 22]	
Authoritative	Statement of rule	Referring to rules, regulations, or protocols to reinforce desired behaviors.	9.3
	Education	Explaining the effects of violating rules and etiquette.	3.8
	Instruction	Coaching on how to observe or practice rules or etiquette.	7.8
Re-request	Directive	Using imperative statements.	9.6
	Polite	Framing requests politely.	13.9

3.4. Community: Interacting with others

Our analysis further considered the ways trip reporters wrote “to” readers of the online forum, using their reports to communicate with other recreationists and potential recreationists. By addressing trail users or speaking directly to people who might use the trail, trip reporters extended the social space of the trail into the online space, creating an opportunity to investigate the interpersonal interactions of both the online and on-trail recreation community. Common strategies included asking questions, seeking advice, sharing photos, and writing about lost and found items. For example, one reporter wrote, “*Let me know if you think these descriptions are clear enough to add to the main trail description, I’d like to help others find this path.*” Such language invites a response or engagement from the reader and invokes communal values, in this case helpfulness and collaboration.

3.4.1. Offering advice, tips and encouragement

One frequent mode of addressing others was offering advice or tips for trail users (occurring in more than half of trip reports). This advice included recommending gear (present in over one third of advice excerpts), exerting cautions (present in almost two-thirds of the of advice excerpts), or offering encouragement or other recommendations (present in less than one-sixth of advice excerpts). Some trip reporters bundled these types of recommendations together; gear suggestions, for example (described in detail in section 3.2), were sometimes coupled with cautions about icy, slippery conditions.

The encouragement offered had a different tone, emphasizing experience and ability. For example, a Mt. Si trip reporter wrote: “*That hike tested my athletic ability but I did it. I never felt so proud of myself. I recommend this trail to everyone who has enough hiking experience to be safe and enjoy a challenging and beautiful hike that’ll literally lead you to the top of the world!*”. While framed positively, such recommendations can create exclusive environments, as readers who do not see themselves within the described category (“everyone who has enough hiking experience to be safe ...”) may feel discouraged to attempt the trail. A similar power dynamic can be seen in other aspects of the trip reports, such as described relative to gear recommendations in section 3.2.

3.4.2. Questions or comments directed at readers

Another subset of trip reports included questions or comments directed at readers, intending to solicit further engagement. In effect, these ways of speaking to trail users and potential users through the forum created a community bulletin board, linking questions, answers, and offers for additional resources. For example, some writers sought responses to their reports, such as the Mt. Si trip reporter who wrote: “*Let me know if you think these descriptions are clear enough to add to the main trail description, I’d like to help others find this path.*” Others asked for advice about the qualities of a trail or the best time to hike, further illustrating the bi-directional nature of the forum. A trip report from Talapus-Olallie Lakes, asked: “*There is also a new trail going in near Olallie Lake. Does anyone know where this connects to?*” These sorts of comments solicited further interactions that would happen on the forum.

Some trip reporters referred to photos and videos they posted to further engage readers, as demonstrated by a Poo-Poo Point reporter: “*There are two look-out points (shown in pics). Both are great and worth checking out.*” These media were sometimes posted on the forum, and sometimes elsewhere; reporters left their Instagram tags or links to pictures from their hiking experience on Flickr and other forums.

Posting about lost or found items was another way trip reporters fostered community interactions, typically describing an object lost or found and then leaving a way to be contacted (e.g. “*Black Diamond ice axe with orange covers was found. If this is yours please comment!*” [Mt. Dickerman]). Some trip reporters left contact information so that they could be contacted outside the forum, while others described where they left the item along the trail. Such use of the forum as a community bulletin board for lost and found items illustrates the confidence participants have in this online space and the associated recreation community to connect otherwise unassociated hikers.

4. Discussion

4.1. Power moves: implications for diversity, equity, and inclusion

What does this record of recreation experiences “do” in the world? What are the cumulative effects of these observations of others? Within the discourse of the online trip forum, we described a number of practices that can be seen as “power moves,” that had the effect of asserting authority over the trail space and establishing cultural expectations. Beyond normalizing behavior, these discursive techniques define and reproduce the recreation experience, in particular the expectations of what a hike is and what a hiker should experience. They also give power and authority to writers who employ those discursive strategies.

Frequent, repeated, and specific references to gear, for example, construct a distinct image of what a hiker should look like when engaged in the hiking activity, and directed, specific criticisms about what other hikers wear and how particular gear enabled hiking success establish the authority of the writer to evaluate other hikers' belonging in the recreation community. Common uses of negative judgements, especially regarding rules and etiquette, suggests that recreationists' sense of power and authority in asserting behavioral norms is strong enough to overcome a positivity bias in social mediascapes. This may indicate the power that rules and etiquette norms have in the recreation culture at large. When people find others online who have similar opinions, their sense of empowerment increases, creating an increased perception of their ability to influence others, and they contribute more readily to the discourse (Chun & Lee, 2017).

Another example of a power move is pairing sensory observations on the trail with judgments about the hiking experience. For example, trip reporters who write about the loud talking or music they heard on the trail and pair it with statements about how the sound disrupted the peace they hoped to experience, privilege their expectations about the trail experience over the experience other recreationists created for themselves. Discursive choices have ripple effects and language enacts social power, creating and reinforcing barriers to inclusion (Allison & Hibbler, 2004; Metz & Weigel, 2013). Existing barriers to recreation participation include perception of safety threats, discrimination (real or perceived), and preference for non-dominant forms of recreation activities (Cervený et al., 2020). As places where meanings are negotiated, online communities have potential to make apparent the wide-ranging cultural attachments to these spaces and the diverse ways people participate in outdoor recreation, but may instead extend dominant beliefs about who belongs in recreation spaces. While online spaces expand opportunities to negotiate social power and identity, they do not diminish the social hierarchies that exist offline (Matsuda, 2002).

Smaller power moves also operate within the forum space. With one or a few words writers can assert authoritative knowledge or expertise about the trail or recreation experience. Prior to our study, we asked focus group participants to rank how they perceived potential purposes of trip reports on a scale from "most important" to "not important"; all but one of 43 participants in this activity ranked "sharing trail condition information" as most important, and 36 participants prioritized "teaching others" as somewhat or most important. One focus group participant even described an acculturation process for using the forum, describing that, *"I hike with ... novice hikers [who] don't know how to use trip reports, so one of the motivations [for posting] is to make sure people understand the usefulness of [trail reports]."* We observed this primary purpose of knowledge-sharing in the trip reports we analyzed as well. But, these information-sharing practices are not value-neutral; for example, using a phrase like "the trail was crowded," turns the writer's judgment of how many people on a trail feels like a crowd into expert knowledge, without providing details that would help the reader understand what the numbers of people on the trail are and how well the trail could accommodate that number of people. Control of this information, including withholding details, exerts authority and builds social status in the forum. Such phrasing can also assert the idea that the number of people on the trail should be considered when evaluating the quality of the recreation experience, and that high volumes of people operate against the ideal. Another subtle power move is the use of jargon, which discursively situates people who have insider knowledge apart from those who don't (Kellert et al., 2017). The use of jargon on a forum can have the effect of making new or potential hikers feel outside the recreation community and unable to enter it. We observed an interesting power dynamic related to the use of the forum to reinforce norms or rules. Almost three-quarters of focus group participants placed "reminding others of the rules" on the "not important" end of the spectrum, while less than one eighth ranked this as a "most important" purpose of trip reports. Similarly, as reported in 3.3, we found that about 11% of trip reports referenced trail rules or etiquette. While it occurs in a

relatively small proportion of trip reports, this practice can be seen as another power move, with perhaps out-sized impacts: delivering judgements by calling attention to and naming behavior trip reporters saw as inappropriate. Not only did this serve to reiterate and reinforce rules for offenders, it also called on others to help enforce the rules. This illustrates the self-regulating nature of social relations, where people police their own behaviors according to prominent social norms (Foucault, 1991). Online forums facilitate the collective construction of personal identity, along with culture creation and the disruption of power relations (Munar et al., 2013). Future research should further explore these dynamics to understand how these appeals are made and function differently.

4.2. Limitations and future research

Our study design was limited by several factors. First, it should be noted what our data—the trip reports—can offer us, and what they cannot. The data represent people's self-reported experiences, and are not an impartial, complete, or consistent documentation of all people's trail experiences. In the trip reports, we only had access to the end products—the words of the reports themselves—and little context for how reporters chose what to include or exclude and how to frame their observations. While our results and discussion consider the layers of social norms, feedback loops, and precedents that set the tone and govern the space of the forum, some of these dynamics may be invisible to us because of our study design. WTA also moderates the forum for offensive or disruptive content; we did not consider reports that were deemed inappropriate and excluded by moderators.

Furthermore, while the WTA forum is widely popular among the hiking community in Washington, there are many other forums where people share their trail experiences, such as Facebook, Twitter, Instagram, AllTrails, or Strava, which may attract a different demographic of users than those who post to the WTA forum, and many trail users do not publicly share their experiences at all. The perspectives of these users may be fundamentally different than those of contributors to the WTA forum, and are not represented in our data. Biases in age (younger), gender (women), socioeconomic status (higher), education (higher), and motivations are also documented in social media (Auxier & Anderson, 2021; Ghermandi & Sinclair, 2019), and with an unknown population, we could not minimize sampling error in our crowdsourced data.

Our analytical approach also offers opportunities for refinement in future studies. For example, we treated each trip report equally, and did not consider multiple posts from the same contributor differently than posts from unique contributors. Future studies may benefit from structuring analyses to consider the relationships between or effects of multiple reports written by the same person. Another opportunity is to consider the characteristics of reports that were voted as "helpful" or that received comments from others to better understand how readers evaluate posts and what types of narratives are most visible and potentially most influential within the community; we did not consider these factors in our analysis. Further, several elements from our coding and analysis are not reported in this article, including a discursive focus on the uses of imaginative, sensory, or evaluative language to describe trail experiences; research questions related to these will be explored in future articles.

Future research might also attend to how the online and material spaces of the trail are created differently across cultures. As social media use and recreation patterns vary by regions and countries, there are opportunities to design a qualitative analysis that works comparatively with crowdsourced data sets to lend insight to geographic differences in social media and/or recreation behavior. Comparative studies of discourse and content for trails or recreation sites across multiple forums could offer insights for how these different social spaces function, how they differ, and ways managers could collaborate with forum designers or hosts to better understand or serve various segments of the public.

5. Conclusion

This research demonstrates the potential to deepen our theoretical and applied understandings of the social dynamics of outdoor recreation spaces, and how meanings and relationships are continually renegotiated. These dynamics are understudied in the recreation and tourism literature, and have important implications for a range of pressing management concerns, including the lack of racial and ethnic diversity, social equity, and economic parity in outdoor recreation. To advance these objectives in any culture, we must better understand the places where recreation happens as social spaces where people's conscious and unconscious language practices and behaviors create insider and outsider groups. Inclusivity not only is related to management practices, but is produced by visitors through their recreation behaviors and the ways they communicate about recreation off the trail, such as in social media. In our context, a trip report forum served as a way to examine social dynamics as they were represented and further developed in an online space, identifying the discursive strategies that create systems of power and authority and reproduce assumptions about who belongs on the trail or in the recreation community.

Our findings illustrate how frequent and repetitious communications about quotidian trail experiences, including descriptions of gear, etiquette, and other hikers, align with personal judgements in ways that delineate who and what belongs in the trail space. If they seek to create more inclusive recreation spaces and communities, public land managers, non-profit partner organizations, and visitors alike should be deliberate in their formal and informal discourse to represent a broader and more inclusive range of experiences and perspectives. In particular, because of their authority over recreation spaces, managers have the opportunity to expand and refine the content and style of their communications, for example creating media that avoid jargon and learning from and incorporating the language practices found in diverse online forums.

Social media and crowd-sourced platforms provide a valuable tool for beginning to understand people's complex, wide-ranging desires and expectations for seeking outdoor recreation experiences, an important step toward effecting management changes that will meet their diverse needs. By collaborating with researchers to systematically study how people use online forums to learn recreation norms, managers can better grapple with the complexities of visitor experiences and support facilities, services, and communications that promote equitable and inclusive access. We urge caution in drawing simplistic conclusions from the content of online platforms, knowing the social media landscape contains biases in reporting and representation which must be interpreted appropriately. For example, managers must account for the positivity bias of social media, knowing an abundance of brief, positive reports may overwhelm more subtle power dynamics emerging in the details of less common—but nevertheless powerful—comments. Managers might also develop partnerships with entities that create and host relevant online platforms, including private partners specializing in particular recreation users or activities, which may have authoritative voices in their realms and access to populations that public land managers do not. By listening (and reading) closely to how people describe their engagements with recreation spaces and other recreationists, managers can learn to respond in ways that affirm or challenge those relationships, and work toward creating truly inclusive systems of recreation opportunities.

CRedit authorship contribution statement

Melanie Armstrong: Conceptualization, Methodology, Investigation, Writing – original draft, Writing – review & editing. **Monika M. Derrien:** Conceptualization, Methodology, Validation, Investigation, Writing – original draft, Writing – review & editing, Funding acquisition. **Hannah Schaefer-Tibbett:** Conceptualization, Methodology, Data curation, Writing – original draft.

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