

**SENSE OF PLACE:
MOUNT DESERT ISLAND RESIDENTS
AND ACADIA NATIONAL PARK**

A Thesis Presented

by

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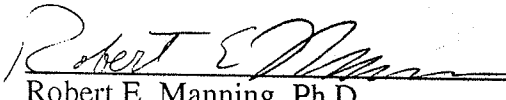
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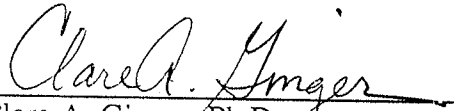
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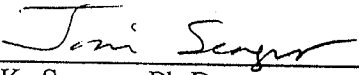
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ABSTRACT

The framework of sense of place, developed by humanistic geographers, has been employed by researchers in their efforts to explain the range of attachments, values, and meanings assigned to natural areas. This study considers how protected areas may inform and potentially protect the sense of place of the region within which they are embedded. A multi-method approach, using both qualitative and quantitative methods, was used to explore how Acadia National Park is part of the regional sense of place and how the park is valued by neighboring residents. Qualitative interviews with residents of Mount Desert Island, Maine informed a mail-back questionnaire administered to a representative sample of island residents. Research findings provide empirical evidence that Acadia National Park is important to the regional sense of place, and is important based on multiple values. These findings suggest that parks may play an important role in protecting the integrity of the sense of place of a region.

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The Green Mountains and the Adirondacks were sources of stability and inspiration. After long hours at school wondering if I'd ever finish this crazy graduate adventure, I'd be comforted by the views to the mountains during my walk home. They reminded me that regardless of my current predicament, the mountains and their timeless energy were still there, whether or not I had the joy of visiting them. While living on Mount Desert Island, I began to understand why my interviewees spoke with such passion about their place. I soon discovered that quiet spots along the ocean shore provided me with the space to think clearly. There is something to be said for a clear view to the horizon when one's mind is cluttered with a thesis.

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LITERATURE REVIEW

INTRODUCTION

The literature on sense of place is diverse, and has been addressed within several disciplines, including geography, psychology, and sociology. Recently, the applied fields of recreation and natural resource management have borrowed the concept of sense of place from the more basic disciplines. Thus, the scope of this literature review is quite broad. The literature review is organized as follows. The first section describes the major conceptual literature on sense of place, as developed by humanistic geographers. The second section describes some of the recent conceptual work regarding the potential application of these concepts to natural resources management. The last section considers the more empirical work and real-world applications of sense of place in regard to community and tourism planning, recreation management, and natural areas management.¹

SENSE OF PLACE AND HUMANISTIC GEOGRAPHY

Community and natural area planning documents commonly refer to "sense of place" to connote the unique character of a place. Often this jargoned phrase is casually referred to, as if what really comprises the sense of place is common knowledge, and there is no need to define it. Sense of place is taken for granted. However, humanistic geographers have developed a body of literature on sense of place and related concepts,

¹ This literature review focuses on the conceptual and empirical literature which uses sense of place concepts to explain the importance of place to natural resource and or community planning. In addition to the literature described here, there is a rather large body of work from the field of environmental psychology regarding the relationship of place to self-identity, and cognition (for example, Canter 1977). Although some of the literature described in this review does touch on issues of self-identity, only the articles which examine this issue in regard to natural areas or community planning are discussed.

such as place attachment, place identity, and place rootedness. Although there is no one definition for sense of place, geographers have made some attempts to define it. The following section reviews the conceptual literature on sense of place. First, some definitions of sense of place are considered. Next, the literature on sense of place, and the concepts derived from this literature are reviewed as a basis for the subsequent discussion of the applications of sense of place.

Sense of place is also referred to as genius of place, spirit of place, or *genius loci* to suggest the character or personality of a place. Relph (1976:48-49), describes sense of place as "...subtle and nebulous, and not easily analyzed in formal and conceptual terms, yet at the same time is naively obvious in our experience of places for it constitutes the very individuality and uniqueness of places." According to the author, sense of place provides a link for three components of place: the physical setting, the activities in the place, and the meaning of the place. Other authors emphasize the individual's perception of place, when describing sense of place. For example, Tuan (1980:4) describes sense of place as "a certain distance between self and place that allows the self to appreciate a place." Still other authors consider the interaction of people and the place important. Steele (1981:2) suggests that sense of place is "an experience created by the setting combined with what a person brings to it."

Given the variety of interrelated definitions described above, sense of place is difficult to analyze. In fact, the majority of the sense of place literature by Tuan (1974, 1976, 1977, 1980), Relph (1976), Steele (1981), Entrikin (1991), Walters (1988), Sack (1992), and others is not about testable theories, rather it is descriptive writing about the interaction between people and places. Nonetheless, some concepts have come from this literature, which can be considered more empirically. The following section reviews the major ideas from this body of literature.

Tuan has written a number of works on the interaction of humans and the environment. In Topophilia: A Study of Environmental Perception, Attitudes, and Values (1974), Tuan describes the variety of ways humans perceive and value the environment at the species level, individual, and group, within the framework of topophilia -- the affective bond between people and place or setting. Although Tuan's work is about perception and the environment, rather than environmental problems, Tuan suggests that understanding the human perception of the environment is an important component of the theoretical work regarding environmental problems. Tuan thus illustrates a unifying concept of the literature on sense of place. In the sense of place literature, humans are a part of nature, rather than separate from nature.

Tuan continues his study into human environmental perception in Space and Place: The Perspective of Experience (1977). In this work, the author refines the concepts of space and place, although it is still a descriptive work. Tuan states that "This approach [to space and place] is descriptive, aims more to suggest than conclude, and raises questions about space and place, rather than assuming them." (1977:7). Tuan considers ways that humans attach meaning to and organize space and place that are not cultural adaptations, such as biological facts, relations of space and place, and the range of experience and knowledge.

Although Space and Place is mainly about perception of space and place from the perspective of the individual, Tuan makes important points that are relevant to planning for public places. In particular, Tuan suggests that people become attached to places over time and through their experiences with the place. Furthermore, place can be understood both intimately and conceptually. These qualities of space and place are complex and not easily expressed; therefore, they are often disregarded by planners. However, these qualities are very important and can be discovered and articulated. The author contends that these

elusive and complex questions about space and place need to be made part of planning and design.

In Place and Placelessness (1976), Relph discusses the importance of place and attachment to place in people's lives. Relph suggests that although attachment to place is at the individual level, symbols in the physical landscape are embedded with meanings which reinforce commonly held beliefs and interpersonal involvement. Relph writes, "People are their place and a place is its people, and however readily these may be separated in conceptual terms, in experience they are not easily differentiated." (1976:34). Thus in order to understand place, its people must be understood, and vice versa. Furthermore, both attachment to place and symbols of place are important components of sense of place.

Although Relph's (1976) ideas about place are similar to Tuan's, Relph's discussion takes a decidedly more political stance. Relph argues that planners and developers have ignored the importance of place, which has lead to a "placelessness." Placeless places are those dominated by mass-market and consumer culture, as opposed to authentic places, which are characterized by variety and meaning. The loss of authentic places is a theme common to much of the sense of place literature.

In The Sense of Place (1981), Steele suggests that an improved "consciousness of place" needs to occur so that authentic places will not be replaced by inauthentic places. According to the author, the loss of authentic places is not inevitable. Rather, people can have a positive impact on places through how they care for, create new social forces, and design new physical features for the setting (1981:9). In this analysis, sense of place is a "transactional system," or an experience created by the setting combined with what a person brings to it. Like the previous authors, Steele suggests that places cannot really exist independently of their inhabitants.

Concern with the loss of authentic places is discussed by Entrikin (1991) in The Betweenness of Place. In this analysis, the author is concerned more with the social and political forces which create inauthentic places, than with the creation of place as suggested by Steele (1981). Although Entrikin's work is predominantly a disciplinary discussion in geography about how to analyze place, his work is important because he suggests that sense of place has been transformed as a result of modern science. Modern science has sought the "universals" of all individuals and reality, whereas place is associated with the very "particular", individualistic conceptions of reality. Thus, Entrikin provides insight into how large scale social forces and "paradigm shifts" affect the experience of place.

Sack's analysis in Place, Modernity and the Consumer's World (1992) is also concerned with the relationship between aspects of the modern world and place. Although his discussion is mainly about the consumer's landscape and its role in contemporary life in relation to geographical space and place, Sack's "geographical framework" is relevant to other discussions about space and place. The modern period has conceived of the world in four separate realms: nature (natural science), social relations (social science, politics, and economics), meaning (ideas and values), and agency (power over ourselves). According to the author, these realms have abstracted and objectified the world into a perspective that comes from "nowhere," which has lead to a fragmented understanding of the world. Sack suggests that the geographical framework, which uses the concepts of space and place, can bring together the realms of nature, meaning, social relations, and agency. By providing a framework for understanding the convergence of the four forces, a perspective from "somewhere" is created.

In Placeways: A Theory of the Human Environment, Walters (1988), like Sack (1992) and Entrikin (1991), suggests that place has been fragmented. The author comments that the fragmentation of place is created in part by the failure of disciplinary thought to capture the holistic experience of place. According to the author, "fragmenting

the experience of place in the abstractions of special disciplines reinforces the split between our methods of feeling and our methods of thinking.” (1988:2). Walters suggests that planning and design needs to consider the “expressive” qualities of place, which include the moral and emotional qualities of place that give the place familiarity and importance.

In The Geography of Nowhere, Kunstler (1993) offers a critique of modernism, suburbanization, and mass-market culture that is geared more towards a lay audience than the disciplinary works described here. Although Kunstler’s ideas are not specifically about sense of place, his journalistic analysis echoes the concerns of the academic geographers regarding the authenticity of places in the modern world. His case study of the region around Saratoga County, New York suggests that modernism, suburbanism, and mass-market culture have had a negative impact on the environment, culture, and quality of life in many small towns and urban areas throughout the United States.

Kunstler (1993) advocates a vision for the future by suggesting that “better places” can be created with planning and design that is more sensitive to the character of the local region. The author suggests further that such places will be better if they incorporate sustainable economies and environmental conservation. Thus Kunstler’s ideas bridge the gap between the goals of traditional community planning and natural resource planning, by suggesting that the two realms must be considered in unison to create “better places.” Finally, the journalistic style of Kunstler’s work may reach a wider audience than the more academic work of the geographers.

In summary, the conceptual work on sense of place was derived mainly from the discipline of humanistic geography. From this literature, several themes have been developed which are important to sense of place. First, the ways humans perceive and value the environment needs to be understood along with the science of environment (Tuan 1974, Walters 1988). Attachment to place is an important component of satisfaction with the experience of place (Tuan 1977, 1980). Sense of place is created both by the attributes

of the place and the interactions of people with places, and with symbols that represent character or place (Relph 1976, Steele 1981). Places have been degraded and sense of place is changing in response to suburbanization (Relph 1976, Kunstler 1993), modern science (Entrikin 1981), and consumer culture (Sack 1992).

Given the themes described here, it is not surprising that natural areas researchers have recently considered sense of place an important framework with which to understand the human component of natural areas. Despite the elusiveness of sense of place, the authors show that in planning for natural resources and communities, a consideration of sense of place is important. In order to understand places, they must be understood as loci of felt value and meaning, not just objects of environmental and economic concern. The next section reviews the conceptual literature which calls for an evaluation of how natural areas can and should be regarded as places of felt value and meaning.

NATURE IS A PLACE: IMPLICATIONS FOR NATURAL RESOURCE MANAGEMENT

The conceptual work on sense of place described in the preceding section has important implications for natural areas management. Although most of the geographical work was concerned with the sense of place of the built world, this work suggests that thinking of nature as a place of felt value and meaning may be an important step towards a better understanding of the human-environment relationship. The following section reviews how "sense of place" frameworks (defined broadly) have been suggested by researchers to reevaluate our understanding of the natural world. This conceptual research can be generalized into three interrelated calls for integration.

First, concern over traditional forest management practices emphasizing sustained yield has fueled a call for integrating sense of place into natural resource management. Williams (1994) suggests that the values of society are not always captured by the use and

yield, or production and commodity values of natural resources. The emerging ecosystem management paradigm may be able to include non-market values as well. Salwasser (1990:35), suggests that "it (ecosystem management) goes beyond the focus on resources and yields to include the full range of services, values, uses, diversity, and continuity of ecological systems." Sagoff (1993) argues that nature should be thought of as a place with ethical and cultural significance, rather than economic terms alone.

Next, an increasingly vocal public has demonstrated that natural resource managers must consider how the public values the areas they manage (Allen and Gould 1986). The authors call this a "wicked problem," or a problem that can not be solved by scientific solutions alone. Rather, managers must include public values along with scientific evidence. McGinnis (1995) argues that environmental goals, such as ecological restoration, cannot be achieved with just the best available technology. Rather, institutions must deal with a multitude of values reflected in a particular landscape and commons. Not including the values held by the public will be a problem for both social science and the natural resource disciplines, because conflicts over natural resources are often conflicts about the meaning of resources (Ewert 1994, 1996). Grieder and Garkovich (1994) suggest that to understand natural resource conflicts, researchers and managers need to understand how different cultural and ethnic groups interpret the meanings of landscapes.

National park researchers have also suggested that park managers consider the needs and values of the public in the planning process. Stankey (1989) has proposed that parks need to be understood within the social and cultural context in which they were established. For example, in the third world, there is a need to understand how parks are sources of subsistence. In the first world local values and attachments to parks must be considered. Only then will scientific values, such as biodiversity, be realized (Zube 1986). Finally, like ecosystem management in regard to forest resources, the full range of values associated with the park must be addressed (Zube 1989).

The first two calls for integration have been concerned with natural places at a local level -- typically individual forests and parks. The third call for understanding natural resources considers a more regional significance of place. These more regional analyses of place, or "bio-regional" movements advocate the integration of natural areas and cultural areas. Parsons (1985) suggests that "bioregionalism" is a lay movement which attempts to apply elements of the radical geography literature (e.g. Relph 1976) to planning. Bioregionalism is defined by the author as a "resurgence of interest in local history, deepening attachment to place, and to one's ancestral roots." (Parsons 1985:1). Other bioregional perspectives call for a reassessment of how cultural needs can be made more compatible, or can find common ground with environmental health (Jackson 1994). Understanding how land use planning can be used to create a "land ethic" is called for by Norton (1991).

In summary, "place" has been suggested by many researchers as framework of inquiry into natural resource management. Thinking of nature as a place is an integral shift from thinking of nature as a resource (Williams 1994). Place implies that the full range of values and meaning assigned to natural areas is considered. The next section reviews the empirical work on sense of place to show how researchers have sought to understand the range of values of natural areas and communities.

APPLICATIONS OF SENSE OF PLACE LITERATURE

Despite the rather vague and descriptive definitions of sense of place offered by humanistic geographers, attempts have been made to apply these concepts to the real-world. This more empirical work has been considered within the realm of community planning, tourism planning, and more recently, in natural resource and recreation planning. More often than not, the empirical work uses sense of place as a conceptual framework to explain a disciplinary problem, rather than explaining sense of place itself. Thus, the

research described in this section is highly varied, using a number of methods and disciplinary perspectives. As such, it is difficult to draw conclusions from the literature. Furthermore, empirical considerations of sense of place concepts often raise more questions than are answered (Tuan 1977). However, the recent interest in sense of place concepts in general, suggests that the values and meaning ascribed to places, whether in the realm of human communities or nature, is increasingly recognized as an important part of the human experience.

For the purposes of clarity in this literature, I have separated the empirical research on community and tourism planning from the research on natural resource and recreation planning. However, as several researchers indicate (Brandenburg and Carroll 1995, Schroeder 1996), these realms are often linked because of community ties to natural and recreation areas. Furthermore, several researchers demonstrate that natural areas and natural features may be an important part of community sense of place (Ebenreck 1988, Hull et al. 1994). In fact, an important concept of the sense of place literature in general is that places need to be understood more holistically. Sense of place, regardless of the method, perspective, or study area can be considered as a unifying concept to understand place.

Community and Tourism Planning

References to a "sense of place" are almost cliché in any planning document. Planners typically use this phrase to connote the character of the place; however, few attempts are made to identify what actually creates the sense of place. Recent efforts have been made to identify sense of place concepts, however. This section reviews these efforts.

Before considering the empirical work on sense of place, two examples of community planning are reviewed that demonstrate efforts outside of academia to consider

sense of place. In the realm of community planning, recent efforts such as that of Common Ground (1993) have attempted to foster renewed place awareness. Other efforts have geared sense of place considerations to a more popular audience (Ebenreck et al. 1988). These efforts demonstrate that sense of place is not purely an academic concept, or of academic concern only.

The majority of this review considers more empirical attempts to elucidate sense of place. Researchers have attempted to categorize different senses of place (Eyles 1985, Burr 1995), and use sense of place for investigating community symbols (Hull et al. 1994). Mudrak (1983) demonstrated the relationship between sense of place and preferences for landscape in regard to community planning. Still other researchers have considered how community residents may be attached to places (Shamai 1991, Fly and Tarrant 1996, Harris et al. 1996), as well as how sense of place is a negotiated and socially constructed understanding of place (Stowkowski 1996).

Community planning has become a focus of recent sense of place related type efforts, which are often outside academia. An example of this type of effort is the organization Common Ground in the United Kingdom (Common Ground 1993). This group has attempted to foster what they call "local distinctiveness." Local distinctiveness is a form of place awareness to counter undesired changes before they occur. The goal of this organization is to illustrate how places are authentic, special, distinctive, and what makes communities unique. Common Ground undertook this effort because they felt that planners needed to reinforce the unique aspects of communities to counter the forces of homogenization, in particular mass-market culture, that robs people and places of things that have meaning and value. In this way, Common Ground's goals are similar to the disciplinary concerns suggested by Relph (1976), Sack (1992) and Kunstler (1993) regarding the homogenizing effects of mass-market culture and suburbanization.

To accomplish their goals, Common Ground (1993) used an unstructured approach that emphasized felt values about communities through essays, poetry, art shows, and other artistic displays. In fact, the organizers of Common Ground were steadfast against more traditional types of planning. They suggest that "[understanding] 'local distinctiveness' demands a poetic quest and points up the shortcomings in all those attempts to understand the things around us by compartmentalising (sic), fragmenting, quantifying, and reducing" (1993: 1). Efforts like Common Ground show how place creation can be a conscious dialogue about how to live, which can then be incorporated into planning.

The sense of place of an area created by natural features is often alluded to in more popular planning articles, which demonstrate that considering sense of place can make a place better, as Kunstler (1993), and Common Ground (1993) advocate. For example, Ebenreck et al. (1988) describe how the sense of place in cities often is derived from enduring landscape features such as trees. In Milwaukee, where tree planting is central to city planning efforts, the authors suggest that the trees represent the care given to the community. Thus natural features, such as trees can symbolize how residents made their place special.

Other efforts related to communities and sense of place concepts have taken more empirical approaches. Eyles (1985) developed a typology of ten senses of place from an empirical study of the residents of Towcester, England. The author suggests that multiple senses of place exist because individuals perceive places differently. This difference in perception is associated with the combination of the physical location of the place, and the personal characteristics of the individual, such as his or her social and economic standing.

To investigate how different senses of place are formed, Eyles (1985) used primarily qualitative data from open-ended interviews. Results showed ten distinct senses of place. Of the ten senses of place, the author classified four major categories: 'social' (interactions with other people and social ties are important to the meaning of the place),

'apathetic-acquiescent' (lack of interest or commitment to a place), 'instrumental' (place is important for its utility), and 'nostalgic' (feelings for a place are based on the past). Eyles' work suggests that although the place informs the individual, what persons bring to the place defines the significance of the place to the individual. Thus, Eyles demonstrates Steele's (1981) discussion of the transactive nature of sense of place.

Burr (1995) explored the relationship between sense of place and rural residents' perception of tourism. The author contends that tourism developers often fail to include a sense of place in their tourism efforts. This can result in inappropriate development that destroys the amenities of the place that made it a tourist destination. In contrast, Burr suggests that when managed with the cooperation of rural leaders, tourism development can improve the quality of life, and strengthen the sense of place of rural residents.

To better understand this relationship, Burr (1995) explored rural residents sense of place, using Eyles' (1985) framework. The author considered the relationship between sense of place and perception of tourism, and whether residents felt tourism was a threat to their sense of place. Methods were semi-structured, qualitative interviews with 43 key informants in four rural Pennsylvania counties. Results suggested that variations in the informants sense of place were related to length of residence. The majority of informants felt optimistic towards tourism development; therefore, few associations could be found with this variable and the type of sense of place. The author comments that understanding the unique aspects of experiences that contribute to rural residents' sense of place and quality of life is a complex issue that remains elusive for tourism planners who desire to improve on the quality of life in rural communities.

Other researchers have used sense of place concepts to investigate community symbols or icons. Hull et. al. (1994) were concerned with how these physical icons can contribute to place identity, self identity, health, sense of community, and sense of place. The authors' objective was to explore these place based meanings, so that self identity and

place identity could be better understood to inform planning and design decisions. Methods were phone interviews of 185 Charleston, South Carolina residents. Interview respondents were asked to respond to a series of closed and open-ended questions regarding how places or natural features that were destroyed by hurricane Hugo were important or special and why. An inductive coding method was used to analyze the responses.

Results from Hull et al.'s (1994) research showed that respondents most often identified natural places and churches as special places which were lost or damaged. In general, these places tended to be important because they evoked memories or feelings, provided a sense of continuity, served as icons for social groups, defined the local area, provided opportunities, and reflected personal values and accomplishments. These results empirically demonstrate that residents value their environment for more than functional or economic reasons. Furthermore, a place's value is also important for its contribution to place and self identity. The authors suggest that their study provides additional justification for local efforts to promote the maintenance and creation of physical icons which foster place identity and symbolize local values.

Sense of place research suggests that more than aesthetics drive an individual's desire for certain landscapes. However, preference studies are often used in community or natural resource planning (for example, see Schroeder, 1991 in 'Natural Areas and Recreation Resources' section of this review) to determine development that is desirable to residents or visitors, and a large body of literature and research exists regarding landscape preference studies. Although the bulk of these preference studies are beyond the scope of this literature review, Mudrak (1983) makes an interesting case for the relationship between landscape preference and sense of place. This author hypothesized that how people feel about their landscape, such as how the landscape symbolizes their community, is an important variable in whether the landscape is preferred or not.

Mudrak (1983) interviewed 26 residents of Ashland, Wisconsin to test this hypothesis. Methods used were a mapping exercise that asked the subjects to map landscape features that expressed the sense of place, symbolized the community, and made the subject feel that the place was their home. Results showed that Ashland residents were able to identify places that symbolized their community and that there was some similarity in responses among residents. The similarity of responses suggest that the sense of place of a community is a shared understanding, which may be negotiated across generations of residents. In summary, Mudrak's research provides further empirical evidence that physical places on the landscape are embedded with symbolic meaning and value.

Place attachment, a subset of sense of place literature has also been considered empirically by researchers. Shamai (1991) attempted to clarify the vague concepts elucidated primarily by Relph (1976) and Canter (1977) regarding the intensity of feelings expressed towards a place. Shamai created a quantitative scale to measure sense of place empirically using a sample of Jewish high school students in Toronto. From the literature, Shamai focused on four ascending levels of place affiliation ranging from "no particular feelings," "belonging" (affiliation without any special affinity), "attachment or affection" (affinity and identification to a place), to "commitment" (readiness to do something for the place). The students were asked to rank their place affiliation with three different levels of places, or "nested allegiances:" Toronto, Ontario, and Canada. Results showed that the high school students gave the highest sense of place rankings to Toronto, the lowest to Ontario, and that the students' sense of place feelings were often the same for the different levels of place. Shamai also looked at the influence of type of school on the place rankings, and found that public schools had the least association with the sense of place rankings.

Fly and Tarrant (1996), examined the level of community attachment of rural residents in Southern Appalachia, using a modified version of a place attachment scale

developed by Williams et al. (1995). The authors' objective was to determine the relationship between positive attachment to community and the characteristics of the residents, such as land ownership, ancestral residence, and community type.

To understand this relationship, Fly and Tarrant administered a telephone survey to 600 residents. Results showed that the majority of residents were positively attached to their community. Positive attachment tended to be associated with rural residency, land ownership, length of time of land ownership, and length of ancestral residence. The authors concluded that place attachment to community should be considered along with the traditional utility values of natural resources in management decisions.

Harris et al. (1996) collected data on place attachment of community members living in the interior Columbia River watershed. In particular, these authors focused on identifying places that were special to community members. Methods used were a social and economic assessment of a sample of 198 communities. Key representatives of communities were asked to fill out a "Community Self-Assessment Workbook" which collected information on the representative's place attachment and special places. Results showed that many communities had an abundance of special places, according to the participants in the community assessment. Preliminary conclusions from this research suggested that special places are likely an important component of healthy communities.

Lastly, researchers have suggested that place attachment is too much of a "micro-representation" of place (Stowkowski 1996). By this, the author means that such studies are too focused on individual's perceptions of place. In contrast, Stowkowski suggests that there is a need to look at more "macro-representations" of place, which consider how the meanings of places are shared across individuals. Place construction, in regard to how conceptions of place are shared by people and maintained over time, is an important concept for community sense of place research. To investigate place construction, the author used qualitative data in the form of text, discourses, and narratives to look at the

construction of place in a Colorado gambling town. Preliminary data from this study suggest that the shared sense of place of this town was called into question in the face of its development from resource dependent town to a tourism attraction.

In summary, sense of place research in regard to community and tourism planning has used a variety of perspectives and methods. Despite the heterogeneity of the literature, a common theme can be surmised. All of the authors suggest that understanding felt values and attachment to place is important for planning. This theme is continued in the next section, which reviews applications of sense of place to natural areas and recreation resources.

Natural Areas and Recreation Resources

Natural areas and recreation researchers have used sense of place concepts in both research and more applied management situations. Although sense of place is a recent trend in these fields, sense of place concepts have been loosely referred to by recreation researchers for many years. This section describes some early references to sense of place concepts by recreation researchers, as well as more recent trends in research in both natural areas and recreation research. Some of the following studies may be more narrowly defined as recreation research, while other studies fall under the broader category of natural areas research.

Researchers interested in motivations for recreation behavior touched on aspects of sense of place long before the recent interest in such studies in the 1990's. Lee (1972) recognized that recreation places have a social component, which he defined as a constructed set of images about place that arise to ensure orderly group behavior. According to Lee, recreation places can be "possessionally occupied," which means that places are selective and open to the public, or "knowledge occupied," which means that

access is more territorial and determined by relations with other people in the place. Lee's research is interesting, because he suggested that lower socio-demographic groups occupy places using the "knowledge" perspective, and the places they frequent are usually neighborhood parks. In contrast, higher socio-demographic groups, such as the middle class typically occupied places "possessionally," and that such places are usually larger scale national parks or wilderness areas. Lee's research showed how behavioral motivations for recreation can affect the choice of suitable recreation places among different socio-demographic groups

Schreyer and Roggenbuck (1981) suggested that differences in user's background, behavior, perception, and attitudes are associated with the extent to which they agree with symbolically constructed images of national parks and wilderness areas. The authors surveyed a random sample of recreational users of the Green and Yampa Rivers in Dinosaur National Monument to determine the extent to which the users agreed with "wildernism" (agreement with legislative definitions of wilderness and wilderness ideals) and "parkism" (agreement with national park ideals). Results showed that "wildernism" was often strongly associated with user's background, behavior, perception, and attitude; however, "parkism" was only loosely associated with the variables. The authors suggested that the lack of associations with "parkism" may result from the vague definitions concerning park ideals, compared to the clearer definitions of wilderness ideals. Schreyer and Roggenbuck's research demonstrated that definitions of place result both from direct experience and symbolically constructed images of place.

Other research suggests that individual or social constructions of place can be adversely affected by changes to recreation places. Schreyer and Knopf (1984) identified five types of persons who are most likely to be systematically disadvantaged by uncontrolled situations of change that lead to either succession or displacement. Of these five types, the authors suggested that persons with strong environmental or place

attachments to recreation sites may be systematically disadvantaged by uncontrolled change in outdoor recreation places. These persons may have a long history of site visitation, such that the site is a repository of emotion and meaning. New persons may be viewed as a threat to the place, or less-caring and less-deserving of the place. Schreyer and Knopf suggested that managers need to understand the dynamics of change, to prevent bias toward certain users when making management decisions.

Within the applied fields of recreation and natural areas management, recent studies using sense of place concepts have emerged. These studies are motivated by an interest in explaining the symbolic and emotional connections by recreational users of natural areas (Williams et al 1992, Mitchell 1993, Moore and Graefe 1994, Virden et al. 1996) and rural residents near natural areas (Brandenburg and Carroll 1995, Schroeder 1996). However, they are also part of a larger paradigm shift towards "ecosystem management," which incorporates felt values about the environment with ecological principles. Thus, they are carrying out research needs suggested by Ewert (1994,1996) and others concerning the human dimensions of ecosystem management.

Like Schreyer and Knopf (1984), several recent researchers have explored the concept of "attachment" to place, which is a subset of sense of place (Williams et al. 1992, Mitchell 1993, Moore and Graefe 1994). Although there is a lack of clear terminology in these studies, "attachment" can be defined as the extent to which an individual or group symbolically or emotionally bonds to place.

Williams et al. (1992), used a place attachment study to demonstrate the shortcomings of the prevailing approach to recreation research, which they call the "commodity metaphor." Following this commodity approach, recreation sites are interchangeable, as long as the substituted recreation site has the necessary features to support the desired recreational activity. In contrast, the authors asserted that recreational

settings are often one-of-a-kind places which cannot be readily replaced or substituted, because recreational users have emotional and/or symbolic connections to the places.

Quantitative data from a mail-back questionnaire of visitors to four wilderness areas were used to empirically test the validity of this emotional/symbolic view. The authors used a Likert scale developed by Williams and Roggenbuck (1989) to measure place attachment. Results illustrated that a distinction between "place attachment" (valuing the setting as an end in itself), and "wilderness attachment" (valuing the setting as a member of a class of settings) existed. Place attachment was associated with a longer use history of the place by the visitor, was more site specific, and was linked to lower socioeconomic status. Wilderness attachment was associated with general wilderness experience, membership in wilderness-type organizations, and sensitivity to wilderness impacts. The results of this study illustrate that different constructions of place exist among wilderness users, and that such areas may not be substitutable for certain users.

Moore and Graefe (1994) developed a model to explain the formation of attachments to recreation places. The authors sought to empirically test how user characteristics were associated with the concepts of "place-dependence" (the place facilitates the recreation activity, but may not be endowed with emotional attachments), and "place-identity," (the user is emotionally connected to the place, and the connection is a source of satisfaction). Quantitative data were collected from users of three rail-trails, and place attachment was measured using 15 Likert scaled statements adapted from Williams and Roggenbuck (1989).

Moore and Graefe's (1994) results showed that rail-trail users exhibit both place dependence and place identity. In addition, three variables were consistently associated with place identity: place dependence, importance of activity, and months of association with the rail-trail. Moore and Graefe conclude that user's attachments to recreation places

need to be considered during the planning process, and that place attachment may be a source of recreation satisfaction for some users.

Mitchell et al. (1993) used data from open-ended interviews with recreational users to the Chiwawa drainage in central Washington to develop a typology of visitors based on their reasons for choosing to recreate in the drainage. The objective of the research was to include more emotional interests in forest places that could not be understood within the planning framework of the Forest Service's FORPLAN. One-hundred and twenty group or personal interviews were used to collect the data. The results show a distinction between "use orientation," (the place supports the activity) and "attachment orientation" (the place is important more emotionally or symbolically). Like the Williams et al. (1992) and Moore and Graefe's (1994) studies, the management implications of Mitchell et al.'s research suggested that planners need to incorporate attachments to place. Finally, these researchers supported Schreyer and Knopf's (1984) suggestion that some recreational users may hold environmental attachments because they are unable to substitute the place of the recreation activity.

The empirical research by Williams et al. (1992) and Moore and Graefe (1994) inspired a number of researchers to explore further the concept of place attachment using quantitative methods. For example, Virden et al. (1996) examined predictors of place dependence and place identity. In particular, these researchers were concerned with the impact of early outdoor socialization on the dependent variables place dependence and place identity. The independent (predictor) variables were as follows: general experience, site experience, childhood experience, motives, and socio-demographics. Methods used an on-site questionnaire of a sample of 408 Arizona hikers at three different hiking areas. Regression analysis was used to examine the relationship between the independent variable and the dependent variables. Preliminary results showed that the dependent variables place dependence and place identity were associated with several of the predictor variables. This

research provides further empirical evidence regarding how visitor characteristics, such as outdoor experience may inform attachment to natural areas.

The research discussed above in regard to natural areas and sense of place has typically focused on attachment or bonding to place. Given that most of the above research is exploratory, there is confusion regarding the "attachment" terminology. In a critique of place attachment type studies, Hammitt and Stewart (1996), suggested that place attachment research needs "construct clarity." Hammitt and Stewart developed a taxonomy of place attachment, using the terminology of the conceptual literature by Tuan (1974, 1977) and Relph (1976) to express the degree of emotional bonding to place. In this taxonomy, place bonding ranges from a general "familiarity" or knowledge of a place to "rootedness," which is a deep, and unconscious connection to place. In addition, Hammitt and Stewart (1996) suggested that place attachment studies have focused more on the attachment or "bonding phenomenon," than on the motivations for the attachment to place. Hammitt and Stewart suggested that further research needs to address the substance of the bonding phenomenon.

Most of the recreation and natural areas research has focused on place attachment; however, other studies have considered sense of place more broadly. This research has focused less on the "bonding phenomenon," and more on the identification of important places, the types of activities associated with the places, and the meanings or values associated with the important places. In addition, the following studies have used primarily qualitative methods, as opposed to the quantitative methods used for the place attachment studies.

Schroeder (1991) considered the relationship between sense of place and landscape preference. Schroeder's research went beyond traditional landscape preference studies which identify only preferred landscapes and features. Instead, he obtained information from qualitative interviews with visitors to the Morton Arboretum in Chicago to determine

what meanings were associated with different places, and if different meanings were associated with different types of places. The methods were open ended questions that asked visitors to identify landscapes from memory that characterized the kind of place the arboretum was for them, and to explain the meaning of the landscape in terms of thoughts, feelings and memories associated with the place.

Schroeder's (1991) results showed that the arboretum landscapes had more than just aesthetic meaning. The author suggested that "Settings help people feel connected with nature, and with their natural and historical heritage." (1991:245). Schroeder's research is important for sense of place research because it shows that asking about values and meaning is valid. Furthermore, like the place attachment studies (Williams et al. 1992, Mitchell et al. 1993, Moore and Graefe 1994), it demonstrates that landscapes are not substitutable. However, in contrast to the place attachment studies, in which the researcher defines the place, Schroeder's research had respondents select their own settings. The author suggested that this method ensured that the places had significance for the respondents.

Schroeder (1996) used a qualitative questionnaire comprised of open-ended questions designed to learn more about "special places" in the Black River Area of the Ottawa National Forest. Schroeder asked visitors to provide a description of four places, and discuss what the places meant to them. A matrix of place themes and meanings or values associated with the places was used to organize the data. Schroeder's data is limited because it cannot be used to estimate the proportion of the general population that holds the same views. However, it illustrates that physical places are important to people because they provide for particular values (e.g. aesthetic, historical).

Brandenburg and Carroll (1995) used concepts derived from the sense of place literature to address symbolic and emotional values of natural areas held by rural residents residing near natural areas. United States Forest Service planners in Washington State felt

that traditional public participation methods were unsuccessful and intense conflict over resource allocation was polarized into urban versus rural or environment versus multiple use groups. Furthermore, there was concern that individuals in rural communities were reluctant to share their feelings about emotional ties to places during traditional planning meetings, such as town meetings. Brandenburg and Carroll's objective was to develop a method to incorporate different and often conflicting values and emotional ties to places expressed by rural constituencies into the public land management agenda.

To accomplish their objectives, the authors chose to use an inductive, qualitative methodology in the form of semi-structured interviews and behavior and interaction observations. Results suggested that individuals were reluctant to share their personal values or emotional attachments towards a place in the context of a social group setting, such as town meetings. Furthermore, they were often unwilling to express themselves even if the social group's values conflicted with their personal values. According to the authors, a sensitivity to place creation can help to reduce oversimplification of issues and polarization of stakeholder's values that can occur in many forms of public participation. Incorporating place creation into the planning framework suggests a way of "discovering common values and meanings among ostensibly opposing stakeholder groups." (Brandenburg and Carroll 1995: 396).

Cheng and Daniels (1996) approached sense of place from a perspective similar to that of Brandenburg and Carroll (1995) to explore the link between place construction and natural resource collaboration. In particular, these authors sought to understand how natural resource partnerships and decision making processes were based on a shared sense of place held by either individuals or communities. These authors suggest that conflict arises during the natural resource decision making process when groups have different, or conflicting constructions of place. Interviews with key informants and observations of a multiple land-owner partnership in Colorado were used to empirically study the relationship

between shared sense of place and natural resource decision making. Although this research is in progress, the author's preliminary results suggest that leaders of different groups have different senses of place.

Kuentzel (1996) used a case study of the Horicon Marsh, Wisconsin to consider how recreational opportunities fit with ecosystem management. Kuentzel suggests that under ecosystem management, recreation may be subverted by ecological principles, which he calls the "ecological principles filter." This "filter" may bias public lands management against understanding the social dynamics of these lands. In contrast, the author suggests managing for a "sense of place." By managing for a sense of place, land managers can recognize and foster the public's personal ties and identifications to the places they manage. Community linkages, information such as interpretative services, special events, and unique experiences are suggested as means for managers to incorporate sense of place.

In regard to natural areas and recreation research, sense of place has been considered from a variety of perspectives, and with a variety of methods. As such, it is difficult to draw conclusions from this literature. Although it may be tempting to argue for the "best" method to address sense of place, all of these methods are valid, because of the nature of sense of place. To a degree, sense of place is all encompassing; therefore, it would be fruitless to limit the real-world understanding of it to one method. The attraction of sense of place concepts is that they may help researchers grasp at the felt values of place that have been subordinated by traditional research paradigms and methods.

The success of the research reviewed here is that it presents new ideas to redress the fragmented relationship between humans and the natural world. However, much work remains to be done to understand how these concepts may be applied to on-the-ground management situations. According to Williams (1995a, 1995b, 1996), more attempts need to be made to identify and even map important places, how they may symbolize local or national heritage, ancestral ways of life, recreation opportunity, scenic views, and so on.

From this perspective, natural resources can be managed as places, not just objects of environmental and economic concern.

Article: The Regional Significance of National Parks: Exploring the Sense of Place of Acadia National Park*

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Abstract *The framework of sense of place, developed by humanistic geographers, has been employed by researchers in their efforts to explain the range of attachments, values, and meanings assigned to natural areas. This study considers how protected areas may inform and potentially protect the sense of place of the region within which they are embedded. A multi-method approach, using both qualitative and quantitative methods, was used to explore how Acadia National Park is part of the regional sense of place and how the park is valued by neighboring residents. Qualitative interviews with residents of Mount Desert Island, Maine informed a mail-back questionnaire administered to a representative sample of island residents. Research findings provide empirical evidence that Acadia National Park is important to the regional sense of place, and is important based on multiple values. These findings suggest that parks may play an important role in protecting the integrity of the sense of place of a region.*

Keywords sense of place, environmental values, meaning, national parks

Introduction

Sense of place is an important concept for national park management. National park designation provides protection for natural and historical resources valued by many Americans. At the national level, parks are icons of an American identity (Nash 1982,

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Runte 1987), and empirical research has shown that park visitors define parks both from this symbolic image and from direct experience (Schreyer and Roggenbuck 1981).

However, at the regional level the natural and historic resources protected by parks may be integral parts of local communities (Zube 1989). Adjacent residents may value these areas not just as symbols of an American identity, or as recreation places, but as places important to the local character or regional identity. It is in this context that sense of place emerges as an important management concept. Local connections to national parks can be positive sources of stewardship; however, local values may be different or conflict with the national values of parks. National park managers may do well to understand how the places they manage have local significance in an effort to develop stronger local constituencies. This paper considers how Acadia National Park may inform the sense of place of the region within which it is embedded -- Mount Desert Island, Maine.

Sense of Place and Human Geography

The emerging and provocative concept of sense of place has disciplinary roots in human geography. Humanistic geographers have developed a body of literature on sense of place and related concepts. In general, geographers such as Tuan (1974, 1977, 1980), Relph, (1976), Steele (1981), and Entrikin (1991) speculated about and described ways that humans attach meaning to and derive meaning from physical places in both the natural and built environments. Sense of place is also referred to in planning as genius of place, spirit of place, or *genius loci* to suggest the character or personality of a place (Relph 1976). Sense of place can be a difficult concept to grasp, however. Relph alluded to this problem when he suggested that sense of place is "...subtle and nebulous, and not easily analyzed in formal and conceptual terms, yet at the same time is naively obvious in our experience of places for it constitutes the very individuality and uniqueness of places." (1976:48-49). According to this author, sense of place provides a link for three

components of place: the physical setting, the activities in the place, and the meaning of the place.

Sense of place involves both attachments to place at the individual level (Tuan 1974, 1977, 1980), and symbols in the physical landscape that reinforce commonly held beliefs and interpersonal involvement (Relph 1976, Steele 1981). Relph comments that "people are their place and a place is its people, and however readily these may be separated in conceptual terms, in experience they are not easily differentiated." (1976:34). Steele (1981) describes this aspect of sense of place as a "transactional system," or an experience created by the setting combined with what the person brings to it. Thus in order to understand a place, its people must be understood and vice versa.

Sense of Place in Regard to Natural and Protected Areas

Recent research on natural areas has suggested that thinking of nature as a place of felt value and meaning may be an important step towards a better understanding of the human-environment relationship. For example, Williams (1994, 1995a, 1995b) suggests that a place perspective implies that the full range of values and meaning assigned to natural areas are considered, rather than just resource or commodity values. In this respect, natural areas can thus be understood as places with ethical and cultural significance, rather than just in economic terms (Sagoff 1993). Other researchers argue that place thinking needs to be incorporated into the emerging ecosystem management paradigm (Salwasser 1990). Such calls have often come in response to an increasingly vocal public involvement in resource management concerns (Allen and Gould 1986), as well as a public that is not convinced by scientific solutions alone (McGinnis 1995).

Most of the empirical work on sense of place in regard to natural areas has considered visitors' attachments to places (Williams et al. 1992, Mitchell et al. 1993, Moore and Graefe 1994, and Virden et al. 1996). Other research has considered the social and symbolic importance of sense of place. For example, Schroeder (1991) investigated

the relationship between sense of place and landscape preference. His results suggested that physical settings can help people feel connected to nature and with their natural and historical heritage (1991: 245). Community symbols or icons have been shown to symbolize local values, place identity, self identity, and sense of community (Hull et al. 1994). Mudrak (1983) found that preferred landscapes are those which symbolize community and home to local residents

In the context of national forest management and planning, discovering more about visitors' and local residents' "special places" may be important for managers to understand how people experience the places under their jurisdiction (Schroeder 1996). According to Brandenburg and Carroll (1995), a sensitivity to place creation can help to reduce the amount of oversimplification of issues and polarization of values that can occur in other forms of public participation. Other researchers suggested that conflict may arise in natural resource decision making processes when groups have different or conflicting constructions of place (Cheng and Daniels 1996).

The research described in this paper will build on the evolving sense of place literature. As noted above, this study seeks to understand how a national park is part of a regional sense of place. Much research has focused on how protected areas are part of regional ecological systems, which is important for the preservation of native species (Newmark 1985), and so that parks do not become isolated "islands" (Diamond 1975). However, protected areas also need to be understood within the social and cultural context in which they were established (Stankey 1989). For example, local values and attachments must also be considered, and only then will the more scientific values of parks, such as biodiversity be realized (Zube 1986, 1989).

Understanding how natural places are important to local or regional values may be an important step in land use planning (Norton 1991). If protected areas fulfill a regional sense of place, park managers may be able to dovetail ecological preservation goals with

those of the local residents, whose interests may be more geared towards other goals, such as preserving a sense of community. In this respect, a sense of place perspective may lead managers towards protecting a diversity of values, as well as a better understanding of how places under their jurisdiction are part of a larger social system. Furthermore, management perspectives that consider the regional importance of the areas under their jurisdiction may foster more enduring relationships with neighboring residents.

The Study Area

The areas addressed in this study were Acadia National Park and Mount Desert Island (MDI), Maine (United States). MDI consists of approximately 73,000 acres, and nearly half of this acreage (32,000 acres) is under the jurisdiction of Acadia National Park.¹ Acadia National Park's acreage is interspersed with lands under the jurisdiction of four towns: Bar Harbor, Mount Desert, Southwest Harbor, and Tremont. Thus MDI is a patchwork of public and private lands. In this respect, Acadia National Park is an unusual unit of the national park system because it is not one relatively coherent unit of land, such as Yellowstone National Park. The close proximity between Acadia National Park and its neighbors suggests that local connections to the park may be strong.

Acadia National Park and MDI are popular tourist destinations. Although the total year-round population of the four towns comprising MDI is just under 10,000, this number swells by an estimated 6,000 - 8,000 seasonal residents who arrive during the peak season of July - August (Bar Harbor Times 1991). Furthermore, short-term or day visits to MDI during the peak season bring about 20 - 25,000 visitors per day (Bar Harbor Times 1991).

¹In addition to the land on Mount Desert Island, Acadia National Park's holdings include several smaller islands or portions of islands, the Schoodic Peninsula, and part of Isle Au Haut. These holdings consist of approximately 5,000 acres, in addition to the 32,000 acres on Mount Desert Island. These holdings are not considered as part of the study area, although some informants may have mentioned them during the Phase I research.

The National Park Service estimates that Acadia accommodates nearly 5 million visits annually, and this figure is expected to increase (National Park Service 1992).

Given the popularity of MDI and Acadia National Park, development pressure on the island is keen and planning decisions are all the more important in this finite area of land. Increases in growth and visitation can affect both the park and the surrounding lands. Such changes could alter the character of the natural and cultural resources which draw visitors to MDI and Acadia National Park, as well as affect the quality of life on the island for year-round residents. As such, it is important to understand more fully the character or sense of place of MDI, so that park managers and the community can make more informed planning decisions. The research described here investigates how Acadia National Park contributes to the sense of place of MDI. Furthermore, a sense of place perspective may demonstrate how parks and protected areas in general have regional significance in the human or social realm.

Objectives and Methods

This research was guided by two general research questions. First, how can sense of place concepts help park managers better understand the relationship between MDI residents and Acadia National Park? Second, what are the implications of such research for our understanding of the role of parks in regard to their neighbors? As discussed earlier, sense of place is an emerging and provocative concept in natural resource management; therefore, exploring this concept in regard to national parks is of paramount interest.

Four objectives were established to address the above research questions:

- ° Identify how Acadia National Park informs the sense of place of MDI.

- Identify characteristic types of places in Acadia National Park that inform the sense of place of MDI.
- Identify the range of values assigned to Acadia National Park by local residents.
- Identify the range of values of characteristic types of places in Acadia National Park that inform the sense of place of MDI.

Given the objectives of the study and the exploratory nature of sense of place research, a two phase approach was designed, using qualitative and then quantitative methods. The qualitative research (Phase I) was an information gathering stage that used personal interviews to inform the Phase II research design. Phase II used quantitative methods in the form of a mailed questionnaire to a representative sample of MDI residents. This research design follows the dominant-less dominant approach, in which the quantitative method is the dominant approach, as suggested by Creswell (1994).

Previous research has used primarily qualitative methods to address similar questions in regard to sense of place (Schroeder 1991, 1996, Mudrak 1983, and Brandenburg and Carroll 1995). Given that MDI has a resident population of almost 10,000, an additional goal of this research was to consider how sense of place might be addressed through involving a more representative sample of residents than would be possible with qualitative research alone. This point may be important if managers are to use sense of place research to guide planning decisions where there is a large local constituency. In fact, a primary difficulty with this study, and sense of place research in general, is formulating methods to address these issues in a more quantitative format. The next two sections describe the methods used for the Phase I and Phase II research. Since Phase I results were used to design Phase II, the Phase I results are presented before the Phase II methods are described.

Methods -- Phase I

Phase I was a series of personal interviews with MDI residents. Gordon (1980) was used as a reference for basic interviewing strategies and techniques. Open ended questions were designed to obtain information about places residents felt were important to the character or identity of MDI, and the values associated with these places. The methods employed in Part I loosely followed qualitative methods used by previous sense of place research (Schroeder 1991, 1996, Mudrak 1982, and Brandenburg and Carroll 1995), and followed basic qualitative methods reviewed by Marshall and Rossman (1989). The interviews were also used as an opportunity to pretest potential quantitative methods to be used in Phase II.

Two questions were designed to gain information about places important to the sense of place of MDI. The first question asked respondents to think about the different places that make up the island. The interviewer then asked respondents the following question, "Please tell me which places you feel are most important in defining the character of Mount Desert Island?" Respondents were allowed and encouraged to think as broadly as possible, and no constraints were put on the location, type, or number of such places that the informant could mention. Thus, respondents were allowed to mention places both inside and outside the park, which would help the researcher understand how the park was integrated into MDI's sense of place.

The second question added some parameters to first question to shape the responses more definitively. This question asked the candidates to describe up to three "photographs" they would take of places that represent the character or identity of the MDI. The purpose of asking the respondents to think in terms of photographs was to help them visualize more specific places or types of places, so that they could be asked more detailed probing questions about the meaning and value of such places.

The last set of questions was a series of probes designed to gather more information about why the places mentioned were valuable or important to residents. For example, these questions asked about how the place was unique to MDI, whether it represented a way of life on MDI, what types of activities occurred at the place, and how it was valuable or important to MDI residents.

Since this phase of research was primarily for information gathering, the effort was focused on gaining access to a range of viewpoints on planning for MDI. Interview respondents were chosen non-randomly from the park planner's recommendations of people involved in MDI planning. The initial interviewees were asked to suggest other candidates as well. Persons interviewed represented a variety of roles on MDI, such as town planner, town manager, chamber of commerce member, business owner, park employee, land-trust employee, interest group employee, and others. Anonymity of respondents was assured and interviews were recorded with consent of respondents. Nine interviews, which lasted from 45 minutes to over two hours were completed during the summer of 1996.

Content analysis was used to organize the data gathered during the interviews. Places mentioned were organized in a matrix for each of the questions using an inductive coding method. The values and meanings of the places mentioned in the second question were coded to add clarity to the matrix. For example, if a place was mentioned as "pretty" or "beautiful" it was coded as having aesthetic value.

Results -- Phase I

In general, Phase I results showed that respondents were able to suggest places important to the character of MDI and were able to attach values to those places. Over half of the places mentioned by respondents were places protected by Acadia National Park. This result supported an assumption of this research that places in the park are important to

the local character. However, places outside the park are important to the character of the island as well. The following outlines the key findings from Phase I research.

Places reported as important to the character of MDI were categorized into two types: those under the jurisdiction of Acadia National Park and those not under this jurisdiction. Results are shown in Table 1. Forty-five places reported by respondents were under the jurisdiction of Acadia National Park, and 32 places were outside the jurisdiction of the park. Some of the places listed as under the jurisdiction of Acadia National Park are only partly under its jurisdiction. Natural areas that are partially protected by the park were placed in this category because the park is responsible for protecting the natural character of such places.

Table 1. Places mentioned as important to the character of MDI.

Places under the jurisdiction of Acadia National Park		Places outside the jurisdiction of Acadia National Park	
Place	Times Mentioned	Place	Times Mentioned
Ocean and Shore	18	Villages or Harbors *	21
Fresh Water Ponds	8	Specific Places in Villages	9
Trails or Carriage Roads	7	or Harbors	
Mountain Interior	7	Natural Areas	2
Vistas and Panoramas	3		
Built Places	3		
Total	45	Total	32

* Respondents did not typically mention the harbors as separate from the villages

Places reported were also coded by the type of place. There were six types of places mentioned that are under the jurisdiction of Acadia National Park, and three types of places mentioned that were outside this jurisdiction. An example of a type of place was the ocean and shore, which was mentioned 18 times. Anytime a respondent reported a type of place that was part of the ocean and shore, it was coded ocean and shore. For example, some respondents mentioned Great Head, Sand Beach, or the Ocean Drive area. All these places were coded ocean and shore. Furthermore, many of the places mentioned in

response to both questions were not very specific places. Often respondents would mention a general area (e.g. the mountains), and then name a specific mountain (e.g. Sargeant Mountain) to describe what was important about mountains.

Some respondents also mentioned that Acadia National Park as a whole was important to the character of MDI. For example, some respondents suggested that park features, such as the trails and carriage roads, were defining elements of the island as a whole. Therefore, it was often difficult to separate the park from MDI. Other respondents suggested that the park symbolized historic social differences between the year-round residents and wealthy summer residents. The park also served as a green space that helped to keep the villages closely knit and distinct from one another, because the park prevented some of the sprawl of new development. Lastly, some respondents suggested that the controlling presence of the park was important. For some this presence was positive because it prevented development; however, for others the prevention of development was negative.

The "photographs" reported by respondents as representing the character of MDI (question two) were categorized in the same manner. Results are shown in Table 2 and are quite similar to the findings from question one. Twenty-two "photographs" described natural areas and/or places in Acadia National Park, and 19 "photographs" were of cultural areas outside the jurisdiction of the park. Ocean and shore and the mountain interior were two categories of places within the park that were reported most often. Villages and harbors were the most important for places outside the park. Having respondents answer in terms of photographs tended to make the responses more specific than the first question; however, the same types of places were suggested in response to both questions.

Table 2. "Photographs" of places mentioned as important to the character of MDI.

Places under the jurisdiction of Acadia National Park		Places outside the jurisdiction of Acadia National Park	
Place	Times Mentioned	Place	Times Mentioned
Ocean and Shore	7	Villages or Harbors *	11
Mountain Interior	7	Specific Places in Villages or Harbors	8
Vistas and Panoramas	4		
Trails or Carriage Roads	2		
Fresh Water Ponds	1		
Built Places	1		
Total	22	Total	19

* Respondents did not typically mention the harbors as separate from the villages

Respondents were also asked a series of probes designed to ascertain why the places shown in Table 2 were important. In general, a diversity of values were mentioned in regard places under the jurisdiction of Acadia National Park. For example, places in the mountain interior were mentioned for their aesthetic, ecological, cultural, and economic values. Other places, such as the trails or carriage roads were mentioned for their importance for recreation, historic value, and for psychological benefit as an opportunity for solitude.

Places outside the jurisdiction of Acadia National Park were most often valued for their economic and cultural importance. For example, Bass Harbor and Southwest Harbor were important as working harbors (economic value), and as examples of the fishing/lobstering heritage of the island (cultural or historical value). Northeast Harbor was economically important for tourism and as an example of the historical and cultural differences between the islanders involved in the traditional fishing economy and the wealthy seasonal residents.

In summary, Phase I results demonstrate that places in the park, and the park as a whole are important to the character of MDI. In addition, both the park as a whole and places in the park are important to residents for a range of values. Results from the open-

ended interviews were used to develop a questionnaire that was administered to a representative sample of MDI residents during Phase II research. The next section describes the methods used for Phase II.

Methods -- Phase II

Phase II was a mail questionnaire administered to a representative sample of MDI residents. A series of questions was designed to address each of the four study objectives. The first study objective was addressed by a battery of questions which explored how Acadia National Park is related to the sense of place of MDI. Four statements were developed to explore different dimensions of this issue and respondents were asked the extent to which they agreed or disagreed with the statements using a five-point Likert scale.

The second study objective was to identify how different places in the park contribute to the sense of place of MDI. To accomplish this, respondents were presented with a series of six photographs included with the mailed questionnaire. Each of the photographs represented distinct types of places in the park."² The places chosen for the photographs were informed by places mentioned most often as important to the character of MDI as found in Phase I. Suggestions from park personnel as to which places in the park were important to local residents were also used. The photographs illustrated the following types of places in the park: 1) the ocean and rocky cliffs, 2) the carriage roads, 3) an estuary, 4) the mountain interior, 5) a fresh water lake, and 6) a hiking trail. Respondents were asked to rate the extent to which each type of place represented both the character of

²Previous research used mapping exercises to identify places important to local character and identity in the context of personal interviews (Mudrak 1983, Peterson and Saarinen 1986). Due to the format of the mailed survey, which precluded a mapping exercise, photographs were pre-tested as a method for describing important places. Narratives to describe types of places were decided against, because it is difficult to describe a place in a narrative format without alluding to the potential function of the place, thereby biasing the assignment of potential values. For example, asking about the values of a "hiking trail," may bias the response to recreation values. Future research may need to consider this distinction to refine and validate methods for considering sense of place in the context of quantitative research. The use of photographs to describe places in this research is exploratory.

Acadia National Park and the character of MDI.³ A six-point Likert response scale was used ranging from "not at all represents the character" to "extremely represents the character."

The third and fourth study objectives were to determine the values residents associated with Acadia National Park and with types of places in Acadia National Park. Phase I results suggested that multiple values for the park and for types of places in the park are important. However, this information was provided in the context of a limited number of qualitative interviews. Therefore, to understand the values of a larger constituency, a typology of values derived from the theoretical literature on environmental value was incorporated as a heuristic device. Versions of this typology have been used to address the values of a variety of public lands (Manning et al. 1996; Manning and Valliere 1996; Manning et al. 1997; Negra and Manning 1997). Respondents were first asked to allocate 100 points of importance among a series of ten values according to how well they thought Acadia National Park provided for each of these values. Next, respondents were asked to use the same method to rate the extent to which each of the six photographs of places within Acadia National Park provided for these values.

The mail questionnaire was administered to a representative sample of MDI residents during the summer of 1996, following the methods recommended by Dillman (1978). Nine hundred and thirty-nine questionnaires were mailed to a stratified sample of the populations of each town on MDI. Of the 761 deliverable questionnaires, 377 were completed and returned, yielding a response of 49.5%.

³Candidates were asked to rate the photographs according to the extent to which the place was important to the character of the island and provided for the value, not according to his or her preference for the place, which is the primary objective of most landscape assessment studies. Several landscape assessment researchers have acknowledged that landscapes can be judged not just for their appeal, but also for how well they provide for activities (Purcell et al. 1994), meanings and emotions (Schroeder 1991), and community symbols (Mudrak 1983). However, these researchers are concerned with how the other attributes of landscape are associated with landscape preference, whereas this research is not concerned with the relationship between values and preference.

Results -- Phase II

Acadia National Park and the Sense of Place of MDI

Findings related to the first study objective are shown in Table 3. Nearly all the respondents agreed that Acadia National Park is important for maintaining the character of MDI. Respondents also agreed overwhelmingly that both natural areas and historic places within Acadia National Park help to maintain the character of MDI; however, level of agreement was stronger for natural areas than historic places. In contrast, respondents disagreed that developed places, such as the town and village centers are more important than natural areas in defining the character of MDI.

Table 3. Response to sense of place statements.

Statement	Strongly Agree	Agree	Neutral/ No Opinion	Disagree	Strongly Disagree
Acadia National Park is important in maintaining the character of MDI	65.7	30.6	2	1.4	0.3
The natural areas within Acadia National Park help to maintain the character of MDI	75.9	22.4	1.1	0.6	0
The historic places within Acadia National Park help to maintain the character of MDI	46.4	39.6	11.1	2.6	0.3
Developed places, such as the town and village centers are more important than natural areas in defining the character of MDI	2.3	9.2	21	44	23.6

Types of Places in Acadia National Park and Character of MDI

Findings related to the second study objective are shown in Table 4. All six of the photographs presented to respondents ranked highly as types of places which show the

character of both Acadia National Park and MDI. However, most places were rated more highly as representative of the character of the park than MDI, and all of the ratings for the park and MDI were statistically different ($p < .05$) except for the "lake" photograph. The carriage road and the lake were most representative of Acadia National Park, and the lake and the ocean and cliff were most representative of MDI.

Table 4. Average responses for how well each of six photographs show a type of place that represents the character of Acadia National Park and Mount Desert Island.

Type of Place	Average Rating*	
	Acadia National Park	Mount Desert Island
Photo 1 - "Ocean and Cliff"	5.20	5.04
Photo 2 - "Carriage Road"	5.45	4.03
Photo 3 - "Estuary"	4.59	4.88
Photo 4 - "Mountain"	5.23	4.90
Photo 5 - "Lake"	5.26	5.21
Photo 6 - "Trail"	4.99	3.76

* 1 = "not at all," 6 = "extremely."

Note: All ratings for character of Acadia National Park and MDI were statistically different ($p < .05$) except for the ratings for the "lake" photograph.

Values of Acadia National Park

Table 5 shows findings related to the third study objective. Acadia National Park appears to have some importance for all of the ten values addressed. However certain values were rated more highly than others. Recreation and aesthetic values were given the most importance. Ecological value was ranked second, followed by therapeutic value. Educational/scientific values, moral/ethical, and spiritual values comprised a fourth tier of values. Finally, intellectual and economic values were reported least often as important.

Table 5. Values of Acadia National Park.

Value	Statement	Average Points of Importance*
Recreation	<i>The opportunity to participate in outdoor recreation activities</i>	15.6 a
Aesthetic	<i>The opportunity to enjoy the natural beauty of this area</i>	15.3 a
Ecological	<i>The opportunity to protect nature in order to ensure human well-being and survival</i>	12.2 b
Therapeutic	<i>The opportunity to maintain or regain physical health and/or mental well-being through contact with nature</i>	10.3 c
Educational/Scientific	<i>The opportunity to study and learn more about nature</i>	8.9 d
Moral/Ethical	<i>The opportunity to exercise a moral/ethical obligation to respect nature and protect other living things</i>	8.2 d, e
Spiritual	<i>The opportunity to obtain spiritual meaning through contact with nature</i>	7.9 d, e
Historical/Cultural	<i>The opportunity to preserve traditions and past ways of life</i>	7.6 e
Intellectual	<i>The opportunity to think creatively and be inspired by nature</i>	6.8 e, f
Economic	<i>The opportunity to earn a living through tourism and other means</i>	6.7 e, f

* based on 0-100 possible points of importance.

a-f denotes statistically significant differences based on paired t-tests ($p < .05$). Each letter refers to a group or tier of values that are ranked together.

Values of Types of Places in Acadia National Park

Table 6 shows findings related to the fourth study objective. Different types of places in Acadia National Park are clearly allocated different values by respondents, and these values are different from the values of the park in general. Although all of the places represented by the photographs, like Acadia National Park in general, ranked high for recreation and aesthetic values, and low for economic and intellectual values, there were some differences among the places. For example, the photograph illustrating the ocean and cliff ranked highest for aesthetic value, whereas the estuary ranked highest for ecological value. Of additional interest is the rather high ranking for historical/cultural value assigned

to the carriage roads and trail. In contrast, the historical/cultural value of Acadia National Park was ranked eighth.

Table 6. Values of six types of places in Acadia National Park represented by photographs.

Value	<u>Average Points of Importance*</u>					
	"Ocean & Cliff"	"Carriage Road"	"Estuary"	"Mountain"	"Lake"	"Trail"
Recreation	10.7	23.2	11.7	19.0	16.0	24.1
Aesthetic	19.5	13.5	16.4	15.6	18.0	11.2
Ecological	14.6	8.4	19.7	12.3	13.8	10.0
Therapeutic	11.2	10.9	9.1	10.6	10.3	11.2
Educational/Scientific	10.2	7.0	10.9	9.0	8.2	8.2
Moral/Ethical	6.7	5.5	7.4	6.3	6.2	5.8
Spiritual	9.4	7.7	8.6	9.0	9.6	7.3
Historical/Cultural	5.9	11.4	6.0	6.6	6.0	10.2
Intellectual	6.6	6.5	6.3	6.7	6.7	6.4
Economic	5.0	5.7	4.0	4.8	5.3	5.4

* based on 0-100 possible points of importance.

Discussion

Findings from both phases of research provide insight into how Acadia National Park may contribute to the sense of place of the surrounding region, as defined by local residents. First, both Phase I and Phase II findings demonstrate that Acadia National Park is important to the character or sense of place of a region -- in this case MDI. This is an important finding because it suggests that the social influence of the park extends beyond its boundaries. Residents of MDI may consider the park as more than a recreation or economic resource, but as a place which is important to the greater character or identity of the island. As one interview respondent suggested, "...Acadia National Park [is important to the character]...the fact that there's all this protected land...it affects not only the visual character of the place, but also the experience of living here."

Second, findings from both phases of research suggest that types of places in Acadia National Park may be important to the sense of place of MDI. For example, Phase I

results showed that the ocean shore was cited most often as a natural area important to the character of the island. This may be important because Acadia National Park provides nearly all of the public access to this resource. Phase II results also suggest that types of places in the park are important both to the sense of place of the park and to MDI as a whole. Furthermore, different types of places were assigned statistically different rankings according whether they were important to the character of the park or MDI. For example, the carriage roads were more important to the sense of place of the park, than MDI, whereas the estuary was more important to MDI's sense of place than the park's. Although the use of photographs to represent characteristic types of places is exploratory, these findings lend empirical support to the idea that places in the park are important for local residents not just as places to visit, but also because these sites help define the sense of place of the region.

Third, both phases of research suggest that the park is important based on multiple values. Furthermore, the values can be classified and measured in the context of quantitative research using the values typology. Even though values related to direct personal use of the park, such as recreation, aesthetic and therapeutic values scored highly, less personally motivated values, such as ecological value scored highly as well. This finding suggests that Acadia National Park is important to MDI residents for a range of values, and that residents are relatively aware of the ecological importance of the park. Thus management may be able find support in the local population for protecting biodiversity as Zube (1986) suggested, along with providing opportunities for residents' more direct uses of the park such as recreation.

Fourth, the values of the types of places represented by the six photographs suggest that such places are important for multiple values. Moreover this mix of values can vary among places and can vary as well from the values associated with the park as a whole. For example, the "estuary" was rated most important for its ecological value while the trail

was rated most important for its recreation value. Moreover, while historical/cultural value received a relatively low rating for the park as a whole, it was rated as third most important for the carriage roads. Park officials may need to consider this diversity of values when formulating management policy. The values typology is useful because it illustrates how value may be allocated among different places.

Combining both qualitative and quantitative methodologies advances research on sense of place. Sense of place has been considered primarily from a conceptual standpoint. This research suggests that aspects of sense of place can be understood more empirically. Addressing sense of place in a scoping phase with qualitative methods allowed the researcher to consider how similar questions could be asked to a representative sample population in a more quantitative fashion.

Data on sense of place from a representative sample of a population is useful to park or protected areas management. For example, empirical data on sense of place and place values is another tool of several (for example, public meetings) that management can employ to understand their constituencies. Such information can help managers consider points of convergence and divergence across multiple sources of information. Furthermore, a range of information sources may strengthen management decisions, especially in areas where conflict exists over management proposals.

Lastly, although quantitative methods reduce the richness or the complexity of sense of place, such methods may be more acceptable to park management. Quantitative methods may help add clarity to this complex topic, so it can be integrated more directly into management policy. For example, management may be able to provide opportunities to experience different values at different places. Some places could be managed for higher use, which could provide for recreational value, whereas other places could be managed to provide for other values important to residents or visitors. Negra and Manning (1997)

suggested that non formal environmental education programs could provide opportunities to demonstrate how parks provide for diverse values.

A limitation of this study is that it represents the views of only one constituency of Acadia National Park -- the residents of MDI. Future research into the sense of place and values of Acadia National Park would do well to balance these views with those of visitors and other interested parties. However, given that national parks and local residents are connected by the geographical nature of place and historical stewardship relationships or use patterns, understanding the relationship between these entities in more empirical terms is an important step for national park management.

Conclusion and Management Implications

The findings of this study suggest that MDI residents consider places under the jurisdiction of Acadia National Park important to the sense of place of the island, thus providing evidence that physical places on the landscape are embedded with social values. These findings are potentially important for national parks, and raise several questions for future research, as well as potential management implications.

Acadia National Park was established from donations of private land by elite residents of MDI, and the communities surrounding the park were established before the founding of the park. These two factors suggested, at least anecdotally, that the park was important to the sense of place of MDI. Thus it was anticipated that places in the park contributed to the sense of place of MDI. What is important here is that these findings provide the first empirical evidence that the park contributes to the sense of place from a representative sample of residents. Such evidence may give further impetus for the park to continue to develop relationships with local constituencies, which can be an important foundation of support for national parks.

Park management may benefit by looking for ways to integrate the diverse values of Acadia National Park held by residents with values that the park protects, such as ecological values. For example, some interview respondents suggested that Acadia National Park's and MDI's abundance of different flora was part of the sense of place. This is important because it shows that for some residents the flora signifies a local identity; whereas for park management the diverse flora could indicate a healthy ecosystem. Future research into the range of values assigned to protected areas may help park management to work together with local constituencies to discover common goals and values for the places they manage.

The evidence presented here is site specific; however, sense of place is an important concept for other national parks and protected areas. In particular, the ideas developed here about sense of place from a regional perspective may be applicable to other parks, particularly those with growing gateway communities. As development increases near parks, future research could be useful to park management to understand how new residents value the places under their jurisdiction. For example, park management and local communities may pro-actively use sense of place concepts to explore what it is about the place that draws new residents to the area, thus helping to protect the sense of place in the face of new development. Furthermore, as noted above, it is possible that the historical relationship between Acadia National Park and MDI residents is associated with the findings of this study. Understanding sense of place in the context of an area without a long-term relationship between the protected area and its neighbors may advance our understanding of factors that drive sense of place.

Future research should consider how Acadia National Park's importance to residents may differ from that of non-residents. Previous research has suggested that park visitors value parks for their symbolic national significance or for recreation (Nash 1982, Runte 1987, Schreyer and Roggenbuck 1981). Future research could explore the extent to

which this is true for visitors to Acadia, and if they have their own or a different sense of place. As Mitchell et al. (1993) suggested, management actions may have more of an effect on locals or visitors with strong attachments. Thus park management may need to negotiate across these potentially different meanings of parks.

In summary, this research has considered how Acadia National Park is important to the sense of place of MDI. Future empirical research may be useful to consider how other types of protected areas are important to a regional sense of place. Understanding sense of place more empirically, as this research has attempted, is one step towards discovering how the integrity of important places, such as national parks can be maintained.

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APPENDIXES

APPENDIX A: PHASE I INTERVIEW TRANSCRIPT.

Introduction

This is a study about Mount Desert Island and its natural and cultural environment. I would like to learn more about what you think is important about MDI and why you think these things are important. Many communities are beginning to conduct this kind of study in order to both maintain the quality of life for residents and to maintain the communities' attractiveness to visitors.

Among other things, I am going to ask you to identify some places on MDI that you think are important in identifying the character of the island. I'm also going to show you some pictures of places on MDI and ask you to evaluate them. Please be as candid and forthcoming as you can in your responses. There are no "right" or "wrong" answers to these kinds of questions. Moreover your answers will be kept completely confidential.

You are one of a small number of MDI residents who are being asked to participate in the first phase of this study. Based on your responses, a questionnaire will be developed and mailed to a larger, representative sample of MDI residents later this summer.

Specifics of the Interview

This interview should last approximately one hour. The first section of the interview consists of a series of open ended questions. During this section, please feel free to elaborate on your answers as much or as little as you like. The second section of this interview consists of shorter close ended questions. Although your answers to the questions in the second section will be brief, you are welcome to make additional comments to these questions.

Recording of the Interview

With your consent I would like to tape record the first section of this interview. The purpose of this recording is to help me more accurately remember your answers to the questions. I will also be taking some handwritten notes as well.

General Questions

1. What is your current position/ title?
2. How long have you been in this position/ title?
3. How long have you been a resident of Mount Desert Island?
4. In what town do you reside?
5. Have you ever lived in other places or other parts of the Island?
6. Do you consider yourself more as a resident of the town in which you live, or a resident MDI as a whole?

The next part of the interview asks your opinions about places that define the character of MDI, or are otherwise important to MDI. Please think broadly about the island, including its natural and cultural environment.

1. First, think for a moment about MDI as a whole and the different places that make up the island. These could be natural places, historical places, places that are developed, area landmarks, or other places. Please tell me which places you feel are most important in defining the character of Mount Desert Island?
2. Another way to think of places that contribute to the island's identity is to think about pictures you would show to someone who has never visited MDI. Please describe the photographs you would take for this purpose. Please keep in mind that I'm not necessarily asking you about the most beautiful or scenic pictures of the island, but the pictures that would most show the island's character or identity. (Limit to 3)

"Photograph" 1

"Photograph" 2

"Photograph" 3

3. Keeping these "photographs" in mind, I'd like to ask you a couple questions about the photographs. (Ask for each "photograph" mentioned in Q - 2)

MDI? A. Is there something about this place, resource etc..... that makes it unique to

B. Do you think this place represents a way of life that is found on MDI?

C. What types of activities go on at this place?

D. How do you think this place is valuable or important to MDI residents?

E. Do you think there are important differences in opinion among residents about this place?

4. Next, I'd like you to think either about how these places could possibly change in the future. (Ask for each "photograph" mentioned in Q - 2)

A. Do you think this place is going to change?

B. Do you think the activities that go on at this place or the meaning of this place are changing or are going to change?

C. Is this a problem for the communities of MDI or for the character of MDI?

APPENDIX B: CONTACT LETTER MAILED TO PHASE I INTERVIEW
CANDIDATES

Nicole L. Ballinger
PO Box 81
Northeast Harbor, ME 04662

July 2, 1996

Dear _____:

I am a graduate student at the University of Vermont pursuing a degree in Natural Resource Planning. This summer I am working on a research project that investigates how Mount Desert Island's natural and cultural resources define the character of MDI, or are otherwise important to the residents of MDI. During the initial phase of this study, I am contacting a small number of island residents to participate in a structured interview. You were recommended to me by other residents as an individual who would be interested in this type of study.

Among other things, I would like to ask you to identify some places on MDI that you think are important in identifying the character of the island. In addition, I will ask you to evaluate some specific places on the island. The results of these interviews will help me develop a questionnaire which will be mailed to a larger, representative sample of MDI residents later this summer. The goal of this study is understand how attitudes and values towards natural and cultural resources can be incorporated into planning, so as to maintain the quality of life for residents and maintain the island's attractiveness to visitors.

This interview should last approximately one hour, and your answers to will be kept completely confidential. If you would like to set up an appointment, I can be reached at the above address or at home at 276-4037. I can also be reached at Acadia National Park, where I am working part-time this summer. The phone number there is 288-5463.

Your participation in this interview will be greatly appreciated. I will be contacting you by phone during the week of July 7th. Thank you for your time in this matter.

Regards,

Nicole L. Ballinger

APPENDIX C: MATRIX OF RESPONSES TO QUESTION 1, PHASE I.

The following matrix presents the findings to question one of the Phase 1 interviews. The matrix is organized into two general place types (bold in capitals), and followed by place sub-types (bold). Specific places mentioned are in normal print. The number of times the place was mentioned is in brackets.

[45] PLACES UNDER THE JURISDICTION OF ACADIA NATIONAL PARK:

[18] Ocean & Shore

- [9] Ocean Drive area
- [3] Ocean Drive itself
- [2] Sand Beach
- [2] Thunder Hole
- [1] Great Head
- [1] Hunter's Beach
- [3] Cliffs to Ocean/ Mountains to Sea (general)
- [2] Somes Sound
- [2] Bays and Estuaries
- [1] Seawall
- [1] Wonderland

[8] Fresh Water Ponds

- [7] Great Ponds
- [2] Jordan Pond
- [2] Long Pond
- [1] Eagle Lake
- [1] Echo Lake
- [1] Great Ponds in general
- [1] Hadlock Pond

[7] Trails or Carriage Roads

- [4] Hiking Trails
- [3] Carriage Roads

[7] Mountain Interior

- [3] Cadillac Mountain
- [2] Bare mountain summits
- [2] General Vegetation of Island
- [1] Wooded Slopes

[3] Vistas and Panoramas

- [2] Vistas to Ocean and Islands
- [1] Vistas of Mountains

[3] Built Places

- [2] Jordan Pond House
- [1] Park Loop Road

[32] PLACES OUTSIDE THE JURISDICTION OF ACADIA NATIONAL PARK.

[21] Villages or Harbors

- [5] Bar Harbor
- [4] Bass Harbor
- [3] Southwest Harbor
- [3] Northeast Harbor
- [3] Bernard
- [2] Tremont
- [1] Seal Harbor

[9] Specific Places in Villages of Harbors

- [3] Stores
 - [1] Don's Shop 'n Save
 - [1] Store Like Fernaulds
 - [1] Salibury Farms Hardware Store
- [2] Boat Builders
 - [2] Hinckley's
 - [1] Ralph Stanley's
- [2] Hotels/Motels
 - [1] The Moorings
 - [1] The Claremont Hotel
- [1] Carroll's Hill
- [1] Criterion Theater

[2] Natural Areas

- [1] Shore Path in Bar Harbor
- [1] Somes Pond in Somesville

APPENDIX D: MATRIX OF RESPONSES TO QUESTION 2, PHASE I.

The following matrix presents the results to question two and question three (probe questions) of the Phase 1 interviews. The matrix is organized into two general place types (bold in capitals), and followed by place sub-types (bold). Specific places mentioned are in normal print. The number of times the place was mentioned is in brackets. A summary of responses to question three are in italics below each place.

[22] PLACES UNDER THE JURISDICTION OF ACADIA NATIONAL PARK .

[7] Ocean & Shore

- [2] Head of Somes Sound
 - unique natural phenomenon*
 - defines MDI*
 - aesthetic value*
 - cultural history of associated harbors*
- [2] Cliffs and Ocean, general
 - historical value*
 - aesthetic value*
 - ecological importance*
 - economic value, draws tourists*
- [1] Otter Cliffs
 - psychological benefit*
 - aesthetic value*
- [1] Seawall
 - unique natural phenomenon*
- [1] Sand Beach & Great Head
 - aesthetic value, contrast of land forms*

[7] Mountains

- [2] Bare Mountain summits
 - ecological/geological importance*
- [2] Cadillac Mountain
 - aesthetic value of the view*
 - economic values, draws tourists*
 - cultural/historical value, illustrates that MDI is an island & is different*
 - negative values, not take picture there - too tourist oriented*
- [1] Sargeant Mountain over Gilmore Bog
 - captures the sense of the landscape*
- [1] St. Sauveur & Somes Sound
 - defines the island*
- [1] Cliff w/ ferns at base
 - aesthetic value*
 - ecological value*

[4] Vistas & Panoramas

- [2] Profile of Mountains

aesthetic value

defines MDI & the region

unique phenomenon of mountains close to sea

historical/cultural value

natural value, not developed

defines home

draws tourists

mystery and allure of the place

- [2] Vistas of Islands

aesthetic value

defines MDI & the region

defines home

[2] Trails/Roads

- [1] Carriage Roads

psychological value, solitude

- [1] Hiking Trails

unique value, because there are so many

recreational value

cultural/historical value

value because there is access, public use

[1] Fresh Water

- [1] Little Hunter's Brook or other small stream/brook

[1] Built Places

- [1] Bass Harbor Lighthouse

aesthetic value

cultural/historical value

type of icon, landmark

[19] PLACES OUTSIDE THE JURISDICTION OF ACADIA NATIONAL PARK.

[11] Harbors

- [4] Southwest Harbor
 - juxtaposition of economic traditions (MDI residents) recreational values (summer elite)*
 - demonstrates diversity of social structure*
 - lifestyle of fishermen (historical/cultural values)*
 - diversity of activities - economic, tourist, year-round community*
 - economic opportunities -- working harbor, boat-building*
- [3] Northeast Harbor
 - show dichotomy of island - tourists in summer, deserted in winter*
 - vital as a harbor (economic & cultural value)*
 - economic value of tourist shops*
- [3] Bass Harbor
 - economic*
 - cultural/historical value*
- - [1] Fishing Boats
 - economic and cultural/historical value*
- - [1] Lobster boats
 - historical value, romantic and traditional image of the Maine coast*
 - economic - working waterfront*
 - cultural, social value - type of lifestyle*
- [1] Bar Harbor
 - tourist economy*
 - historic summer colony*

[8] Specific places in Villages or Harbors

- [4] Bar Harbor
 - - [1] Mt. Desert St.
 - historical value of architecture*
 - cultural value - shows sense of community stability*
 - - [1] West St. (houses, library, YMCA)
 - historical value of architecture*
 - cultural value - shows sense of community stability*
 - - [1] Aerial photo showing juxtaposition of town & harbor
 - shows pattern of historical settlement and small-town feel*
 - - [1] Jackson Laboratory
 - shows diversity of economic opportunities, more than just tourism*
- [2] Northeast Harbor
 - - [1] Winter on Main Street
 - deserted place, no activity, shows the winter character of the island*
 - - [1] Summer on Main Street
 - lots of activity, tourists, wealthy people, shows the summer character of the island*
- [2] Southwest Harbor
 - - [1] Video of houses, streets, school, harbor, seawall
 - show how economic and social changes have taken place in village*
 - - [1] Hinckley Boatyard
 - diversity of economic opportunities, more than just tourism*

APPENDIX E: PHASE II QUESTIONNAIRE



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Acadia National Park
P.O. Box 177
Bar Harbor, Maine 04609

August 9, 1996

Dear Mount Desert Island Resident:

I am writing to ask your help. Acadia National Park is planning for the future. As part of this planning process, we would like to involve residents of Mount Desert Island. I would like to ask you to please complete the enclosed questionnaire.

You are one of a small number of residents of Mount Desert Island who has been selected to participate in this effort. Thus, it is important that each questionnaire be completed and returned. Most of the questions concern the carriage roads in the park and other important park issues. When you complete the questionnaire, please place the questionnaire in the mail. The back cover of the booklet is self addressed, and postage has been prepaid.

Many of the questions ask for your opinions about park management issues. Please be as thoughtful about these questions as possible. Experience shows that it may take about 30 minutes or more to complete the questionnaire. However, your answers are very important to us in determining how Acadia National Park should be managed. I hope you will find many of the questions interesting.

You may be assured of complete confidentiality. The questionnaire booklet has an identification number for mailing purposes only. This is so we may check your name off the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire or otherwise associated with it.

This survey has been planned and conducted in cooperation with the University of Vermont. The University will compile and report results to Acadia National Park so this information can be used directly in park planning and management.

Thank you for your assistance.

Sincerely,

Paul Haertel
Superintendent

Part II. The second part of this questionnaire concerns Acadia National Park and Mount Desert Island in general. Among other things, we would like to know what is important about Acadia National Park to people who live on Mount Desert Island.

Q-20. One way to think about the potential importance of Acadia National Park is represented by the following 10 potential values that the Park might serve. We would like to know how important you feel these values are. Please assume you have 100 "points" of importance to divide among the following 10 potential values of Acadia National Park. Please indicate in the blanks provided the number of "points" of importance you would assign to each of these potential values. The number of points you assign to a value indicates how important you feel it is. If one or more of the values are not at all important to you, you may enter a zero. Please read all of the 10 potential values before you begin to answer. (Enter a number of points for each value in the blanks provided. The total number of points you enter must equal 100.)

Number of "Points" of Importance

- a. Recreation value (the opportunity to participate in outdoor recreation activities) _____
- b. Ecological value (the opportunity to protect nature in order to ensure human well-being and survival) _____
- c. Historical/cultural value (the opportunity to preserve traditions and past ways of life). _____
- d. Aesthetic value (the opportunity to enjoy the natural beauty of this area) _____
- e. Economic value (the opportunity to earn a living through tourism and other means) _____
- f. Moral/ethical value (the opportunity to exercise a moral/ethical obligation to respect and protect nature and other living things) _____
- g. Therapeutic value (the opportunity to maintain or regain physical health and/or mental well-being through contact with nature) _____
- h. Educational/scientific value (the opportunity to study and learn about nature) _____
- i. Intellectual value (the opportunity to think creatively and be inspired by nature) _____
- j. Spiritual value (the opportunity to obtain spiritual meaning through contact with nature) _____

Total = _____ 100 points

Q-21. Next, we would like you to evaluate 6 photographs of places within Acadia National Park. (Please look at Enclosure B.) Please look at these 6 photographs and answer the following questions.

a. How well does each photograph represent the "character" of 1) Acadia National Park and 2) Mount Desert Island? Please note that you are not necessarily being asked to rate the scenic beauty of each photograph, but rather how well each photograph shows a type of place that is important in defining the character of the Park and MDI as a whole. (Circle one number under "Acadia National Park" and one number under "Mount Desert Island" for each photograph)

	How well does each photo represent the character of Acadia National Park?						How well does each photo represent the character of Mount Desert Island?					
	Not At All	Slightly	Somewhat	Moderately	Very Much	Extremely	Not At All	Slightly	Somewhat	Moderately	Very Much	Extremely
Photo 1	1	2	3	4	5	6	1	2	3	4	5	6
Photo 2	1	2	3	4	5	6	1	2	3	4	5	6
Photo 3	1	2	3	4	5	6	1	2	3	4	5	6
Photo 4	1	2	3	4	5	6	1	2	3	4	5	6
Photo 5	1	2	3	4	5	6	1	2	3	4	5	6
Photo 6	1	2	3	4	5	6	1	2	3	4	5	6

b. To what extent does the type of place represented in each photograph provide for each of the 10 values you considered in Q-20? To answer this question, please assume you have 100 "points" of importance to divide among the 10 values for each photograph. For each photograph, please indicate in the blanks provided the number of "points" of importance that you would assign to each value. The number of points you assign to a value indicates how well you think each photograph provides for that value. If the type of place represented by a photograph does not provide for one or more of the values, you may enter a zero in the appropriate blank(s). (For each photograph, enter a number of points for each value in the column of blanks provided. The total number of points you enter for each photograph must equal 100.)

Value	Photo Number					
	1	2	3	4	5	6
1. Recreation. . .	_____	_____	_____	_____	_____	_____
2. Ecological. . .	_____	_____	_____	_____	_____	_____
3. Historical/cultural. .	_____	_____	_____	_____	_____	_____
4. Aesthetic . . .	_____	_____	_____	_____	_____	_____
5. Economic . . .	_____	_____	_____	_____	_____	_____
6. Moral/ethical . . .	_____	_____	_____	_____	_____	_____
7. Therapeutic . . .	_____	_____	_____	_____	_____	_____
8. Educational/scientific .	_____	_____	_____	_____	_____	_____
9. Intellectual . . .	_____	_____	_____	_____	_____	_____
10. Spiritual . . .	_____	_____	_____	_____	_____	_____
	100	100	100	100	100	100

Q-22. Finally, please indicate the extent to which you agree or disagree with each of the following statements. (Circle one number for each statement.)

	Level of Agreement				
	Strongly Agree	Agree	Neutral/ No Opinion	Disagree	Strongly Disagree
a. The natural areas within Acadia National Park help to maintain the character of MDI	1	2	3	4	5
b. The historic places within Acadia National Park help to maintain the character of MDI	1	2	3	4	5
c. Developed places, such as the town and village centers of MDI are more important than natural areas in defining the character of MDI	1	2	3	4	5
d. The existence of Acadia National Park improves the quality of life for MDI residents	1	2	3	4	5

	Level of Agreement				
	Strongly Agree	Agree	Neutral/ No Opinion	Disagree	Strongly Disagree
e. Acadia National Park is important in maintaining the character of MDI	1	2	3	4	5
f. The presence of Acadia National Park is one of the major reasons I choose to live on MDI	1	2	3	4	5
g. The natural areas on MDI are really important to me	1	2	3	4	5
h. I identify more closely with the town or village I live in than with MDI in general	1	2	3	4	5



Photo 1



Photo 2

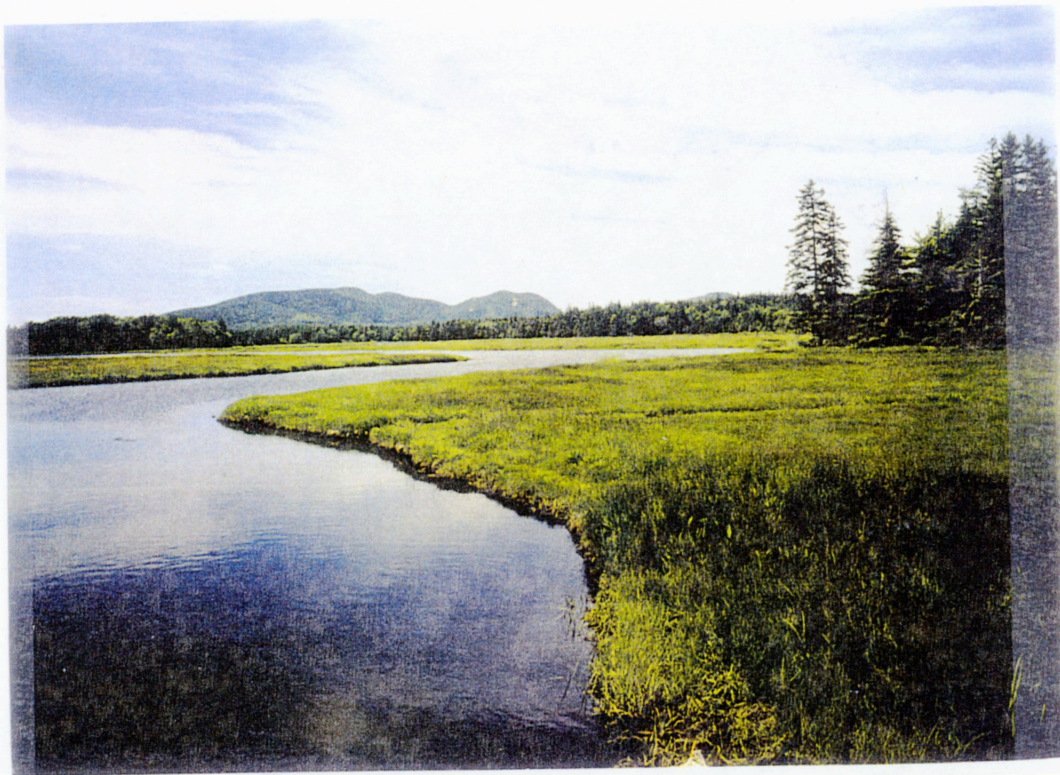


Photo 3



Photo 4



Photo 5



Photo 6