

## MEASURING HUMAN/PLACE BONDS TO ASSIST PUBLIC LAND MANAGEMENT

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### DETAILED ABSTRACT

Public land managers must consider a broad range of public input in developing effective and equitable land use projects. There is growing agreement that increased understanding of public views and desires will enhance honest and meaningful involvement of the public and contribute to more balanced, integrated and equitable management decisions (Kruger 2003). The challenges are to organize understanding of widely varied interests in meaningful ways and develop the best balance between a consideration of each individual's views and that of the aggregate of the affected populations.

Organized stakeholder groups are often the most common means available to the public to articulate their interests in project planning situations - through lobbying, organized letter-writing, attending public meetings, or in collaborative decision-making processes. However, individual needs may be poorly represented by stakeholder groups. Special interest stakeholder groups commonly focus on a narrow set of objectives, while their constituents are unique individuals with varied concerns, values, and life stages. Many public planning processes fail to find solutions to contentious issues, not only because stakeholder groups struggle against each other, but also because these groups cannot agree internally on acceptable management options (e.g., Marston 2001; Moseley 2001; Snow 2001). This chapter argues that an examination of human / place bonds at an individual level through survey research and market segmentation analysis clarifies mutual interests among participants in land use decisions. Results of market segmentation analysis reveal alliances within communities that reflect powerful, latent expectations and demands that enable more creative and cooperative solutions to contentious wildland planning problems.

### BACKGROUND

There is growing evidence that people's bonds with public places influence their views about conflict and appropriate management solutions in natural resource management decisions (e.g., Brown, Reed, and Harris, 2002; Cheng, Kruger, and Daniels, 2003; Davenport and Anderson, 2005). Low and Altman (1992) offer a conceptual framework compiled from a number of authors, across many disciplines, engaged in developing understanding of humans and place.

They use the term “place attachment” for the concept of human ties to place (Altman and Low 1992). Hinting at the numerous perspectives on the concept of humans and place, they say that place attachment “subsumes or is subsumed by” other terms in the literature including topophilia, sense of place, and place identity, among others. Their view of place attachment involves an interaction between practice, cognitive, and affective components of expression, but they say that studies (as well as the term, itself) tend to emphasize the affective, emotional component. They describe the practice component as actions and behavior, the cognitive component to include thought, knowledge and beliefs, and the affective component as emotional attachment.

The human / place bond research approach is based on the recognition that people’s ties with public wildlands are difficult to observe directly, are expressed in multiple ways, and are related to attitudes about management of those places. As a latent concept, researchers typically rely on measuring it indirectly through the use of indicators (Watson, Glaspell, Christensen, Lachapelle, Sahanatien, and Gertsch 2007). The choice of indicators thus, becomes critical, and in this approach, this choice is guided by an applied goal to improve the natural resources management decisions. Certainly, the chosen indicators should be easy to monitor, valid in their representation of latent concepts, have reliable sets of measures based in natural resource management research, and be related to opinions about management.

To provide a robust set of measures this approach uses three general types of indicators in quantitative surveys to assess human / place bonds. These three types of indicators fit the above criteria for applied research and represent the behavioral, cognitive, and affective forms of expression in Low and Altman’s framework. The three types of indicators include: 1) on-site activity participation, measuring the behavioral component; 2) assigned values, representing cognitive beliefs; and 3) place attachment representing the affective component. These concepts have all been previously considered in research applied to recreation and natural resource management and methods have been established for their measurement. This approach is unique in combining these three concepts as the primary indicators of human / place bonds, and in segmenting the public based on these bonds for the purpose of developing understanding about public opinions in contentious planning decisions. Combining these indicators offers a robust and diverse set of measures, each with a history of application in natural resource management studies, to better reflect the multidimensional nature of human / place bonds than a traditional single-focus method.

Segmentation of the public, using a marketing research-type cluster analysis (Parasuraman 1986), provides a potentially powerful method for identifying and understanding important concerns of stakeholder representatives as well as their constituents, based on human / place bonds with public wildland places. Applying this form of market-based research will allow managers to consider management options that protect and enhance the deepest and most abiding elements of people’s interests regarding public lands. For example, a collaborative planning effort for motorized recreation use may invite a group of stakeholders to the planning table that includes ‘motorized recreation users,’ ‘nonmotorized recreationists,’ and ‘local homeowners.’ A typical local resident, however, might easily fit all of those categories to some degree, with no single stakeholder group adequately representing their interests or concerns. Planners using a more sophisticated market segmentation methodology might find that a local community includes several different types of motorized users, such as young motorcycle riders and family-

oriented ATV'ers, each with different motivations, use patterns, and concerns about management. They might also find that some homeowners in the area ride horses and are concerned about the safety of encounters, while the same homeowners also participate in motorized recreation and have concerns about maintaining access to the public lands in their backyard.

## APPLICATION

Two case studies illustrate the application of this approach: The planning process for the Situk River on the Tongass National Forest in Alaska, and the travel management planning process on for the Trapper-Bunkhouse area on the Bitterroot National Forest in Montana. Each of the case study planning situations included controversial issues about specific recreation activities on local National Forest Ranger Districts. The market segmentation approach applied to the Situk and Darby case studies identified five and six segments (population subgroups), respectively, that reflected like-minded or like-valued individuals within their geographic communities of Yakutat, AK and Darby, MT. Each of these subsets of the overall resident population displayed different human / place bonds with local public lands and each had statistically significant differences in concerns about conditions and perceptions of appropriate management. In Yakutat, the research showed differences of opinions between two sport fishing groups on previously unrecognized desired fishing locations; and in Darby differences across segments hinged not on motorized versus non-motorized use, but on user-created routes. In both cases, attitudes about appropriate management options were more directly related to multiple types of human / place bonds than to activity participation alone.

In the Yakutat case study it became apparent that the human / place bonds between local residents and their special places on public lands are imbedded in history and culture, and include perspectives involving identity, tradition, subsistence, and livelihood. The issues that are important to these local residents differ from those that are important to most recreation visitors to the Situk (Christensen, Watson, and Whittaker 2004). In the Darby case subsistence and livelihood issues were less important, but recreational opportunities and traditions of public land uses pervaded the experiences of both long- and short-term residents.

In both cases those community segments showing intense bonds cared more about the overall condition of these public places, favoring stewardship-oriented management even at the expense of their own freedom to recreate. Identifying management solutions based only on the views of participants versus non-participants in recreational activities would have failed to account for the diverse concerns and opinions across the local community. Community segments that participate in key activities, but also have bonds linked to preferences other than activity participation, adopt different attitudes toward management. The segments having more complex and intense bonds generally indicate a stronger land ethic or stewardship orientation than segments whose bonds are based primarily on only one or two specific types of bond expression, particularly participation in the controversial activity and/or functional place attachment.

These "high intensity" place-bonded groups might represent managers' best allies in resource protection. They appear to have the most realistic perceptions of current conditions, care deeply

about the place, and are willing to sacrifice personal benefit for the greater public good. Residents with bonds more focused on a single activity seem to care more about the space as a backdrop providing the opportunity needed for their activities.

## DISCUSSION

A typical planning process would consider all sport anglers (in the Yakutat setting) or all motorized users (in the Darby setting) as one stakeholder group with a common set of interests and concerns. Yet in both case study communities, the human / place bond research approach revealed multiple community segments on each side of a seemingly dichotomous controversy. Each of these communities of like-minded/like-valued individuals showed different types and intensities of human / place bonds with their local public lands, concerns about the resource, and opinions about management solutions. It presents managers with a far more detailed and nuanced view of public expectations and potential community-level alliances that could support or oppose a given management activity.

The case studies suggest the utility of the human / place bond approach to identify distinct communities of interest within geographic communities and to provide meaningful insight about public opinions in contentious natural resource planning situations. It is important, however, to interpret the results about these community divisions within the limitations of the research methods and our ability to simplify complex situations. The community segments that are identified do not represent homogeneous groups with consistently held experiences and opinions. Rather, this research identifies 'clusters' of the population with characteristics more in common than with other members of the population. The borders of these clusters are imprecise and porous - the segmentation results offer insight about the structure of the community, but membership and characteristics of these groups should not be interpreted too literally. These segments are not stakeholder groups, with tightly held interests, but rather 'clusters' of interests with more fuzzy, ill-defined, boundaries between groups. The segmentation results are not the ultimate representation of how people feel about a place and its management, but they do offer us insight and nuanced understanding about the structure of these relationships.

Understanding the differing orientations and structures of community segments does not answer the question for managers about how to deal with this knowledge in resource allocation decisions. This research does not suggest that it would be appropriate to prioritize segment desires based on stewardship orientation or ignore those segments with low-intensity bonds. Wondolleck and Yaffee (2000) suggest that more effectively involving the public in land use planning is not only important for developing future community capacity for problem solving, but can also shape the values that people assign to natural resources and foster a sense of responsibility toward the public good, thereby improving future community capacity to make better decisions for the overall public good. Managers may need to make a special effort to reach out to and foster relationships with certain community segments in an attempt to improve their stewardship orientation based on the nature of their bonds with specific public places. For example, opportunities might exist to demonstrate appropriate recreational behaviors or provide information to segments that care deeply about the place but may lack the first-hand experience to form realistic expectations about conditions and management concerns. Managers might also

seek to build alliances between segments that are more likely to put ecosystem health in front of personal agendas, and use those alliances to apply peer pressure to segments less inclined to exhibit stewardship or retain a land ethic.

## CONCLUSION

A market segmentation approach supplies a relatively underutilized and replicable tool for public wildland planners. The information from a human / place bond study could be useful during the planning process to managers, organized stakeholders, and the general public to improve understanding of local views during project planning efforts. This research could help break down inaccurate stereotypes that lead to planning gridlock by identifying more moderate stances within traditional stakeholder groups along with common views and activities shared between seemingly opposed groups.

All public places cannot serve all purposes to all people so it is necessary to allocate uses at least partially based on the compatibility with the public purpose of the place and the potential for conflict with other legitimate uses. This type of information may help guide managers to make those decisions by developing understanding of how important specific places are to different groups of citizens, why they are important, and what would be required of possible substitute locations. It provides a clearer view of the major types of local interests in the population, as well as shedding light on some of the characteristics of citizens holding relatively extreme views compared to those with moderate stances that are more likely to reach agreement. The most appropriate time to implement the type of approach described here would be prior to a formal planning process or community collaborative effort. This would allow subsequent deliberations to possess a more objective basis for determining the major types of local stakeholders that should be represented, at a minimum, during a collaborative process. The information would serve as a complement to other supporting documentation usually gathered by other specialists during early phases of project planning. The results may also be used to assess the overall equity of resource allocation on the landscape beyond each small scale planning project. Further, successful application of segmentation in public wildland planning can encourage productive cooperation between social scientists and managers such that other social science tools supporting management assessments and evaluations might become more broadly applied.

## REFERENCES

- Altman, I., Low, S. M., eds. (1992). *Place Attachment*. New York: Plenum Press, 310 p.
- Brown, G. G., Reed, P., Harris, C. C. (2002). Testing a place-based theory for environmental evaluation: an Alaska case study. *Applied Geography* 22, 49-76.
- Cheng, A. S., Kruger, L. E., Daniels, S. E. (2003). "Place" as an integrating concept in natural resource politics: Propositions for a social science research agenda. *Society and Natural Resources* 16, 87-104.

- Christensen, N., Watson, A., Whittaker, D. (2004). Situk River 2003 Recreation Visitor Study. Missoula, MT: USDA Forest Service, Aldo Leopold Wilderness Research Institute, 262 p.
- Davenport, M. A., Anderson, D. H. (2005). Getting from sense of place to place-based management: an Interpretive investigation of place meanings and perceptions of landscape change. *Society and Natural Resources* 18, 625-641.
- Kruger, L. E. (2003). A Focus on community-forest relationships. *In: Understanding Community-Forest Relations*. Portland, OR: US Forest Service, Pacific Northwest Research Station. General Technical Report PNW-GTR-566, pp. 1-6.
- Low, S. M., Altman, I. (1992). Place attachment: a Conceptual inquiry. *In: Altman, I. and S. Low, eds. Place Attachment*. New York: Plenum Press, pp. 1-12.
- Marston, E. (2001). The Quincy Library Group: a Divisive attempt at peace. *In: Brick, P., D. Snow, and S. Van de Wetering, eds. Across the Great Divide*. Washington DC: Island Press, pp. 79-90.
- Moseley, C. (2001). The Applegate partnership: Innovation in crisis. *In: Brick, P., D. Snow, and S. Van de Wetering, eds. Across the Great Divide*. Washington DC: Island Press, pp. 102-111.
- Parasuraman, A. (1986). *Marketing Research*. Reading, MA: Addison-Wesley Publishing Company, 831 p.
- Snow, D. (2001). Montana's Clark Fork: a New story for a hardworking river. *In: Brick, P., D. Snow, and S. Van de Wetering, eds. Across the Great Divide*. Washington DC: Island Press, pp. 91-101.
- Watson, A., Glaspell, B., Christensen, N., Lachapelle, P., Sahanatien, V., and Gertsch, F. (2007). Giving voice to wildlands visitors: Selecting indicators to protect and sustain experiences in the eastern Arctic of Nunavut. *Environmental Management* 40, 880-888.
- Wondolleck, J. M., Yaffee, S. L. (2000). *Making Collaboration Work: Lessons from Innovation in Natural Resource Management*. Washington DC: Island Press, 277 p.