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Abstract

Place meaning and related concepts that reference human attachment to the physical world have received considerable attention from resource and recreation managers and scientists. Although much work has focused on understanding the meanings that key stakeholders associate with landscapes, the perspectives of managers have generally been absent from these investigations. In this case study, we explore the meanings resource managers associate with Aransas National Wildlife Refuge Complex, Texas. We draw on a thematic analysis of five semi-structured interviews with managers from Aransas. Our findings illustrate that managers have emotional attachment to places under their jurisdiction, and use this attachment to provide high quality experiences for their public constituents. This study offers insights into the characterization of values that managers ascribe to Aransas National Wildlife Refuge Complex.

Keywords: place meanings, management decision-making, Aransas National Wildlife Refuge

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Introduction

Investigations of the meanings people associate with places reference ideas about the activities that occur within places and the interactions between people and the environment (Altman & Low, 1992). In a broad sense, a place can be defined as a space that is imbued with values and meanings (Relph, 1976; Sack, 1997; Tuan, 1980; Vanclay, Higgins, & Blackshaw, 2008). There are three popular conceptualizations of the idea of place. First, "sense of place" is an overarching concept that encompasses both place meanings and forms of attachment between people and an environment. Second, "place attachment" is a similar yet distinct idea that measures the importance and strength of a person's connection to the physical world. Finally, "place meanings" are the characterizations of the personal attachments that people share with a natural landscape. For the purposes of this study, place meanings were more specifically defined as the emotional bonds used to conceptualize attitudes toward a spatial setting, which had affective, cognitive and conative components (Jorgensen & Stedman, 2001).

Studies of place-person bonding offer a promising approach to better understand the meanings that stakeholders ascribe to resources and, therefore, what is or is not important (Kyle, Mowen, & Tarrant, 2004; Manzo, 2005). This information offers a guide for decision-makers to oversee resource and recreation conditions in ways consistent with those meanings. Several managerially relevant issues have been explored through the lens of place, including intergroup conflict (Gibbons & Ruddell, 1995; Hawkins & Backman, 1998; McAvoy, 2002; Yung, Freimund, & Blesky, 2003), public involvement (Brandenburg & Carroll, 1995; Gahwiler & Havitz, 1998; Kyle & Chick, 2004), and human responses to changing environmental conditions (Brown & Raymond, 2007; Davenport & Anderson, 2005; Kyle, Graefe, Manning, & Bacon, 2004; Stewart, Liebert, & Larkin, 2003; White, Virden, & van Riper, 2008). Although the idea of place has

provided extensive insight into how individuals and groups perceive and experience the natural world, little is known of managers' perceptions of place meanings (Hutson, Montgomery, & Caneday, 2010).

This paper has two primary objectives: 1) Describe the meanings that managers ascribe to protected areas under their jurisdiction, and 2) Explore how managers act as providers of place meanings for their public constituents. These objectives shed light on the reasons why places hold particular importance for managers and offer insights into how managers maintain place meanings according to their subjective views of what is and what is not important. This study assesses managers' place meanings and their roles as place providers at Aransas National Wildlife Refuge Complex, Texas, U.S.A. (Aransas).

Literature Review

Place research has received increased attention in natural resources management, in part due to a relatively recent shift toward understanding public perceptions of the environment (Farnum, Hall, & Kruger, 2005; Trentelman, 2009). Diverse methodological approaches have been applied in this area to better understand human-place bonds, including evaluative measures such as survey scale items that assess levels of attachment (Hammit, Backlund, & Bixler, 2006; Williams & Vaske, 2003) and descriptive measures such as in-depth analyses of place meanings (Davenport & Anderson, 2005). Resource and recreation managers have used these tools to integrate the subjective interpretations of places into decision-making (Brandenburg & Carroll, 1995; Mitchell, Force, Carroll, & McLaughlin, 1993). This process of considering public interests helps to minimize conflict and guide decisions toward outcomes that are consistent with public expectations.

For example, Davenport & Anderson (2005) assessed local community members' emotional attachments and perceptions of landscape change. The authors supported the use of place-based frameworks to explore contentious issues in natural area plan-

ning, and proposed four dimensions – identity, tonic (i.e., dependence), sustenance, and nature – of meanings that residents associated with the Niobrara National Scenic River. The findings from this study helped decision-makers recognize why a river in north central Nebraska was important to community members and the benefits that public constituents gain from interaction with this environment. Cheng & Daniels (2003) also examined subjective attachments between people and places, and urged managers to consider the political consequences of places and the varied perceptions of environmental change. The authors highlighted the social influences that places could have on individual and group behavior, thus informing the process of strategic decision-making.

Central to past research is the idea that emotional ties bind people to the physical world. Within natural resources management, these connections have been proposed as social phenomena influenced by current and changing identities (Greider & Garkovich, 1994; Stokowski, 2002; Williams, 2002). In this sense, the social contexts that people exist within help to define and symbolically represent the meanings assigned to places (Kyle & Chick, 2007; Low & Altman, 1992). Previous experience and interaction with on-site resources also underpin the particularities of place meanings (Hammit et al., 2006). The process of creating person – place bonds is socially constructed over time, therefore shaping and reinforcing one's self-definition. Understanding these characterizations of attachment helps managers understand why places are considered important.

Methods

Study Context

Aransas is a U.S. Fish and Wildlife Service Refuge Complex located in southwestern Texas along the Texas Gulf Coast. This site was established in 1937 with the primary purpose of protecting and providing habitat for migratory birds. Specifically, the area is vital resting, feeding, wintering, and nesting grounds for migratory birds and native

Texas Wildlife including the American Alligator, the Javelina, White-tailed Deer, and Armadillo (Aransas National Wildlife Refuge, 2010). The four units within Aransas encompass approximately 115,000 acres of land, which were initially set aside to protect the Whooping Crane. After the bird population diminished to a low of 15, Aransas was established within the Department of Interior.

Although the primary legislative charge for Aransas is to protect fish, wildlife and their associated habitats, opportunities for public use are also considered important aspects of management. The Claude F. Lard Visitor Center is a good example of the ways in which Aransas offers quality experiences for the public. In the visitor center there are opportunities to view exhibits and enjoy public programs at an indoor auditorium. Interpretive signs and a range of educational exhibits inform the public of the historical context and on-site resources at Aransas. Various management tools are employed to protect conditions at the Refuge and facilitate public use through biological programs, fire management, outreach, and partnerships (Aransas, 2010). Aransas is well-suited for this research, because of the biological and social importance of the area, which enables managers and visitors to develop emotional attachments to the natural world.

Within the larger Refuge Complex there are nature trails, public spaces and an auto tour loop that leads to a 40-foot high viewing platform that towers over the tree canopy near a wetland habitat and allows visitors to watch the endangered Whooping Cranes in their natural wintering ground habitat. Additionally, public involvement and community engagement are facilitated through volunteering, outdoor educational courses and a youth environmental training area for organized groups and overnight camping. Both consumptive (e.g., hunting, fishing) and non-consumptive (e.g., picnicking, wildlife viewing, photography) uses are permitted within Aransas.

Research Approach

Our case study drew on a grounded theory approach to develop a preliminary account of managers' place meanings by drawing on observations and conversations with managers of Aransas (Glasser & Strauss, 1967). This entailed an inductive method to sift through and analyze various forms of qualitative data, the primary source of which were semi-structured interviews (Clarke, 2005). The themes extracted from interviews helped us to identify categories and subcategories to marshal the study findings. The exploratory nature of the present study lent itself well to grounded theory because we developed concepts throughout the process of collecting data and thematically analyzing interviews using ATLAS.ti version 4.2. All conversations were tape recorded and transcribed verbatim. Common themes, relationships and patterns within the text were organized to organically create a preliminary theoretical frame for understanding managers' place meanings.

Our semi-structured interviews were conducted both in-person and by telephone in the spring of 2010 ($n = 5$). The interview guide consisted of 20 interview questions aimed at understanding the meanings resource managers ascribed to the Refuge. More specifically, the guide explored participants' position descriptions, length of employment, previous experiences in decision-making, involvement in recreation and/or leisure activities, place meanings, salient management issues, techniques employed to integrate knowledge into decisions, ways to increase public participation, and socio-demographics. Following Schroeder (1996) and Wynveen, Kyle, & Sutton (2010), we elicited responses about place meanings by requesting participants to "Describe a place at Aransas that is particularly important for you." This question was followed by another prompt: "Why does this place hold special meanings or values"? A purposive sample of managers was selected according to recommendations from the primary manager of the Refuge Complex who iden-

tified the individuals that could be contacted for the purposes of the study. A total of six individuals were invited to participate, five of whom agreed. Each participant was provided with background on the study purpose and personal copies of the consent form and interview guide. Conversations ranged from 39 minutes to 2 hours and 30 minutes, amounting to 4 hours and 58 minutes of total interview time.

Additional forms of data were assessed to build a stronger and more holistic understanding of the study context (Marshall & Rossman, 2006). A total of 10 hours of participant observation were completed at various places at Aransas, including the visitor center, the auto tour loop and the Whooping Crane viewing tower. Participant observations were employed to triangulate the findings and better understand the professional worlds that managers operated within. This information is not explicitly presented in the study findings, rather, applied to better understand the general context of this research. Prior to completing the study interviews, a brief content analysis was conducted of available public information (e.g., website, media) and historical documents (e.g., reports). This information was used to form the study context section of this paper. This methodology allowed us to synthesize findings and build a preliminary theoretical framework for further research on place meanings among resource and recreation managers.

Study Findings

Study findings illustrated emotional attachment between managers and natural environments under their jurisdiction. This information provided insight into why places at Aransas were of particular importance for the five study participants. The following two sections, developed from the study interviews, explore the meanings that managers ascribed to Aransas and their roles as providers of place. Excerpts from the study interviews are presented to illustrate how the construction of place meaning was uncovered throughout the research

process. The socio-demographic characteristics of managers are presented in Table 1.

Table 1. Socio-demographic characteristics among five managers

Variable	Frequency
Gender	
Male	3
Female	2
Age	
Average	40.4 (9.1 SD)
Ethnicity	
Hispanic/Latino	2
Not Hispanic or Latino	3
Race	
White	5
Education	
Four year college degree	3
Graduate degree	2
Annual Income	
Less than \$20,000	2
\$20,000	0
\$50,000	1
\$80,000	1
\$100,000	1

Place Meanings

Place meanings were partially shaped by participants' interests in the ecological and naturalistic values of the Refuge Complex. When asked to identify places of particular importance at Aransas, the natural environment was often referenced: "It's hard for me to pinpoint one place, because it's so ecologically unique." Other individuals emphasized environmental attributes such as the "barrier island habitat," "pristine system," "coast prairie," and "native vegetation." In this sense, many of the descriptions were grounded in the natural environment. One participant derived satisfaction from "experiencing nature and wildlife," and further explained

"It's a place that I can get to, where I can reconnect with nature and not have to think about personnel problems or people or just the wildlife and just get back to what got me here from the get go."

The remote location of Aransas and an associated sense of solitude were important factors that aided in the construction of managers' place meanings. One participant stated, "Well, I'm kind of reclusive and I don't seek crowds. I prefer not to be in the presence of crowds and the observation tower is a favorite spot of mine, in the absence of people." Another participant deemed a place important because "it's closed to the public and it's a place that I can get away and I'm not going to run into anybody....Most people and wildlife biologists, they don't get into it for the people, they get into it for the wildlife. So the chances to actually get out and see stuff, that's when your best opportunity is going to be, is when there are not many people around." Another confirmed, "This place is special to me. It's unique. Uh, I've helped or tried to help every person and every manager in particular who has come to this place. Some appreciate it, some don't. So I got in it for the resource."

Participants' interactions with natural resources were integral to their connections to the natural environment. Many of the managers pursued environmentally-oriented activities outside of their professional positions: "I bird to no end. I hunt and I fish to no end. Those are the three time consuming [activities]." Another stated, "I love the coast. I love to boat and to fish." Most participants were affiliated with professional organizations such as the Wildlife Society, Ducks Unlimited and the Society for Range Management, thereby indicating support for use and preservation of natural resources. This finding suggests that participants better understood and derived meaning from the natural landscape at Aransas through involvement in environmentally-oriented activities.

Interaction with natural resources helped managers build familiarity with on-site conditions.

According to one participant, “We should not all be slaves to our desks. We should get out there and see it on the ground firsthand. Review the work that the people you supervise are doing. Get engaged.” This participant went on to say, “They know that I try at least once a week to get out in the field. And that is just once a week whereas in the past it was every day. But that’s the most I can afford anymore to keep up with the workload. But yes, I will take the time once a week to get out for several hours to touch base with the crews as they’re working on different projects.” According to another participant, “It can be deadly to the resource if the manager allows himself or herself to get too removed.” However, the time dedicated to interacting with resources was difficult for some to maintain: “I’m not in the field as much anymore...it seems like I’m behind the desk, uh, too much. Uh, and that’s tough on me ‘cause I’m a field-loving outdoor person.” Another participant presented circumstances that prevented interaction with natural resources:

“Policy wise, vision wise, objective wise that to really spend a lot of time actually out in the field that for me probably it hasn’t been an option. Probably won’t really be an option. Probably at least through this first year because there’s just too much to learn as far as being able to take responsibility for the Refuge.”

Thus, we see that managers of Aransas prioritized experiencing natural settings firsthand, because it enhanced their ability to make decisions about and be familiar with places. This interaction with the environment appears to enhance the importance of natural conditions at Aransas, and therefore, amplify the meanings that managers associate with places. However, it should be noted that although managers’ engagement in outdoor activities was important in their professional worlds, constraints were faced to maintain sufficient time in the field.

Place Providers

Managers of Aransas facilitated the creation of meanings through community engagement and cooperation with outside organizations. For example, at the visitor center, interpretive boards and educational programs helped to define the resources for visitors to the area. This in turn shaped the way that resources were subjectively interpreted according to management guidelines and objectives. The agency also engaged the public in activities that would create bonds between people and the natural environment at Aransas. For example, opportunities to volunteer and engage in conservation work related to the Refuge were provided through the Friends of Aransas group. When asked about the importance of place meaning, one participant referenced this group:

“Most every Refuge has a friends group, because it affords the opportunity to do things that you couldn’t otherwise do. And also it’s a way of reaching out to the community and having the community play a part in the management of the Refuge. Very important, very supportive.”

Another participant mentioned a Youth Hunt as an activity that facilitated support among community members: “And my whole, the whole idea behind it is to give them a better appreciation for National Wildlife Refuges. Certainly this Refuge can show them that in this case hunting, not always, but hunting can be compatible even with endangered species if done correctly.” This participant went on to say, “experience has shown me that compatible public use is good.” The relationship between Aransas and the surrounding community was seen as “mutually beneficial...they lead to volunteers and potential funding sources.”

Although managers of Aransas prioritized providing quality experiences for user groups, it was emphasized that a number of challenges inevitably accompany public involvement in management: “Every project leader and wildlife Refuge manager

has in their position description the need to maintain those community contacts and be a part of the community, but yet, a lot of us don't, because we are so pulled in the direction of wildlife and habitat management. It becomes a time issue." Others mentioned "time," "resources" and "staffing" as limiting factors. Several conflicts emerged in conversations about public involvement. For example, one politically contentious issue was a proposal to open a naturally occurring pass that formed the south boundary of an area in the Refuge Complex (i.e., Matagorda Island), which had silted in overtime. "There is a misconception on part of the public that the Refuge is opposed to the breaching of that pass. And they could not be more wrong. We support it. It is just a matter of how they go about doing it." In this light, the emotional attachments between people and place can potentially lead to social conflict. However, not all participants pointed to disputes when discussing community engagement. One participant offered a contrary opinion: "You know we protect, conserve, enhance, uh, for the American people. Uh, but I think since we're doing it for the wildlife first I think it's. There's less. I guess there's less issues with it."

Discussion

Our case study extended the current literature on place meaning within the context of natural environments to include the perspectives of managers of Aransas National Wildlife Refuge Complex. Specifically, this study provided a preliminary account of the meanings that five managers associated with the natural environment and the ways in which managers defined themselves as providers of place meanings for their public constituents. Findings illustrated that managers' place meanings evoked emotional attachments and encouraged them to engage public constituents of Aransas. In other words, managers developed an understanding and a connection to Aransas through their personal value systems, and embraced their roles as custodians of natural areas.

The participants in this case study associated a variety of meanings with Aransas. The majority of participants referred to a suite of natural values related to the biological world. Several managers reported "getting into it for the resource," suggesting that these participants may have been relatively concerned with protecting natural resource conditions (Hammitt & Cole, 1998). These findings aligned with past research that has pointed to the importance of naturalistic values in protected area management decision-making (Kellert, 1996; Manning, Valliere, & Minter, 1999). According to Davenport & Anderson (2005), there is a strong need for human-environment relationships to "include ecological and sustenance-related dimensions in scales measuring the bonds people have with places" (p. 638). Along similar lines, solitude was integral to managers' place meanings at Aransas, in that participants desired solitude while enjoying the Refuge. Perceptions of solitary experiences in remote settings such as Aransas may provide opportunities for temporary release from the rules and pressures of everyday life (Hammitt, 1982).

Involvement in environmentally-oriented activities contributed to the meanings reported by managers of the Refuge. In this sense, the social worlds surrounding managers' professional positions shaped their meanings and attachments to the natural environment (Gahwiler & Havitz, 1998; Kyle & Chick, 2007). Managers engaged in recreational pursuits such as fishing, hiking and hunting, which were linked to memberships of environmental organizations and recreational activities. This process facilitated the development of specific value systems, social worlds and meanings associated with places at Aransas. In turn, these interactions helped managers define and shape their connections to the natural world.

Managers saw themselves as place providers charged with connecting public constituents to places at Aransas. Volunteer and educational activities were two mechanisms used by managers to engage

and communicate with their public constituents. Managers framed their roles within the agency as custodians of natural areas that were charged to protect natural resources while also facilitating connections to those resources. Several conflicts arose from public participation, including resolutions over water quality and structural developments; however, despite these challenges, managers in this case study prioritized the provision of public experiences, and framed their professional responsibilities in terms of providing a sense of place for their public constituents.

Management Implications

The following management recommendations flow from the information explored in this case study. They are meant as suggestions or areas of consideration for managers to think about human-place bonds in the context of Aransas National Wildlife Refuge Complex. The following recommendations are offered for consideration:

1. Utilize the results of this study to identify the level of importance associated with particular places at Aransas.
2. Manage to protect naturalistic values, ecological health and solitary experiences.
3. Aim to maintain a minimum amount of time spent in the field for managers to continue building familiarity with and knowledge of on-site conditions.
4. Utilize interpretive techniques and outreach programs to maintain the connection between public constituents and the Refuge.
5. Provide necessary opportunities for staff to keep-up-to-date with formal and informal regulations.
6. Encourage resourcing and networking to maximize efficacy in decision-making.

Limitations

There are several limitations and potential sources of error that should be noted and taken into account when interpreting the results. For example,

the intellectual biography and academic training of the primary investigator inevitably shaped the interpretation of study findings. The underpinning beliefs about natural resources management and personal value systems contributed to the interview questions used to guide the interviews. This approach was recognized and reflected upon throughout the research process to respond to preexisting knowledge concerning the study topic, maintain a flexible and receptive attitude and encourage a critical analysis of various forms of data. This yielded an in-depth understanding of place meanings among managers, rather than a representative sample used to extrapolate to larger populations.

Conclusion

Much of the place literature focuses on the meanings that public constituents associate with the physical world, and although these insights are important, the perspectives of managers are rarely considered (Hutson et al., 2010; Stokowski, 2002). This gap in the literature needs to be filled because managers, as stewards of natural areas, are responsible for protecting natural and recreational resources and educating the public about the importance of these special places. The findings from this case study offer a preliminary understanding of the relationship between managers and areas under their jurisdiction. This research will help managers identify the particularities of their relationship with the environment, therefore enabling them to work toward integrating place meanings among public constituents into the decision-making process.

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