

## What Makes a Place Special? Interpretation of Written Survey Responses in Natural Resource Planning

Herbert W. Schroeder<sup>1</sup>

**Abstract.**—In an open-ended, written survey, I asked residents and visitors of the Black River area in northern Michigan to identify and describe places that were special to them. I conducted a thematic interpretation of the responses, using a set of indexing and cross-referencing macros that I wrote in Word Perfect 5.1. The themes that emerged included the natural beauty of the area, its quiet and uncrowded character, the history of the harbor and fishing community, and the high quality of recreation facilities. The Ottawa National Forest used this information in developing a plan for future management of the Black River area.

The decisions made by natural resource managers have wide-ranging effects on a variety of features and processes of ecosystems. Not least among these effects are those on the human beings who live in and visit the areas being managed. These human impacts go beyond the biological and physical domains to include the thoughts, meanings, and feelings associated with places and areas in people's minds. Understanding these impacts is not always easy, but it is a necessary part of ecosystem management (Mitchell *et al.* 1993, Schroeder 1996a, Williams *et al.* 1992). Even the best intentioned and most scientifically well-founded ecosystem management efforts can be brought to a standstill by controversy, if people believe that their deeply held feelings and values are threatened by management actions.

Managers can begin to gain understanding of people's feelings and values through informal day-to-day interaction with the public, as well as through more formal public involvement activities. Research studies carried out by social scientists in cooperation with managers can provide additional valuable information for resource planning. Open-ended, qualitative approaches to data gathering and analysis can be particularly useful, given the variety and the complexity of meanings and values that can be associated with particular places. This paper

summarizes a qualitative study that I conducted with the Ottawa National Forest as part of their opportunity area analysis for the Black River area of northern Michigan. It provides one example of a research approach that can be used to help forest managers learn about the human meanings and values that will be impacted by their decisions.

The Black River area, located on the Lake Superior shore of Michigan's Upper Peninsula, includes a National Scenic River, a Scenic Byway, and a National Scenic Trail. There are several large waterfalls on the river, as well as some outstanding groves of hardwoods, pine, and old-growth hemlock. Recreation facilities include a campground, a picnic area, and a rustic, historic harbor. Through both personal experience and interaction with visitors and residents, the staff of the Ottawa National Forest was aware that the Black River had a special character and meaning for many people. The Black River Opportunity Area planning team particularly wanted to include public values and feelings about the area in the planning process. Therefore, they invited me to help them with a research study to find out more about people's attachment to the Black River area.

### DATA AND METHODOLOGY

The research approach I used was based on an earlier study I had conducted at the Morton Arboretum near Chicago (Schroeder 1991). The first step was to design a one-page flier announcing the Black River "Special Places" Study. The flier briefly described the purpose of the study and invited anyone who was

<sup>1</sup> USDA Forest Service, North Central Research Station, Forestry Sciences Laboratory, 845 Chicago Avenue, Suite 225, Evanston, IL 60202. E-mail: [hschroeder@fs.fed.us](mailto:hschroeder@fs.fed.us)

interested in participating to contact me. The Ottawa National Forest planning team mailed the flier to people on their public involvement mailing list for the Black River Opportunity Area. The flier was also posted in Forest Service offices, local businesses, and recreation sites where local residents and visitors to the Black River area could pick it up.

Fifty-five people responded to the flier by sending me their names and addresses. I sent these people instructions for writing about their special places. The response format was designed to be as open as possible, so that people could describe their experiences in their own words. The instructions asked the participants to think of from one to four places within the Black River area that were special to them; to describe these places; and to explain what thoughts, feelings, memories, and associations came to mind about these places. Twenty-three people sent me descriptions of their special places. These respondents included about equal numbers of residents and visitors, a few of whom had lived or vacationed in the Black River area since childhood.

The process I followed for interpreting and summarizing the responses involved several steps. First, I typed all of the survey responses into a Word Perfect 5.1 document on an IBM compatible PC. Then I divided each response into smaller units of text. Each text unit consisted of one or more phrases or sentences that expressed a more or less distinct idea or theme. I read each text unit carefully and in a separate document began developing an outline of the general themes and concepts that were being mentioned. As I read through the responses, I built upon the initial outline by adding topics and dividing general topics into more detailed subtopics. I marked each text unit with codes to indicate which topics from the outline applied to it. My goal was to have each unit of text linked to at least one entry in the topic outline.

When I had finished reading, outlining, and cross-referencing the text units to the topics in the outline, I tallied the frequencies with which each topic appeared in the survey responses. My purpose in doing this was not to quantify the data in any precise way, but simply to give myself an idea of which topics I was finding most frequently across respondents. Then I began to write a report of the survey responses, including the most frequently mentioned topics

as well as any other information that seemed important or useful for the planning team to have. In particular, I included in the report any specific problems or recommendations for future management of the Black River area that the respondents mentioned. In writing the report, I referred back to the original text to find quotations illustrating each of the topics I presented.

To facilitate the steps of the analysis described above, I wrote a set of word processing macros<sup>2</sup> to perform the required tasks of indexing, cross-referencing, searching, and tallying the frequency with which topics appeared in the text. Text units were delimited by special characters in the word processing document, and topic codes were inserted as footnotes at the beginning of each text unit. The word processor's search function could then be used to go from the outline back to the original text and retrieve instances of text units relating to each topic or subtopic. Macros for browsing the outline and inserting topic codes into the text were set up as "keyboard macros," so that they could be invoked quickly with single keystrokes. Additional macros for tallying and displaying frequencies of topic codes in the text took advantage of the word processor's built-in sorting and tabular math capabilities.

There were several distinct advantages to using word-processing macros to carry out the outlining and coding process. First, it enabled me to carry out all the stages of data entry, interpretation, coding, and report writing entirely within the word-processing software. The alternative would have been to enter the data in a word processor, export it to a commercial text analysis package for interpretation and coding, and then return to the word processor to write the report. The full editing and search capabilities of the word processor were available to me at all times, which meant that I could edit, correct, and reformat the text easily, even after beginning the interpretation phase. This gave me considerable flexibility, for example, in working with text units. I did not have to define the text units in a fixed way (e.g., as lines, sentences, or paragraphs) before beginning my analysis. I could easily redefine,

---

<sup>2</sup> A macro is a computer program written in a special programming language designed to automate sequences of word processor operations and commands.

split, and merge text units as needed while in the midst of the analysis. In this way, the text units could more naturally conform to the way meanings were expressed in the text. In some cases this allowed for a more precise or "fine-grained" coding of the text. For example, if a sentence was found to contain two distinct ideas or themes, then the sentence could be broken into two text units, one for each theme, rather than having to assign the codes for both themes to the entire sentence.

As I gained experience with the analysis process, I was able to tailor the macros to suit my own particular style of coding. This enabled me to assign topic codes rapidly to text units with a minimum of keystrokes. Also, I could design the macros to provide precisely the analytic features that I wanted for the type of data I was analyzing. For example, I set up the macros so that I could tally the frequency of topics at any of three levels—by text units, by place descriptions, or by survey respondents. When searching for and tallying topics, I programmed the macros so that I could easily switch between hierarchical and non-hierarchical approaches.<sup>3</sup>

The primary disadvantage in this approach, of course, was the extra time and work it took to write, test, and debug the macros. This was not a simple task, and if I had used these macros only for this one project, it would probably not have been worth the effort. Since I have been able to use them for several other similar studies, however, I feel that the investment has been more than repaid. Thus, I would recommend that researchers who have some facility in computer programming consider using the powerful macro languages included in many word processing packages as a tool for carrying out text analysis.

## RESULTS AND DISCUSSION

In this section I will give a brief description of the most important findings of this study,

---

<sup>3</sup> In a hierarchical approach, each occurrence of a subtopic in the text also counts as an occurrence of every "parent" topic above it in the hierarchy. For example, an occurrence of the topic "conifers" would also count as an occurrence of the more general topics "trees and forests" and "vegetation." In a non-hierarchical approach, the parent topics are counted only if they are explicitly coded to the text unit.

relating to the meanings, experiences, and values that the survey respondents associated with the Black River area. A more detailed account of the survey responses can be found in Schroeder (1996b).

First of all, it was immediately clear that these people have strong positive feelings for the Black River area. They used words like "great," "fantastic," "marvelous," and "wonderful" to describe the river and its surroundings. Three people went so far as to call the Black River area a "heaven" or a "paradise." Some people said that they felt grateful for being able to visit or live in a place like the Black River area. One resident said simply, "Living here is a privilege and blessing."

Beauty was one of the qualities of the Black River area that was mentioned most often. One resident of the area wrote, "The pleasure I get from living within and sharing a place of beauty that is my home is hard to describe." Along with natural beauty, people also described a sense of serenity or peace. For example, one person wrote, "It is so very quiet and relaxing. To walk the beach gives a person a very peaceful feeling." Many people attributed the beauty and serenity of the Black River to its natural and undeveloped condition. They referred to the rustic, primitive character of the area and its relative isolation. One person wrote, "It is beautiful and the feeling of wilderness lakeshore is great." Several other people also used the word "wilderness" to describe the area. Even with the developed recreation sites, trails, and other users in the area, the Black River is not crowded and people can find opportunities for solitude and privacy.

Other aspects of the natural character of the area that people wrote about were its pristine quality, the clean air, and especially the crystal-clear water of the lake. People also wrote about the abundance of natural features—the diversity, uniqueness, and rarity of the plants, animals, and geology of the area. For some people, the beauty of these natural features evokes powerful feelings. One person said that his first hike on the North Country Trail was such a beautiful experience that it gave him chills down his spine. The water rushing over the waterfalls gives a sense of force and energy that one person referred to as "mesmerizing." Another person said that the grandeur of the old-growth hemlocks gave a spiritual sense of the "majesty of nature and the minuteness of man."

In addition to the natural features of the Black River area, the people there also contribute to its specialness. The Black River is a friendly place, and people enjoy meeting and talking to other visitors and to the people who live and work in the area. One person wrote, "I have met a lot of good people down at the bottom of the falls in the 35 years I have fished here." The history of the area as a commercial fishing community is also important, especially for those people whose families were a part of this history. Two people in particular wrote detailed reminiscences of their childhood experiences and of their parents' and grandparents' roles in the history of the harbor.

Some people recalled difficulties or hardships of the past, and elements of difficulty and danger still exist. The rougher elements of the Black River area include the strong winds on the lake and high water over the waterfalls at certain times of year. One person wrote about a bear that had torn off the steps of her cabin and part of her porch. But these dangers and difficulties don't seem to detract from people's feelings for the area. If anything, they evoke a sense of respect. The only feature of the Black River area that was described in consistently negative terms was the black flies.

People who have lived in the Black River area for a long time have seen many changes take place. Some of these changes they experience as positive, such as improvements in the harbor facilities, docks, and access to the waterfalls. Some changes they experience as negative—one person complained about the intrusion of the campground into what had been a favorite wooded area, and another was concerned about the increasing traffic on Black River Road. But, generally, the people who participated in this survey seem to view human influence and management as beneficial to the Black River area. People praised the high quality of the construction, maintenance, and cleanliness of recreation facilities. Several older people especially appreciated the measures taken by managers to increase access to the waterfalls. One person who walks with a cane said that "the wide paths recently put in are a blessing to handicapped people."

With respect to the future, some people pointed out opportunities for developments they thought would enhance the Black River area. But for the most part, these people said that they like the Black River as it is now, and they

were concerned that future changes and development might spoil the qualities that make the area special. The single most frequent recommendation for management from these people was to limit development and maintain the area as it is. One resident wrote, "We love and respect it, and fervently hope it is not improved to death. Let Nature do what she does so *well* ... mostly we want it to stay pristine and quiet. Please, no more improvements!"

In general, the results described above were corroborated by information obtained in the other public involvement activities conducted by the Black River Opportunity Area team. Based on all their interactions with the public, the planning team established the desired future condition for the Black River Opportunity Area as "maintaining the character and facilities of the area, with an emphasis on non-motorized use east of the byway" (USDA Forest Service 1995).

## CONCLUSIONS

The purpose of this study was to gain a better understanding of the strong attachments that residents and visitors feel for the Black River area. To achieve this purpose, I employed an open-ended survey to elicit residents' and visitors' meanings, feelings, and values relating to the Black River. With the aid of word processing macros, I distilled themes and concepts that characterized people's descriptions of their special places in the Black River area. The findings provided insights into the experiences that give rise to strong place attachments and identified some of the specific places, qualities, and features of the Black River area that are most important to people. The Ottawa National Forest was subsequently able to incorporate these insights into their planning process.

While this study provides useful information on the relationship between people and the Black River area, it also has some limitations that must be taken into account when using the results. The survey employed a voluntary, self-selected sample of people. This was an efficient and cost-effective way of ensuring that the sample would include people who had experienced the kinds of feelings that I wanted to learn about. The non-random nature of the sample, however, means that the survey cannot be used to estimate the proportion of the general population that holds the various views

represented in these responses. For example, because the survey specifically asked people to write about places that are special to them, it seems likely that the respondents would be more oriented toward preserving these places in their current condition than would a random sample of the population. By itself, this survey cannot measure how important the respondents' experiences are compared to other valued uses of the Black River area, nor can it resolve issues such as how the benefits of preserving the character of the area should be balanced against the benefits of increasing development and tourism. Therefore, this study should be viewed as one source of input in a larger planning and public involvement process.

Making decisions about managing natural places and features that are important to people will always be a complex and difficult task. Qualitative surveys, in which people can speak in their own words about places that are special to them, may help natural resource managers to carry out this task with greater awareness of the feelings and values that people hold for these places.

#### ACKNOWLEDGMENTS

I would like to thank Sherri Schwenke, Jim Jordan, Jill Leonard, Dennis Dufrane, Mike Jacobson, and Rick McVey of the Ottawa National Forest for their assistance and cooperation in carrying out this study. I also thank all the residents of and visitors to the Black River area who took time to participate in this research.

#### LITERATURE CITED

Mitchell, M.Y.; Force, J.E.; Carroll, M.S.;

McLaughlin, W.J. 1993. **Forest places of the heart: incorporating special spaces into public management.** *Journal of Forestry*. 91(4): 32-37.

Schroeder, H.W. 1991. **Preference and meaning of arboretum landscapes: combining quantitative and qualitative data.** *Journal of Environmental Psychology*. 11: 231-248.

Schroeder, H.W. 1996a. **Ecology of the heart: understanding how people experience natural environments.** In: Ewert, A., ed. *Natural resource management: the human dimension.* Boulder, CO: Westview Press. 263 p.

Schroeder, H.W. 1996b. **Voices from Michigan's Black River: obtaining information on "special places" for natural resource planning.** Gen. Tech. Rep. NC-184. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 25 p.

USDA Forest Service. 1995. **Black River Opportunity Area analysis.** Bessemer, MI: U.S. Department of Agriculture, Forest Service, Ottawa National Forest, Bessemer District. 120 p.

Williams, D.R.; Patterson, M.E.; Roggenbuck, J.W.; Watson, A.E. 1992. **Beyond the commodity metaphor: examining emotional and symbolic attachment to place.** *Leisure Sciences*. 14: 29-46.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410, or call 202-720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

**North Central Research Station  
Forest Service—U.S. Department of Agriculture  
1992 Folwell Avenue  
St. Paul, Minnesota 55108  
Manuscript approved for publication March 8, 2000  
2000**

## TABLE OF CONTENTS

|   | <i>Page</i> |
|---|-------------|
| Foreword .....  | I           |
| <i>David N. Bengston</i>  |             |
| Increasing the Trustworthiness of Research Results: The Role of<br>Computers in Qualitative Text Analysis .....         | 1           |
| <i>Lynne M. Westphal</i>  |             |
| What Makes A Place Special? Interpretation of Written Survey Responses<br>in Natural Resource Planning .....            | 7           |
| <i>Herbert W. Schroeder</i>   |             |
| Exploring Residents' Perceptions of a Natural Protected Area<br>Using Computer-Aided Analysis of Interview Text .....   | 12          |
| <i>Terilyn D. Allendorf</i>   |             |
| Turning Qualitative Text Into Interval-level Data: A Computer<br>Content Analysis Approach .....                        | 15          |
| <i>Chad D. Pierskalla and Dorothy H. Anderson</i>   |             |
| Exploring the National Benefits of Alaska's Tongass National Forest .....   | 19          |
| <i>Stewart D. Allen, David N. Bengston, and David P. Fan</i>  |             |
| Applying the VBPro Computer Programs to Analysis of Environmental<br>Policy Debates: Comparing Stakeholder Frames ..... | 26          |
| <i>Bonnie P. Riechert</i>   |             |
| Messages in Global Climate Change: Using the Diction Program to Analyze<br>News Coverage .....                          | 29          |
| <i>James Shanahan</i>   |             |
| Monitoring the Social Environment for Forest Policy Using the InfoTrend<br>Computer Content Analysis Method .....       | 34          |
| <i>David N. Bengston and David P. Fan</i>   |             |
| Computer-Aided Qualitative Content Analysis: A Useful<br>Approach for the Study of Values .....                         | 43          |
| <i>Karen G. Mumford and J. Baird Callicott</i>  |             |
| In Search of Common Ground Among Diverse Forest Stakeholders:<br>A Contextual Content Analysis of Online Text .....     | 48          |
| <i>Jennifer A. Cuff, David N. Bengston, and Donald G. McTavish</i>  |             |

# **Applications of Computer-Aided Text Analysis in Natural Resources**

**David N. Bengston**  
**Technical Editor**

Bengston, David N.

2000. **Applications of computer-aided text analysis in natural resources.** Gen. Tech. Rep. NC-211. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 54 p.

Ten contributed papers describe the use of a variety of approaches to computer-aided text analysis and their application to a wide range of research questions related to natural resources and the environment. Taken together, these papers paint a picture of a growing and vital area of research on the human dimensions of natural resource management.

---

**KEY WORDS:** Computer-aided, computer-coded, content analysis, human dimensions, text analysis, textual data.