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Poster Session

THE POLITICAL ECONOMY OF WILDERNESS DESIGNATION IN NOVA SCOTIA

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Abstract: This paper traces the various policy stimuli shaping the development of the Nova Scotia Wilderness Areas Protection Act (December, 1998). It does so by examining international, national, provincial, and local influences on wilderness designation, legislative structure, and implementation issues that influenced, or are likely to influence, wilderness area management. By combining content analysis of theoretical literature, governmental and legislative documents, transcripts of key-actor semi-structured interviews including provincial politicians, government officers, and a first nations' leader, as well as input from wilderness policy experts and mass media analysis; this study identified a number of key issues likely to daunt the most avid supporter of wilderness preservation in Nova Scotia. Close examination of the Wilderness Act's composition and giving specific attention to the Jim Cambells Barrens Wilderness, the Polletts Cove/Aspy Fault, and the Cloud Lake Wilderness Areas, this analysis suggests that wilderness managers have very difficult challenges ahead in maintaining ecological integrity while allowing for a broad range of recreational and other non-conforming uses.

Background

Little more than a decade ago, large-scale designation of wilderness areas in Nova Scotia seemed not much more than a pipedream for a few dedicated park managers and idealistic environmentalists. Today, thirty-one new wilderness areas encompassing 291,000 hectares (Figure 1) stand alongside the protected areas of Nova Scotia's two national parks: Kejimikujik and Cape Breton Highlands, and the sizeable hectarage of Louisbourg Historic National Park to form, at least on paper, an impressive assemblage of lands that increases Nova Scotia's protected areas by 300%.

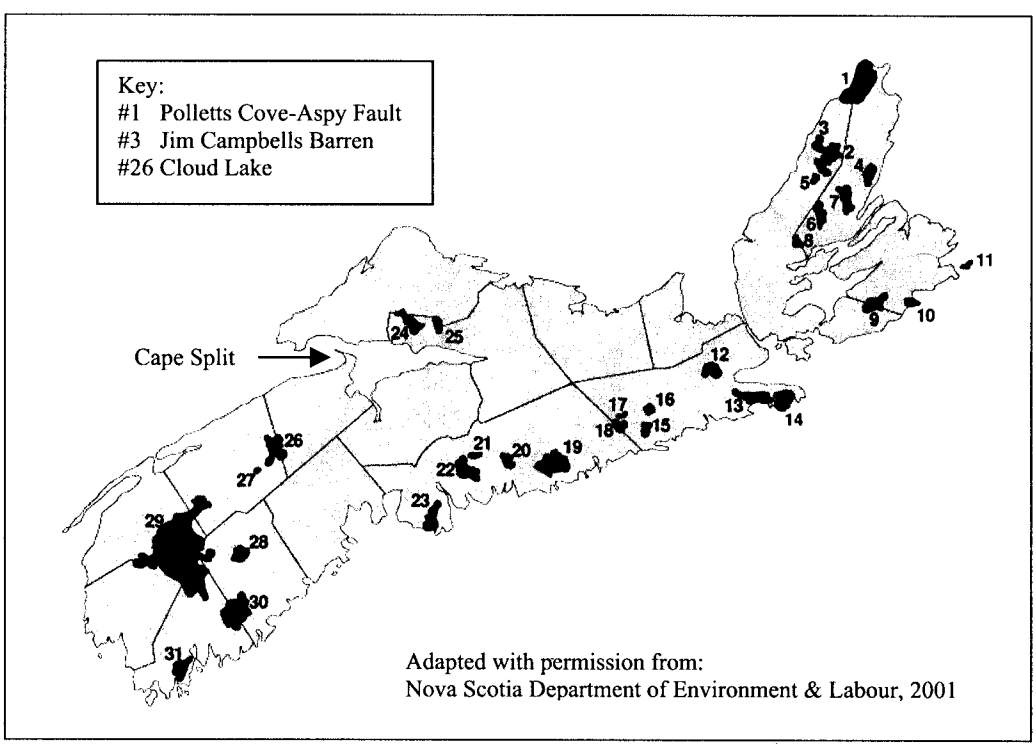

Figure 1. Map to Show Location of Nova Scotia's Designated Wilderness Areas

The purpose of the Nova Scotia Wilderness Areas Protection Act (NSWAPA) is to: "provide for the establishment, management, protection, and use of wilderness areas, in perpetuity, for present and future generations" (1998). In particular, as stated in Section 2, the Act is designed to:

(a) maintain and restore the integrity of natural processes and biodiversity;
(b) protect representative examples of natural landscapes and ecosystems;
(c) protect outstanding, unique, rare and vulnerable natural features and phenomena,

and deliver the following secondary objectives:

(d) provide reference points for determining the effects of human activity on the natural environment;
(e) protect and provide opportunities for scientific research, environmental education and wilderness recreation; and
(f) promote public consultation and community stewardship in the establishment and management of wilderness areas, while providing opportunities for public access for sport fishing and traditional patterns of hunting and trapping.

While this paper broadly examines the influences on the political economy in Nova Scotia that led to the enactment of the NSWAPA, it also assesses the Act's potential to protect the wilderness integrity by paying special attention to three designated wilderness areas: the Jim Cambells Barrens Wilderness, the Pollets Cove-Aspy Fault Wilderness, and the Cloud Lake Wilderness.

Methodology

This study combines document analysis with over thirty in-depth semi-structured interviews of key policy actors, visitations by some key actors to the Acadia University campus, and four phases of fieldwork: two in the Northern Cape Breton Region, one focused in Halifax (the provincial capital), and the other in the Cloud Lake Wilderness area. The Cape Breton phases were conducted in the summers of 1997 and 1999. The Cape Breton fieldwork included interviews with senior personnel from the Cape Breton Highlands National Park, municipal politicians and personnel, both volunteers and administrative personnel in local and regional economic development corporations, various special interest groups supporting and opposing wilderness designation, and provincial wilderness planning specialists. The Halifax phase trained senior undergraduate recreation management students to interview ten key actors concerned with legislative enactment of Bill 24 in December 1998. Politicians representing both the government and opposition parties were interviewed, so to were provincial officers, non-government organisational (NGO) personnel, and a member of the Mi'kmaq First Nations. Both face-to-face and telephone interviews were used at the convenience of the respondents. The fourth phase included a detailed analysis of Cloud Lake's natural resources inventory focusing on potential recreation impact and was completed during the September 1999 to June 2000 period. This phase also included phone consultations with provincial protected area planners and field observation by canoe.

Political-Economic Influences

While it is difficult to pinpoint the exact impact of any one or particular combinations of political economic pressures on wilderness designation in Nova Scotia, it is clear that a number of international, national, provincial and local influences converged to shape policymaking. At the international level a series of conventions bolstered the confidence of backroom park planners and civic boosters, and increasingly sensitised politicians and the electorate to the importance of protected areas as a key sustainable development initiative. In Bali, Indonesia in October 1982, for example, the International Union for the Conservation of Nature and Natural Resources' convention, called the World Congress on National Parks and Protected Areas, resulted in guidelines for establishing a comprehensive network of protected areas. The National Wilderness Research Conference in Colorado in 1986 outlined objectives for maintaining wilderness protection and emphasized the need for, and urgency of protecting wilderness areas all over the world. In 1987, an initiative entitled "Our Common Future" by the World Commission on Environment and Development committed to "save species and their ecosystems"; while the Rio Earth Summit in 1992, which included the Convention on Biological Diversity under the United Nations Environment Program, also promoted the importance of protected areas (DNR, 1995a). Besides the United Nations, importantly, many other international bodies held various conventions and conferences to lobby for the conservation of wilderness areas. Together they created awareness and spurred political, bureaucratic, and civic activity within Canada.

The National Task Force on the Environment and Economy in Canada for instance, was created shortly after the World Commission on the Environment and Development (the Brundtland Commission) reported in 1987. This taskforce called upon each provincial and the federal government to create Round Tables on the Environment and the Economy. Frequently, it was in these forums that influential politicians, business people, bureaucrats and civic leaders were exposed to the value of protected areas as a key component of a sustainable society. Critical to broadly sensitising the Canadian public to the importance of habitat protection in saving endangered species was the Endangered Spaces Campaign jointly sponsored by the World Wildlife Fund (WWF) Canada and the Canadian Parks and Wilderness Society (CPAWS). This ten year long campaign was launched in September 1989. This campaign not only enlightened Canadians about species-at-risk but also drew attention to the insidious impact of urban expansion, pollution, agriculture, and industry on the environment in general, to habitat, and to saving endangered species. Interestingly this campaign exploited the rule of thumb made popular in the Bruntland

Commission report that 12% of the Canada's area was a reasonable target for protection. Despite the lack of definitive evidence that any particular level was essential for sustainable development, the Canadian Government's "Green Plan" launched in 1990 also set the long-term preservation goal of 12%. This initiative was followed in 1991 by 'A Protected Areas Vision for Canada' established by the Canadian Environmental Advisory Council. This idea sharpened Canadians' resolve for sustainable development and focused on the need to protect "representative and unique natural areas, wilderness areas and wildlife habitats". In 1992, the Canadian Council of Forest Ministers announced their commitment to preserving the representative forest communities. Later, in 1996, the Canadian government further embraced safeguarding biodiversity by examining ecosystem conservation in the 'Caring for Home Place: Protected Areas and Landscape Ecology' conference. The philosophical core of Nova Scotia's protected area strategy largely reflected the various ideas discussed in these forums (Lynds & Leduc, 1995).

As it turned out, a key influence in changing the thinking of both the citizens and the politicians of Nova Scotia was the Endangered Spaces Campaign. Colin Stewart, working for and representing the Nova Scotia chapters of both the WWF and CPAWS steadfastly lobbied the provincial government and commercial land and natural resource managers over most of the nineteen nineties to persuade and occasionally cajole key decision-makers and policy influencers regarding the efficacy of protected areas legislation. The expiry of this ten-year campaign became a self-imposed deadline for wilderness advocates to realise legislative enactment. While identification of wilderness areas was to a large extent scientific and systematic (DNR, 1995b), political and economic influences substantially shaped designation. Landscape regions were first identified using largely national criteria then increasingly more detailed categorisation was employed to identify areas worthy of inclusion in a comprehensive protected areas system (Lynds & Leduc, 1995). The initial goal was to protect a representative area in each basic biogeographic landscape category. Early on in the designation process it was decided to include only lands under provincial tenure (DNR, 1997). While clearly an astute political move that avoided potential conflict with private and commercial land managers, this decision also eliminated seventy percent of the province from consideration. Initially park managers identified over a hundred potential wilderness sites on provincial Crown lands that met the criteria for protection, however, large numbers were subsequently purged, many were reduced, and a few enlarged in internal bargaining within the Nova Scotia Department of Natural Resources and other government departments, and externally with commercial forestry and mining concerns that controlled provincial forest management licenses and mining claims. In the early years of the nineties decade, when most of this filtering process took place, parks managers were yet to gain the political momentum that would later allow them greater persuasive power among their mining, forestry and development contemporaries. This bargaining process saw the original list of candidate areas wilt to thirty-one. As the nineties decade matured so the political economic equilibrium shifted; the multinational forestry companies found themselves under considerable market pressure to adopt environmentally friendly forest management practices. Operating from a region perceived internationally as environmentally progressive was increasingly seen as a positive image-maker and important marketing tool by these multinationals. During this period endemic opposition to preservation within the resource exploitation industries softened, and subsequently, with great fanfare, the province felt politically secure enough to announce in 1995 their intention to enact protected areas legislation (DNR, 1995a). This was accomplished with the overt support of the Nova Scotia Resource Council, the mining industry's lobby group. Marketing pressures from abroad then, made protected areas legislation palatable to the resource industries, and this in turn made the political process more acceptable for provincial politicians.

It is interesting to note how these dynamics played out at the local level as local concerns sometimes supported legislative enactment, some seemed indifferent, and others appeared to act relentlessly to derail the legislative process. The designation of the Jim Campbells Barrens was particularly noteworthy and quite volatile. The Jim Campbells Barrens sits adjacent and south of the Cape Breton Highlands National Park (CBHNP). As part of the legislative planning process all of the designate areas were afforded interim protection from new resource extraction initiatives. Nevertheless, the government made explicit their intent to honour existing mineral claims, although the long-term viability of these claims seemed vulnerable to resource companies in the ensuing legislative gestation process. The proposed wilderness designation in the Jim Campbells Barren philosophically split the local community apart. Those supporting the mining claim within the proposed protected area boundary pushed to have the area de-listed. In December 1996, after concerted lobbying from the industry, the Liberal Cabinet did indeed remove this area from the candidate list to allow for unencumbered mineral development. A provincial newspaper columnist captured the moment best when he wrote that: "the cabinet... [in an instance] voted to override four years of planning and public consultation and delete the Jim Campbell Barren as a candidate protected site" (Dobson, 1996). This action not only risked this specific area's ecological integrity, but was viewed by protected area advocates as making the other listed areas vulnerable to interference. Those supporting tourism and salmon fishing for example, as well as environmentalists locally, regionally, provincially, and internationally mobilized to lobby for re-listing. In the middle of considerable political upheaval the government backtracked and re-listed this area in time for legislative enactment.

Not far away and adjacent to the northern boundary of CBHNP, the Pollets Cove-Aspy Fault proposed wilderness area also became a focal point of local concern. Civic action included substantial vandalism in Cape Breton Highlands National Park, formation of local and regional support and opposition groups, and damage to provincial civil servants' vehicles as well as various other threats. Some locals argued that they were already essentially

"parklocked" (Bissix et al., 1998) by the Cape Breton Highlands National Park and further wilderness designation in their region would simply exacerbated the problem of further restricting access to natural resource utilization. Anxiety by some that the proposed wilderness act was the provincial government's hidden agenda to designate more national parks or increase the size of already established national parks—further restricting resource utilization (Bissix et al., 1998)—raised local frustration and perhaps gave rise to the vandalism. Significantly from a policy development perspective, such concerns drove the legislature to include a provision that no designated wilderness area could later be reclassified as a national park.

In stark contrast to the political turmoil of northern Cape Breton, the Cloud Lake Wilderness Area, which straddles the counties of Kings and Annapolis in western Nova Scotia, generated little public concern. The public review process (DNR, 1995c) received no specific comments regarding Cloud Lake although several respondents called for the inclusion of nearby Cape Split in Kings County--a privately owned and wild land protrusion into the Bay of Fundy. Despite the lack of overt concern among the locals, the Cloud Lake area nevertheless draws attention to other apprehension about the Wilderness Act. This particular wilderness area especially emphasizes the need for adequate funding for restorative ecological management. Some parts of this area have been significantly degraded, having been used for many years as the venue for an air force cadet camp. It includes rather extensive and aesthetically unpleasing parking lots, camp areas, and a communications tower, and has backcountry approach roads that seriously threat typical notions of wilderness. Continued intensive use as a cadet training area and relatively easy access by motor vehicle will no doubt put this area's wilderness values at further risk. It is important therefore, that each wilderness area management plan be carefully crafted to maintain and enhance wilderness values. To ensure this happens, there is a need for the provincial government to appropriate sufficient funds to ensure that all thirty-one wilderness areas move beyond mere paper designation to incorporate a legitimate management process that boosts wilderness preservation and restoration. This, as discussed later, will be problematic under the provisions of this act.

Despite the vagaries of each local political economy surrounding each designate wilderness area, it was unlikely that the language of the wilderness act would have finished up so convoluted without an unusual political circumstance. The Nova Scotia general election of March 24, 1998 produced a legislature with 19 Liberals, 19 New Democrats and 14 Progressive Conservatives. Until that election, this provincial legislature--which was the first overseas jurisdiction in the former British Empire to gain responsible government in 1848--had no experience with a minority government although, according to Hyson (1998), the strong two party tradition had been punctuated a few times with a very slim majority. This meant that very different legislative processes were worked out on the run, and the bill to enact the Wilderness Act was in effect a political science laboratory. The Liberals were awarded the government status by virtue that they had formed the previous government; as a result the New Democrats became the official opposition. By the time this bill had run its course through the legislature the New Democrats had reduced its complement to 18 by expelling a member from caucus who then sat as an independent. While the Progressive Conservatives were the third party of the legislature, they had a substantial voting block and had to be reckoned with if any amendment was to survive, or if the Act itself was to stay alive. Although Hyson (1998) concluded that this minority situation might lead to a rebirth of interest in the art of responsible government, the reality for wilderness advocates was that no piece of legislation could pass through the legislature without any two of the parties' support. Each of the members of the legislature was aware that this session of the legislature was unlikely to last very long, so no politician or party was willing to upset any faction of the electorate. Consequently, just about any special interest could find a sympathetic ear with at least one of the parties. As a result there was incessant lobbying from numerous quarters to persuade the legislature to include this or that special interest provision.

While the previous Liberal government had carefully overseen the formulation of this legislation and had reluctantly withdrawn it from the order table of the previous legislature for technical revision, they were fully supportive and enthusiastic about its passage this time. Now, however, they had to contend with the special interests of influential resource companies, the time pressure imposed by CPAWS and the WWF, and the growing might of local interest groups--especially those creating political upheaval in the Pollets Cove-Aspy Fault region. Each interest vied for influence over the government directly, and more indirectly by attempting to influence the other two opposition parties. It was theoretically possible for anyone interest to capture the hearts of the two opposition parties, and perhaps add quite unwelcome amendments or worse, defeat the bill outright leaving the province open to the scorn of increasingly more influential environmental groups nationally and internationally. Consequently the Act, as passed in the legislature, was the result of substantial political bargaining and compromise. In the end, with the passage of the Wilderness Act, the government could boast its legislative accomplishment in sustainable development. In reality, however, this enactment left a legislative legacy that was likely to stretch the ingenuity of the most gifted resource managers to deliver wilderness values in its thirty-one designated areas.

Implementation Challenges and Issues

Perhaps the most challenging aspect of this legislation was its grossly inadequate financial resources. As inferred earlier, there were no special funds appropriated at the time of legislative enactment, although the protected areas staff and its meagre programming resources were subsequently transferred from the Department of Natural Resources (a relatively resource rich department) to the Department of

Environment (a relatively resource poor department). The protected areas division of eight staff (including secretarial staff) will necessarily have to scratch and claw for adequate resources to move beyond 'paper park' (see Shackell & Willison, 1995, p.7) designation to more meaningful wilderness management implementation, especially in a continuing era of government restraint.

There is little for concern in the broad objectives of this legislation; nevertheless the devil is in the details. As a result of the lobbying efforts emanating from the various political-economic concerns of the more vociferous adjacent communities, a number of testing provisions were included in the Wilderness Act. In sub-section (a) for example of Article 39 (1), it states that the Governor in Council may make regulations "respecting the erection, development, operation, maintenance, use or licensing of structures or facilities or the type of construction, location or cost of structures or facilities within a wilderness area". Whereas in sub-section (e), it states that the government may engage in regulating, restricting or prohibiting modes of travel in or through a wilderness area; and in sub-section (f), it states that it may make regulation "respecting any activity undertaken in accordance with a mineral right or other interest held before the coming into force of this Act". While at first glance these provisions seem quite innocuous, they seem to infer restrictive provisions to protect the wilderness resource; they in fact reflect the reality that in some wilderness areas certain developments are likely inevitable. For example, some wilderness areas lock-in private enclaves where motorised access will necessarily have to be maintained. In other areas legal mining claims exist and will conceivably be developed in time, and will have to be serviced with transportation systems, heavy mining machinery and other support facilities. In other areas long-term private cabin leases exist. It is difficult to imagine how these non-conforming uses can be maintained without endangering wilderness values. Given the compromises imbedded in the details of the Wilderness Act such as those above, and those concerning sport fishing, recreational access, and the yet to be defined provision for "traditional patterns of hunting and trapping" (as specified in Section 2), it is difficult to see how the Wilderness Act can act, for example, as a "reference points for determining the effects of human activity on the natural environment" (Section 2 d). This is especially so when heavy recreational use is likely to be condoned and even promoted in the name of tourism. Perhaps more significant than the shortcomings of the explicit provisions of the Act is the blind eye given to present uses such as the Canadian Military's use of the Cloud Lake Wilderness Area. It seems inconceivable that continuance of uses of this sort is compatible with wilderness values.

A particularly interesting provision in the Act is Article 15, which states that:

> (1) The Minister shall complete management plans to guide the protection, management or use of a specific wilderness area, a part of a specific wilderness area or any action or activity undertaken to manage a specific wilderness area.

In addition, this article states that "the Minister shall engage in such public consultation on the management plan as the Minister considers appropriate", and a further sub-section states:

> (4) Before the designation, a socio-economic analysis of the impact of designation of a wilderness area shall be prepared for every wilderness area designated on Crown land after this Act comes into force, the analysis shall be completed and made available to the public before the designation.

It would appear that before a wilderness area is fully ratified under this act, it must pass a test of social and economic viability. How those tests are structured, and whether there is consistency from one wilderness area to another, will be of considerable import to the viability of the Act. As much of the political support for Wilderness Act ratification was contingent upon continued access by off-road vehicle operators, hunters, fishers, and snowmobilers, social acceptance is likely to be acknowledged in some areas only if their particular demands are met. It is clearly inconceivable, however, that the designation of a wilderness area can meet any established measure of economic viability. The economic activity generated from a wilderness area is unlikely to match the possible revenue stream from natural resource exploitation such as forestry or indeed sub-dividing a wilderness into cottage lots. It is clear then that quite different social and economic assessment tools will be necessary to meet this provision if any wilderness areas are to pass this test and be officially designated.

Conclusions

Criticism has often been laid at developing countries, for example India (RLEK, 1997) and Belize (Mather & Chapman, 1995), for the designation of national parks and other protected areas that have provided little concrete conservation at ground level. It seems, however, that wilderness managers in Nova Scotia will have their work cut out to avoid similar criticism. Given the small operating budget and miniscule management and enforcement staff for designated wilderness, and the anticipated compromises to be embedded in wilderness management plans, such areas are likely to remain only 'paper wilderness'.

References

Bissix, G., Anderson, C., & Miles, K. (1998). "Parklocked?"-- Sustainable rural development in the Northern Cape Breton greater ecosystem. In Munro, W. P. Neil, & J. H. M. Willison (Eds.), Linking protected areas with working landscapes: Conserving biodiversity (pp. 885-892). Wolfville, Nova Scotia: SAMPAA.

Department of Natural Resources. (1997). Choosing areas for protection. Belmont, NS.

Department of Natural Resources. (1995a). A proposed systems plan for parks and protected areas in Nova Scotia. Belmont, NS.

Department of Natural Resources. (1995b). Parks and protected areas of Nova Scotia. Halifax: Department of Supply and Services.

Department of Natural Resources. (1995c). Protecting Nova Scotia's natural areas: The report of the Public Review Committee for the proposed systems plan for parks and protected areas in Nova Scotia. Nova Scotia.

Donham, P. B. (1996, December 8). Who's protecting what? The Daily News, p. 15.

Government of Nova Scotia. (1998). Chapter 27 of the Acts of 1998. Halifax.

Hyson, S. (1998). Nova Scotia and the "problem" of minority government. Canadian Parliamentary Review, 21(4).

Lynds, J. A., & Leduc, J. (1995). Planning for the protection of biodiversity at the landscape level in Nova Scotia. In Herman et al.

Mather, A. S., & Chapman, K. (1995). Environmental resources. Harlow, UK: Longman.

Rural Litigation & Entitlement Kedra. (1997). Community forest management in protected areas: Van Gujjars proposal for the Rajaji Area. Dehra Dun, India: Natraj Publishers.

Shackell, N. L., & Willison, J. H. M. (1995). Marine protected areas and sustainable fisheries. Wolfville, NS: Science and Management of Protected Areas Association.

THE WESTFIELD RIVER WATERSHED INTERACTIVE ATLAS: MAPPING RECREATION DATA ON THE WEB

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Abstract: Imagine searching the web to create a map to your house. You could use one of the many Internet mapping sites like MapBlast™ or MapQuest™ to create such a map. But maybe you wish to get a map of trails for the Grand Canyon. The National Park Service web site could serve that need. Or you may wish to get a map to show you the way from the Orlando Airport to Disney World. Again the web will come to the call. Generally, the web delivery of maps may simply involve the printing a graphics file. But in some cases, you create the map specific to your need by suggesting what elements are shown, at what scale and for your particular interest. The interactive element of delivering maps and data specific to a recreation and tourism theme will be illustrated in this paper. With a computer software program called ArcIMS, one can create maps on the web. Using the Westfield River Watershed Interactive Atlas, tourism data and maps can be delivered to a surfing population. Keywords: Internet Mapping, Westfield River.

Introduction

In recent years we have experienced a tremendous growth of two technological events that have influenced society. The first is in the explosive growth of the Internet. Some "think tanks" project that over 350 users worldwide will use the Internet by 2005 (NUA, 2000). About half of the users are found in North America, with the other half coming from Eurasia. This growth, despite the recent demise of many "dot-coms" can be expected to continue with a more refined and cautious surfer.

The second area of technological growth has a longer history and involves the automated creation of maps using computers. Geographic Information Systems, or a package of computer mapping software, hardware and data, permit the user to not only capitalize on the number-crunching capabilities of the computer, but also allow the creation of new information. Thus a GIS can aid in decision-making with the formation of new data from the analysis of digital data bases that reflect the "lay of the land".

It is the combination of these two technological advances, the Internet and GIS, and the birth of Internet Mapping Servers that this paper focuses on. In particular, Internet-based mapping sites have also experienced a similar growth. With origins in Local Area Networks (LANs), the need to deliver maps to users is widely varied. For example, the Greater Atlanta Data Center (http://www.gadc.kennesaw.edu/) allows web users to track crime in Metro Atlanta, while Internet surfers can visit the US Air Force Bird Avoidance Model (http://bam.geoinsight.com/) to learn how pilots and flight planners can select flight paths and thereby avoid bird causing crashes!

For tourism interests, travelers can visit MapBlast (http://www.mapblast.com) or MapQuest (http://www.mapquest.com) to plan their next driving trip. In addition to the route, more and more Internet based mapping sites provide site specific information about parks, open space and regional attractions. In this paper we follow the creation and maintenance of a web-delivered interactive atlas. The Westfield River Watershed Interactive Atlas (WRWIA) premiered during the Spring 2001 and serves to deliver human and natural dimension data for Western Massachusetts.

Background

The use of technology for tourism is not new. The travel industry has fully grasped the information super highway (Sheldon, 1997). The natural linkage between the Internet and GIS is an obvious extension for decimating spatial information to the public. Recent research has noted the importance of tourism promotion via GIS technology. For example, Kilical and Kilical (1997) illustrate the potential use of a GIS for the Tourism Office of Turkey and the eventual use by tourism operators and tourists. Likewise, the Greater Yellowstone Area Data Clearinghouse (GYADC) shows the partnership between several public and private interests in the management and publication of ecosystem data via the web (Scarrah & Hamerlinck, 1998).

The National Geographic Society's Map Machine provides Internet surfers one of the most powerful mapping sites available today (http://www.nationalgeographic.com/maps/). So besides the occasional paper map wedged between the covers of the magazine, web users can log onto the Society's Homepage and create maps at their leisure.

The National Park Service (http://www.nps.gov) provides copies of many of their maps on the website, but these are essentially copies of the regular paper printed map. More and more web sites allow users to draw a map to meet their particular need. For example, hikers can plan trips on Ice Age Trail Map Buffet (http://www.dnr.state.wi.us/org/at/et/geo/iceage/). Likewise, ecotourists can create maps on the Ecotourism Interactive GIS provided in Australia (http://www.gisca.adelaide.edu.au/cgi-bin/eco/ecogis).

Fortunately for users, there are several web indexes available to start your search. The University of Minnesota maintains a gallery of map servers. Berkeley provides a link page (http://sunsite.berkeley.edu/GIS/intergis.html) for

inquires also. Environmental Systems Research Institute, Inc (ESRI) has a several pages of links available on their web site (http://www.esri.com). ESRI has even published a book called Serving Maps on the Internet (Harder, 1998). McKee (2001) highlights this revolution, noting the relative ease for today's surfers. He also notes that mapping web sites provide not only maps, but also other forms of data including video, photographs and text documents. For a general guide to leisure and tourism Internet resources see Theobald and Dunsmore (2000).

Westfield River Watershed Interactive Atlas

The Westfield River Watershed Interactive Atlas (WRWIA) was born during early Spring 2001. As a response to the growing demand for information about Massachusetts' first Wild and Scenic River, the Westfield River, and to provide an educational forum for social and natural environmental data via the Internet, the WRWIA project began. The GIS lab at Westfield State College had been involved with mapping projects for several years, the next logical step was the publication of these data via the Internet. Using the software called ArcIMS (ESRI, inc.) and Servelet Exec 3.0 MS IIS/Windows, and a computer server, Westfield State College premiered the first mapping server in the Massachusetts State College Nine Campus System. The River, as the server is called, is available at the web address http://river.wsc.ma.edu. For those interested in estimating costs, the Dell Server cost approximately $1600 (educational pricing), the Servelet was $658. The price for ArcIMS is unavailable since Westfield State College has a Site License for ESRI products.

The mapping software uses ESRIs ArcView GIS data structure and thus while not required to deliver maps on the web, the ArcView software does come in handy in the initial preparation of maps. The first map delivered to our web audience was one of neighboring Stanley Park (http://www.stanleypark.org). The second author edited this map and created an orienteering course using GPS technology.

Other maps have followed and with data collected during the summer 2001 (funded by a Massachusetts' Department of Environmental Management Greenways Grant), the River will deliver tourism related maps and data to the public. Included one will find information about parks, open space areas, as well as support infrastructure such as lodging and restaurants. Considering the popularity of the Berkshire Mountains in Western Massachusetts, on should find this information especially useful for tourists.

Interactive Mapping Technical Information

This section of the paper will identify some of the key elements involved in the creation and maintenance of an Internet Map Server. For the casual reader, you may wish to skip this section since it is filled with computer details and jargon.

For the WRWIA, the ArcIMS software and Microsoft Windows NT 4.0 with Service Pack 4 Server operating system were employed. The River resides on a Dell Power Edge 1400, 800 MHz Server with 256 MB RAM. The machine has one floppy disk drive (1.44 MB) and 20/48x CD Drive. An external 100 MB Zip Drive and the network connections provide a backup. The ArcIMS software works with a web server software. The Application Server Connectors (ActiveX Connector) uses Microsoft IIS 4.0 for Windows NT Server as a Servlet Engine. Java Runtime Environment (JRE) is needed for some mapping applications and is downloaded from the River to the client browser if needed.

Client browsers include Microsoft Internet Explorer 4.0 or higher and Netscape 4.5 or higher. However, we have found IE 5.0 and Netscape 4.7 to work best. Java prepared maps obviously requires the higher end browsers and current limitations with ArcIMS preclude Netscape with Java Custom Viewers.

The ArcIMS architecture involves the serverside and the clientside. The client is the end user, typically one surfing on the web, while the server is the host machine that delivers the map product. Clients may use a standard HTML Viewer (any typical browser) or a Java Viewer (usually a higher end browser). On the server end, one will find the Manager, a Web Server, an Application Server and a Spatial Server. All link the software with the hardware to produce interactive maps.

The Spatial Server is the backbone of ArcIMS. It processes the clients' request for maps and data. The Application Server manages the whole system by balancing the requests for maps and tracking usage. The Application Server Connectors links the Web Server and the Application Server. The ArcIMS language is known as ArcXML. Lastly, the Manager is just that, a management system that is an interface and supports the three main tasks in ArcIMS. The three tasks are to author MapServices, Design Web pages and to Administer the site. For more information, readers are directed to the ArcIMS website (http://www.esri.com/software/arcims/index.html) and the ArcIMS Manuals.

Summary

The delivery of maps and data for tourism applications over the Internet has a great potential. As high speed connections and faster computer become commonplace, we could expect virtual tourism to explode. Further, tourism maps, as a deliverable product over the net will broaden the publics' "spatial" awareness. That said, developers must adhere to cartographic standards and produce quality products. Or else, tourism maps could become a biased marketing tool that will feed into the divide between the "Haves" and the "Have nots".

Bibliography

Ecotourism Interactive GIS. (2001). http://www.gisca.adelaide.edu.au/cgi-bin/eco/ecogis. Accessed 26 July 2001.

GeoPlace. (2001). See web mapping in action. http://www.geoplace.com/gw/2001/0201/webmapsites.asp. Accessed 26 July 2001.

Greater Atlanta Data Center. (2001). http://www.gadc.kennesaw.edu/. Accessed 26 July 2001.

Harder, C. (1998). Serving maps on the Internet. Redlands, CA: ESRI Press.

Kilical, H., & Kilical, A. (1997). GIS as a tool for tourism information management system. In Proceedings of the 1997 ESRI User Conference. http://www.esri.com/library/userconf/proc97/proc97/to450/pap426/p426.htm. Accessed 17 March 2001.

McKee, L. (2001). Geography connects cyberspace with the real world. GeoWorld, 14(2), 2-9.

NUA, Ltd. (2001). Travel sites continue to thrive. http://www.nua.ie. Accessed 26 July 2001.

National Geography Society. (2001). Map machine. http://www.nationalgeographic.com/maps/. Accessed 14 March 2001.

Regents of the University of Minnesota. (2001). Map server application gallery. http://mapserver.gis.umn.edu/gallery.html. Accessed 26 July 2001.

Scarrah, P., & Hamerlinck, J. (1998). Development of the Greater Yellowstone Area Data Clearinghouse (GYADC). In Proceedings of the 1998 ESRI User Conference. http:www.esri.com/library/userconf/proc98/PROCEED/TO250/PAP220/P220.htm. Accesses 17 March 2001.

Sheldon, P. (1997). Tourism information technology. Wallingford, Oxon: CAB International.

Stanley Park. http://www.stanleypark.org/. Accessed 14 March 2001.

Svensson, B. (2000). User focus for a multimap web site: Improving the usability of an online atlas. In Proceedings of the 2000 ESRI User Conference. http://www.esri.com/library/userconf/proc00/professional/papers/PAP761/p761.htm. Accessed 11 February 2001.

Theobald, W., & Dunsmore, H. (2000). Internet resources for leisure and tourism. Oxford: Butterworth-Heinemann.

US Air Force Bird Wildlife Aircraft Strike Hazard Team. (2001). http://bam.geoinsight.com/. Accessed 26 July 2001.

US Army Corps of Engineers. (2001). http://www.webmapping.org/. Accessed 26 July 2001

UC Regents. (2001). Web GIS and interactive mapping sites. http://sunsite.berkeley.edu/GIS/intergis.html. Accessed 19 April 2001.

Wisconsin, Dept. of Natural Resources. (2001). Ice age trail map buffet. http://www.dnr.state.wi.us/org/at/et/geo/iceage/. Accessed 26 July 2001.

PARK RESOURCES AS AN ESSENTIAL TO URBAN SOCIETIES

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Abstract: Open recreation space is a necessity to urban environments. People who reside in a crowded living condition need to have a place where they can go to escape everyday pressures and stress. Many have realized the importance of recreation space as a place to recuperate both physically and mentally. Overtime, parks have evolved to become an array of different types of resources ranging from a preserved piece of the natural landscape to a highly artificial habitat. Urban parks are known to contribute such benefits as physical health, mental health, stress relief, relaxation, self-realization, provide an escape mechanism, and provide psychological benefits. This paper highlights some of these reasons with a brief literature review and introduces a community's quest to protect a small urban park.

Introduction

Urban parks are a limited resource. They have become increasingly important to the urban landscape since there is an increase in demand for park spaces in cities. Today, new parks are not constructed as often as new buildings. Citizens are left using old park systems that are over-utilized and inconveniently located. Hence, individuals are limited in their choice of recreational spaces, and what parks that are available are needed to preserve the elements of history, scenery, or natural environments for people to enjoy. The relative shortage of open space and recreational facilities in metropolitan areas has created a shortage of good quality parkland. Parks offer an escape from the hustle and bustle of busy city streets. For example, parks supply a place where people can congregate to socialize or relax and may be used for exercise or as a place to read. Green spaces put people in a calmer mood and can also help to make the air a little cleaner. Therefore, all cities should have specific areas of open space set aside for the benefit of people.

Today there is an increasing awareness that preservation efforts are needed in order to keep our national, state, and local parks as protected areas that must be viewed as part of the surrounding ecological and cultural landscapes. Local community groups, such as the Friends of Grandmothers' Garden, Inc. in Westfield Massachusetts join the ranks of volunteer-based groups who dedicate their free time to preserve and manage public open spaces. And due to a growing disparity between location and condition, America's vast inventories of public parks are at forefront of public consciousness and political agendas (Cranz, 1982; Garvin, 2000; Russell, 1996; Vaughn, 2000; Wright, 1996).

Many groups of people run to the outdoors on weekends to escape the congestion of crowds. People may try to escape the city to find "re-creation" of body and soul. Individuals achieve this in a variety of ways ranging from simply enjoying the scent of woodland, listening to the sounds of nature, or by just lying around (Johnson, 1972).

In this paper, a brief history of urban park resources will be provided. The reader will find a literature review followed by a case study of a small urban park. Finally, the paper will conclude with a discussion of urban parks' role in modern society.

History of Urban Parks

In the following section, the history of urban park resources will be introduced. It begins by introducing the ideas and concepts that gave rise to the construction of the park systems in North America. Next, the three key individuals responsible for starting this park movement in America will be identified.

Parks and outdoor recreation have had a long and complex history of overlapping ideas and concepts. Three different concepts of parks are realized from studies tracing from the beginning of the park and recreation movement. These are:

- Concerned conservationists wanted to preserve forestry, wildlife, and related natural resources. The concept of park usage resulted in federal and state legislation to help conserve and protect some of these resources.
- Park planning and design.
- Organized recreation, which gathered momentum at the turn of the twentieth century. (Johnson, 1972)

The conservation of natural resources was the beginning of the recreational use of our land. The recreation and playground movement resulted from a growing need to organize, schedule and give meaning to the activities taking place in the newly established parks, activity centers, and open space areas (Johnson, 1972). More recently, Williams (1995) traced the evolution of urban parks in three phases: Foundation, Consolidation, and Expansion. In the Foundation Phase during the 19th Century, British planners saw urban parks grow in numbers. For the Consolidation Phase, more specialized urban recreation opportunities were promoted. And the Expansion Phase was experienced in the post WWII period and brought greater diversity and opportunities to urban residents (Williams, 1995).

As a result of the increasing demands for recreation, parks were beginning to take form in early America. Three individuals in specific had a tremendous influence on the development of park spaces in America. These were Andrew Jackson Downing, Frederick Law Olmstead, and Calvert Vaux. Downing's designs of an informal landscape park, much like England's first public parks, were to later influence Olmstead and Vaux. Olmstead and Vaux

collaborated their efforts in the planning and design of New York City's Central Park. After Central Park, they remained partners in landscape architecture (Johnson, 1972).

It was Central Park that began the park movement for many cities in the United States during the late 1800s and early 1900s. The planning, acquisition of land, and the development of Central Park in New York City were the first big milestones in the municipal park system of the nation (Garvin, 2000).

However, most new park construction had to wait until after the Depression and World War II. By the 1950s park construction started to boom (Cranz, 1982). Parks became numerous throughout the fabric of all cities. However, it was not until the 1960s that emphasis was placed on open space itself in cities. In the 1960s, parks protected for open space became a political issue. This was in response to the so-called urban-crisis and the resultant "escape from the city" out-migration (Cranz, 1982). "Paley Park in New York City is the epitome of open space mentality. This small oasis offers a visual counterpoint to the city without escaping the adjacent street" (Cranz, 1982, p. 136). By the 1970s, emphasis of urban parks took on a moral imperative. "Park and recreation people must begin to take seriously their obligations to provide recreation experiences" (Brauer, 1972, p. 14). Fueled perhaps by the entire environmental movement following Earth Day, citizens began to recognize outdoor spaces were vital to the Earth's well-being. Therefore, in the late 1970s, municipal, regional, and federal agencies cooperated to preserve segments of historic towns and landscapes. For example, Lowell, Massachusetts is one example where a National Historic Park was founded (http://www.nps.gov/lowe/). These urban/cultural parks opened on the assumption that all parts of the city had equal aesthetic and recreational potential. "Diverse urban elements as historic sites and urban parks both serve as social gathering places" (Bray, 1978, p. 1).

More recently, Americans have experienced an explosion in urban greenways as a landscape planning tool (Little, 1990). While, the term greenway has only been around since the 1950s, the design of these open spaces has been in existence as early as 1860 due to Olmstead's goal to provide access to these open spaces to the residents that surrounded them. As Olmstead realized, greenways are a response to classic human needs and part of an evolving, centuries old landscape form (Fabos, Milde, & Weinmayr, 1968; Stearns, 1995).

Literature Review

The following literature review will provide summaries of the selected research materials in this area. Included here is a discussion of various benefits provided by parks. Observed positive benefits of urban parks include providing open space, psychological benefits, self-realization, escape mechanism, and therapeutic value. In fact, outdoor recreationists already realize many of these benefits. Outdoor recreationists are often those who primarily seek psychological rewards, and wish to avoid negative elements of their daily living environment (Iso-Ahola, 1980; Driver, Brown & Peterson, 1991; Chubb, 1981). The Urban Parks Institute at Project for Public Spaces (http://urbanparks.pps.org) introduces the reader to a wealth of information on benefits.

Parks offer many benefits for the citizens and the community. One benefit that parks provide to city dwellers is open space. Open space may be utilized in many ways, including opportunities for recreation. While it may be obvious that recreation may provide one with physical benefits by engaging in sports and other activities, it also provides psychological benefits. From previous studies and observations, it appears that all forms of recreation have some sort of psychological significance, but the amount depends on the perception of the individual. These psychological aspects include relaxation, self-realization, escape mechanism, and therapeutic values.

Perhaps, the most important psychological benefit obtained from recreation is relaxation. The relaxation theory explains play as an activity that allows the individual to recuperate from fatigue and stress. When tired from work, people play. Opposite from the surplus energy notion, the relaxation theory claims that energy expended for survival activities is replenished during play (Vaughn, 2000). Relaxation provides a respite from life's worries and pressures relieves feelings of tension and fatigue and restores mental efficiency. Without relaxation, the human being would not be capable of functioning to the fullest potential.

In addition, recreation can provide valuable opportunities for self-realization by providing feelings of personal worth. The standard notion is personal enhancement and self-development is a developmental process of psychological growth and positive self-transformation. Leisure provides a distinctive life-space in which people can either cultivate preferred definition or creatively elaborate new self-definitions in the face of change. Examples may include: art activities that promote originality, participation in sports that result in feelings of exhilaration and accomplishment or by fulfilling personal goals which leads to feelings of self-improvement (Russell, 1996).

Escape Mechanism may also be achieved by offering temporary relief from unpleasant realities in a person's personal life. By immersing oneself in the make-believe world of daydreaming, and/or exercise that one often finds people doing in parks, one can recharge the emotional or physical strength they need to cope with what life deals them later (Chubb, 1981).

Urban parks are also known to provide a kind of healing therapy. Mandel (1998) suggests the value of recreation may help reduce pain, relieve anxiety, and strengthen the immune system. Improved physical conditioning and the release of endorphins can even remedy the brain. Endorphins are feel-good chemicals in the brain that are released when you do physical activity. Going outdoors and taking part in outdoor recreation helps manage stress

by relaxing the mind. This shows that the natural outdoors may play a positive role on the individual. Recent growth in the field of therapeutic recreation services and the recent demand in jobs provide evidence in the importance of this benefit. Visit the National Therapeutic Recreation Society at http://activeparks.org/branches/ntrs/ for more information.

Citizens understand instinctively that a park's calming effect is as necessary as ever. Humans need open space just for social fabric, just as for mental well-being (Mandel, 1998). These patches of green stitched into the urban fabric form our playgrounds, our escapes from the gritty streets, bland shopping centers and blank office towers. A contemporary park is a place where you do not have to buy anything. Park planners ponder questions that most of us never consider such as: what exactly is "open space," and how is it important to our cities and our daily lives? Park experimentation has flourished in recent years, resulting in a series of innovative, expressive and often unexpected new landscapes in our cities. Designers are still trying to offer relief from the crowded city, but they are also struggling to shed the weight of park history (Vaughn, 2000).

To give an example of how park experimentation has shaped contemporary parks, consider the Tennessee River Park. It is a series of unique public parks connected by a twenty-two mile winding greenway along the river. This park brings together Chattanooga's citizens, public spaces, and scenic beauty. It is a very popular place for recreation. It offers a vast array of activities including rowing, viewing wildlife, a climbing wall, biking paths, fishing, walking, rollerblading and learning (the walk incorporates history). It also has an aquarium, sculptures throughout, wetlands, and many flowers. Each development has raised the bar on the design standards of the city's built environment and offered a rediscovery of the natural world (Vaughn, 2000). In essence, each place has its own unique character.

Case Study: Grandmother's Garden in Westfield, Massachusetts

Albert Steiger, a successful businessman, donated a 10-acre parcel of landscaped land that he acquired from his father-in-law Chauncey Allen, to the city of Westfield in the late 1920's (Wellington, 2000). This donation was given with a wish that one part of the lot would be made into a flower garden with old-fashioned flowers in dedication of his mother, "Grandmother Steiger". The towns' people of Westfield came together and developed the parcel into a beautiful parcel of land. Steiger himself was moved by the completion of the garden now named "Grandmother's Garden". The garden flourished with the never-ending efforts of many hard working citizens. After the completion of Grandmother's Garden (GG), work started on a picturesque park that included a wading pool, frog pond, bandstand, and upper terrace that all overlooked GG and was named "Chauncey Allen Park". A map of available open space in the community is shown in Figure 1.

Grandmother's Garden has seen it share of ups and downs. In 1934, it was featured in a horticulture and landscape architectural magazine for winning a blue ribbon. However, in

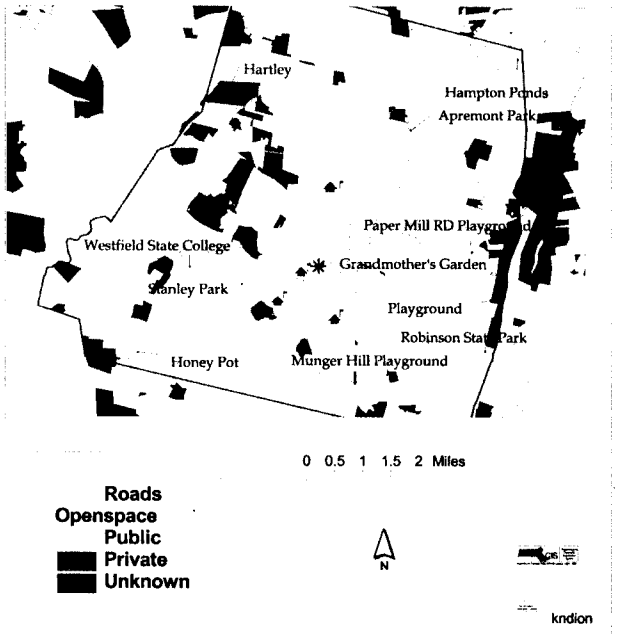

Figure 1. Open Space in Westfield, MA

the late 1970s money and volunteers were hard to come by and by 1994 the garden had to be closed due to the lack of both. This was provided the seed to grow a group of volunteers who were concerned for the love and care of the garden. This group is known as the "Friends of Grandmother's Garden". This group cares and publicizes for the garden. They are in the midst of a re-birth of GG, by renovating the garden. They produce a web site, (http://community.masslive.com/cc/GrandmothersGarden), flyers, membership and volunteer programs, such as a Grandmothers' Day essay contest.

Discussion

Recreation is an important part of life that people enjoy through various activities. Recreation is used for exercise, rest and relaxation, stress relief, family togetherness, and a variety of other reasons. After one is done with working, eating, sleeping, he or she may look for something to occupy this leisure time. This leisure time may be fulfilled with by the use of public parkland. Playing catch, taking a walk, or simply sitting on a favorite park bench observing the natural beauty of the landscape are ways park resources may be enjoyed. The value of parks and recreation may also arise by just looking forward to going to the park after a stressful and hectic day. Going to the park and doing an activity may result in stress relief, mental and physical revival, and a healthful state of mind. This in turn helps individuals continue with their busy lives by providing a renewed physical and mental capacity, which enables them to tackle whatever may be thrown their way. Therefore, parks are a most vital component of urban landscapes. Individuals need open space provided so they are not denied the necessity of recreation space as both a physical and mental supplement to overall well-being.

Bibliography

Brauer, D. G. (1972, November). Park planning for the future. Parks and Recreation, 14.

Bray, P. M. (1978, December 6). Preservation helps new parks take shape. Kite, 1.

Chubb, M., & Chubb, H. R. (1981). One third of our time? New York: John Wiley & Sons.

Cranz, G. (1982). The politics of park design-A history of urban parks in America. MA: MIT Press.

Driver, B. L., Brown, P. J., & Peterson, G. L. (Eds.). (1991). Benefits of leisure. State College, PA: Venture Publishing.

Fabos, J., Milde, G., & Weinmayr, V. (1968). Frederick Law Olmstead, Sr.-Founder of landscape architecture in America. MA: University of Massachusetts Press.

Garvin, A. (2000). A park's agenda for the 21st century. Parks and Recreation.

Iso-Ahola, S. (1980). The social psychology of leisure and recreation. IA: William C. Brown Co.

Johnson, E. R. (1972). Park resources for recreation. Columbus, OH: Charles E. Merrill Publishing.

Little, C. (1990). Greenways for America. Baltimore, MD: Johns Hopkins University Press.

Mandel, C. (1998). Soothing the urban soul. Canadian Geographic, 118(4), 30-41.

Russell, R. V. (1996). Pastimes, the context of contemporary leisure. US: Times Mirror Higher Education Group.

Stearns, R. M. (1995). The evolution of greenways as an adaptive urban landscape form. In Landscape and urban planning. Netherlands: Elsevier Science.

Vaughn, L. P. (2000, January). Take me to the river. Parks and Recreation, 62-73.

Wellington, A. (n.d.). An old fashioned garden: The story of grandmother's garden and Chauncey Allen Park of Westfield Massachusetts. Independent thesis project. Cambridge, MA: Radcliffe Seminars.

Williams, S. (1995). Recreation in the urban environment. London: Routledge.

Wright, G. (1996). National parks and protected areas: Their role in environmental protection. US: Capital City Press.

PARKS AND RECREATION EMPLOYMENT STATUS: IMPLICATIONS FROM A CIVIL SERVICE PERSPECTIVE

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Abstract: Current research on the credentialing process in parks, recreation and leisure services has focused primarily on accreditation and certification and has largely ignored the civil service exam as a credentialing toll or condition of employment in many state and municipal parks and recreation departments. It is the experience of the researchers of this study that a significant number of students are stunned when seeking many state and municipal parks and recreation jobs. This is so because they are usually confronted with the need to be tested and perform well on civil service examination as a condition of employment or a condition for retaining their position after provisional status has ended. The purpose of this study was to examine the extent of public recreation employment and wages at the state and municipal levels and draw inferences as to the extent employees and potential employees are subject to the civil service examination process. The results indicated that: 1) recreation employment at both the state and municipal levels is significant, 2) many prospective employees will inevitably be impacted by the need to take & successfully pass civil service examinations, since state & municipal departments are subject to this process, 3) although employment in terms of numbers & payroll amount is significant, public sector recreation employment is small compared to total public sector employment, 4) both within a region and among regions some inference can be drawn as to the recreation & leisure values held by elected officials and the population in general, and 5) Students will continue to acquire little knowledge of the civil service employment system because there are no current curriculum accreditation standards that require recreation programs to specifically address civil service employment issues.

Introduction

The U.S. Census Bureau (1998) reported that there were approximately 45,584 state and 202,888 municipal recreation employees in the United States. Approximately 5,000 state and 16,000 municipal employees were in the Northeast region. State recreation employee payroll was $90,623,678 and the municipal payroll was $455,558,562. It is assumed that recreation programs across the country want their graduates to secure good and well paying jobs, many of them in the public sector. Therefore, investigation of the public sector employment process as it relates to recreation and parks professionals is important.

The vast majority of public sector jobs (state and municipal) are controlled and regulated by state departments of civil service. They provide a wide range of services to ensure that state and municipal agencies meet their human resource needs in a timely manner. These departments determine salaries, classify job titles, recruit and test prospective employees, and certify eligibility lists. This study only begins to scratch the surface of the public sector employment process, therefore the researchers decided to segment their research into three phases and restrict data collection in phase one primarily to the Northeast region of the United States. The three phases of research cover: 1) a pre-census directory survey of all 87,000 local governments. It will include extensive legal research into government structure by state, as well as a mail survey, and will produce an updated list of all local governments and selected data, 2) all state governments, and will expand the census year annual finance survey from about 14,000 to all 87,000 local governments. It will use on-site data collection for many of the state and largest local governments, consolidated data submissions (usually electronic files) for about 55,000 local governments, and a mail survey of the remaining governments, and 3) all of the state governments and expands the census-year annual employment survey from about 10,000 to all 87,000 local governments. It relies on consolidated submissions for a limited number of state respondents, but is primarily a mail survey. The purpose the initial phase (phase 1), as presented in this paper, is to examine the extent of public recreation employment and wages at the state and municipal levels and draw inferences as to the extent employees and potential employees are subject to the civil service examination process.

Methodology

Data for phase one was collected from two secondary sources: 1) 1998 U. S. Census data (on-line via the Internet), and 2) state government civil service web sites. United States Census data was down loaded from the Census Bureau web site (http://www.census.gov/govs/www/apesstl.html) into MS Excel spreadsheet software. It was decided to group the data into regions for analysis at a later date. The state groupings are: Northeast (Maine, New Hampshire, Vermont, Rhode Island, New York Connecticut), Mid-Atlantic (Pennsylvania, New Jersey, New Jersey, Maryland, Delaware, Virginia, West Virginia), Southeast (North Carolina, South Carolina, Georgia, Florida), South (Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Arkansas, Missouri), Mid-West (Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa), Great Plains, (North Dakota, South Dakota, Kansas, Oklahoma, Nebraska), Rocky Mountain (Montana, Wyoming, Colorado, Idaho, Utah, Nevada), Southwest (New Mexico, Arizona, Texas), West (Alaska, Washington, Oregon, California, Hawaii).

The data that were collected from the U. S. Census Bureau web site included: 1) number of part time and full time state recreation employees, 2) number of all part time and

full time state employees, 3) total state recreation employee payroll, 4) total state employee payroll, 5) number of full time municipal recreation employees, 6) number of all municipal employees, 7) total full time municipal recreation payroll, 8) total payroll for all municipal employees, and 9) number of municipal recreation employees per ten thousand of population. The number of part time employees and payroll information for the municipal sector was not available. Job descriptions and job classifications were collected from the Northeast region via web sites. The State of Maine does not permit access to this type of information by the general public. The data for the remainder of the states was downloaded into word processing software for later analysis. Employment data was analyzed using descriptive statistics in the form of raw scores, rank ordering and percentages.

Results

As Table 1 indicates, the total state recreation employment payroll was $90,623,678, and total municipal recreation payroll was $455,558,529. It is important to note that the Southeast region had the largest municipal payroll ($18,060,443) while the Northeast region had the third largest ($13,501,027). The West region had the highest state payroll ($104,140,492) while the Northeast region had the fifth largest ($41,243,059). Additionally, Table 1 shows the ratio of regional state payroll to regional municipal payroll. The region with the lowest ratio of state payroll to municipal payroll was the Mid-West and the region with the highest ratio of state to municipal payroll was the Great Plains.

Table 2 shows the percentage of regional state recreation payroll to total regional state payroll. The Northeast regional ranked fourth with a share of total state recreation payroll of .86%. The region with the largest share of total state recreation payroll was the Great Plains (2.11%), while the Mid-West held the smallest share (.38%).

As Table 3 indicates, the recreation employment share of total payroll for the Northeast region was 9.3% of the national recreation payroll. The West region had the highest percentage of total national payroll (23.4%), while the Great Plains reported the least (3%).

Table 1. State & Municipal Payroll by Region, 1998

REGION	STATE RECREATION PAYROLL	MUNICIPAL RECREATION PAYROLL	RATIO STATE TO MUNICIPAL PAYROLL
Northeast	$13,501,027	$ 41,243,059	.325
Mid-Atlantic	$14,144,925	$ 47,424,467	.298
Southeast	$18,060,443	$ 53,491,833	.351
South	$10,585,421	$ 30,180,578	.350
Mid-West	$ 7,987,682	$ 93,768,383	.085
Great Plains	$ 8,438,440	$ 13,227,816	.637
Rocky Mountain	$ 2,926,491	$ 25,347,225	.115
Southwest	$ 3,953,000	$ 36,734,679	.107
West	$11,026,249	$104,140,492	.105
TOTAL	**$90,623,678**	**$445,558,529**	

Table 2. Percent of Regional State Recreation Payroll to Total State Payroll, 1998

REGION	% RECREATION PAYROLL
Northeast	.86%
Mid-Atlantic	.87%
Southeast	1.37%
South	.82%
Mid-West	.38%
Great Plains	2.11%
Rocky Mountain	.55%
Southwest	.39%
West	.56%

Table 3. Percentage of Regional Municipal Recreation Payroll to National Recreation Payroll, 1998

REGION	PERCENTAGE
Northeast	9.3%
Mid-Atlantic	10.6%
Southeast	12.0%
South	6.8%
Mid-West	21.0%
Great Plains	3.0%
Rocky Mountain	5.7%
Southwest	8.2%
West	23.4%

Whereas job classifications were available for most states, for the purpose of phase 1 of this study, such information was only collected for the Northeast at the state level. It was found that the majority of civil service classifications for recreation positions were grouped into two categories: 1) park operations and 2) therapeutic recreation. Table 4 illustrates job classifications for the state of Connecticut. Although the other states in the Northeast were not presented in this paper, the patterns that are indicated in Table 4 are typical.

As indicated in Table 5, the data was rank-ordered from the most number of employees to the least number of employees. It shows that for the Northeast region the State of Connecticut possessed the highest ratio (6.7:10,000) of municipal recreation employees to the general population and the State of New Hampshire had the lowest (2.5:10,000).

Table 6 depicts the ratios of states with the highest and lowest municipal recreation employees to the general population within a region. The State of Hawaii possessed the highest ratio (15.7:10,000) and the State of New Hampshire the lowest (2.5:10,000).

Table 7 indicates that the Rocky Mountain region had the highest average number (9.52:10,000) of recreation employees per ten thousand of population, while the Northeast region had the lowest (3.87:10,000).

Table 4. Job Classifications for Connecticut

PARK OPERATIONS
Park Operations Environmental Protection Operations Supervisor
Environmental Protection Park and Recreation Supervisor 1
Environmental Protection Park and Recreation Supervisor 2
Environmental Protection Park and Recreation Supervisor 3
Environmental Protection Recreational and Resource Coordinator
THERAPEUTIC RECREATION
Rehabilitation Therapist 1
Rehabilitation Therapist 2
Rehabilitation Therapy Assistant 1
Rehabilitation Therapy Assistant 2
Rehabilitation Therapy Supervisor 1

Table 5. Number of Municipal Recreation Employees per 10k of Population: Northeast Region, 1998

STATE	EMPLOYEES
Connecticut	6.7
New York	5.9
Maine	4.8
Massachusetts	3.5
Rhode Island	3.4
Vermont	3.1
New Hampshire	2.5

Discussion and Conclusions

Recreation employment at both the state and municipal levels is significant even though, at face value, it is a small fraction of total public sector employment. When examined in the context of the volume of total public sector jobs, the raw numbers are vital as a marketing tool for attracting prospective parks and recreation students. In addition, many prospective employees will inevitably be impacted by the need to take & successfully pass civil service examinations, since state & municipal departments are subject to this process, as evidenced by the job classifications.

The data reveals very interesting information about each region and within regions. Payroll data suggests how

Table 6. Number of Employees per 10k of Population High/Low All Regions, 1998

REGION	STATE	EMPLOYEES
Northeast	Connecticut	6.7
	New Hampshire	2.5
Mid-Atlantic	Maryland	12.1
	Pennsylvania	2.9
Southeast	Florida	10.8
	North Carolina	5.7
South	Alabama	7.8
	Mississippi	3.5
Mid-West	Illinois	12.4
	Michigan	4.8
Great Plains	North Dakota	13.1
	Oklahoma	6.3
Rocky Mountain	Colorado	14.4
	Montana	4.4
Southwest	New Mexico	10.5
	Texas	6.5
West	Hawaii	15.7
	Alaska	5.6

Table 7. Regional Mean of Number of Employees per 10k of Population, 1998

REGION	MEAN
Rocky Mountain	9.52
West	9.48
Southwest	8.4
Great Plains	8.34
Mid-West	7.27
Southeast	7.2
Mid-Atlantic	6.82
South	5.91
Northeast	3.87

evenly/unevenly employment is divided. The region with the most even employment is the Great Plains. This may suggest the lack of state parks as tourist destinations and more use of these state parks by the local population. Therefore, the distribution of services between state and localities is more evenly divided. While the region with the most uneven distribution between state and municipal employment payroll (Mid-West) may indicate a different set of issues. The Mid-West (Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa) has a much greater number of high population cities than the Great Plains which may indicate a higher concentration of municipal recreation services. Additionally, the organization of park districts in Illinois my skew the data, as it is not known how the U.S. Census Bureau categorized employment in special districts.

Other data that stands out is the information concerning the Northeast region. The Northeast (Maine, New Hampshire, Vermont, New York, Massachusetts, Connecticut, Rhode Island) possesses the highest concentration of people in the United States. Yet in total recreation payroll (state & municipal) the Northeast is ranked 6th, in state payroll it is ranked 3rd, in municipal payroll it is ranked 5th, in percent of regional state payroll to total state payroll it is ranked 4th, in percentage of regional municipal payroll to national municipal payroll it is ranked 5th, and lastly the Northeast region is ranked 9th or last in the number of municipal employees per 10,000 of population.

This data covering the number of municipal employees per 10,000 of general population both within a region and among regions indicate that some inference can be drawn as to the recreation & leisure values held by elected officials and the population in general. Full data is provided for the Northeast region in Table 5. For example the states/regions which seem to be the most conservative possess the highest number of municipal employees per 10,000 of population. Does this mean that residents of these regions place a high value on local recreation services that counter balances their belief in small government?

The regions and states with the highest ratio of municipal recreation employees are places with a great number of outdoor recreation opportunities and tourist destinations. Does this mean that municipalities are taking a greater roll in supporting tourist activities? One example that one of the researchers observed during a 1997 trip to Colorado was the community recreation center in Breckenridge. It was built with a dual role. First, to provide community recreation for its residents. Second to provide winter tourists to the area an alternate location to enjoy family indoor recreation in the evening and when the weather was poor, providing a secondary recreation opportunity.

Public sector employment in the United States is a very complicated and regulated process. Each state controls public employment through their respective civil service organizations, and each lower level of government (county, city) has its own civil service organization. Research suggests that like many government agencies, civil service organizations are subject to political stress (Desai & Hamman, 1994; Kellog, 2000; Kellough, 1999; and West & Durant, 2000). In New York State, for example, prospective employees of recreation positions have responded in interviews (B. Emelson, personal communication, April 3, 2000) that the tests they recently took, for the most part, do not reflect what is being taught in the recreation programs that they received their undergraduate degrees from. This implies the need to examine the congruence between education preparation and the competencies necessary to successfully complete the civil service examination. Currently there are no NRPA/AALR accreditation standards regarding the civil service process for undergraduate degree programs. Without a standard addressing the civil service process and testing, or a systematic plan by educational institutions to address civil service competencies, students will be inadequately prepared for the entry process to public sector employment.

Areas for Further Study

As mentioned in the introduction, the researchers realized that the subjects of the civil service process, credentialling and accreditation is a very large area for study, and that the researchers decided to segment the research into three phases. Phase one, determining the importance of the subject presented here. Phase two of the research process will encompass the following: collecting data from all of the state governments, and expand the census year annual finance survey from about 14,000 to all 87,000 local governments. It will use on-site data collection for many of the state and largest local governments, consolidated data submissions (usually electronic files) for about 55,000 local governments, and a mail survey of the remaining governments.

Phase 3 will cover all of the state governments and expands the census-year annual employment survey from about 10,000 to all 87,000 local governments. It relies on consolidated submissions for a limited number of state respondents, but is primarily a mail survey.

List of References

Desai, U., & Hamman, J. (1994). Images and reality in local government personnel practices: Investigating the "quiet crisis" among Illinois city officials. Public Administration Review, 54(4), 391-397.

Kellogg, J. (2000). Political patronage. IRE Journal, 23(6), 19-21.

Kellough, E. (1999). Reinventing public personnel management: Ethical implications for managers and public personnel systems. Public Personnel Management, 28(4), 655-672.

State of Connecticut. (2001). Department of Administrative Services. http://www.das.state.ct.us/HR/Jobspec/JobSearch.asp

State of Maine. (2001). Department of Human Resources web site. www.state.me.us/bhr/index.html

State of Massachusetts. (2001). Department of Human Resources web site. www.state.ma.us/hrd/ceo.

State on New Hampshire. (2001). Department of Personnel. http://webster.state.nh.us/das/personnel/classindex_a_d.htm

State of New York. (2001). Department of State website. http://www.cs.state.ny.us/cc/titleplan.html

State of Rhode Island. (2001). Department of Labor and Training website. www.dlt.state.ir.us/

State of Vermont. (2001). Agency of Human Services. http://www.state.vt.us/query.htm

U. S. Census Bureau. (2000). http://www.census.gov/govs/www/apesstl.html

West, W., & Durant, R. (2000). Merit, management, and neutral competence: Lessons for the U.S. Merit Systems Protection Board, FY 1988-1997. Public Administration Review, 60(2), 111-122.

NATURAL RESOURCES INTERPRETATION: THE ROLE OF RESEARCHERS A NEW-OLD APPROACH

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Abstract: For the past several years interpretive programs for visitors at Isle Royale National Park have included presentations by natural resources researchers. These researchers are presenting the findings of their Lake Superior and Isle Royale National Park research directly to the public. This cooperative and developing project involves many individuals representing many fields in a joint venture bringing together Michigan Technological University (MTU) and the National Park Service (NPS) personnel. Park personnel and University staff have been very supportive of these successful efforts to create an additional interpretive experience for Park visitors.

Background

When Americans think of their National Parks, the image of the Park Ranger is one that often comes to mind. For many visitors, the Ranger campfire program was and still is one of the main sources of information and interpretation of the Park unit that they are visiting. While Ranger duties are numerous, it can be said that interpretation remains the most public and identifiable component of the National Park Service (NPS) Ranger activities. Public education has been part of park visits even before there were park rangers. It has been said that the first park naturalists were the university professors that did public presentations in Yosemite National Park starting in 1919. These researchers were there at the invitation of National Park Director Stephan Mather. Both the naturalist programs presented by the concessions and the presentations by the professors were instrumental in the development of the interpretive programs of later years (Albright,1985). Many of the early park naturalists were employed as professors, teachers or natural resources researchers. These early efforts are very similar to the project at Isle Royale National Park which is why this paper recognizes past NPS efforts.

Over the years there have been improvements and directives in the manner that interpretation should be presented to the public. One of the most notable was Freeman Tilden's book, Interpreting Our Heritage, written in the 1950s. This book is still recognized as a useful resource by many NPS personnel. In his book, Tilden outlines six principles of interpretation that are still considered useful guidelines.

The Isle Royale project suggests an expansion and continuation in the concept of public presentations by researchers that was first seen in 1919 at Yosemite. This project is a cooperative educational and interpretive approach within the NPS that could complement and be included in Interpretive Ranger programs. This effort involves natural resource researchers or scientists presenting the results of their research directly to the public rather than in presentations by NPS Interpreters. Many National Parks include natural resources research information in their interpretation ranger training yearly, but it has been reported that this information is not always integrated into the rangers programs (NPS interview, Acadia, 2001).

For the purpose of this paper, interpretation can be defined as a method for "people (to) communicate the significance of cultural and natural resources" (Knudson et al., 1999, p. 4). As already indicated, traditionally National Park interpretation has been performed by naturalists or Park Rangers referred to as interpreters. The interpreters provide programs, exhibits, and educational opportunities for the public (Mackintosh, 1986). These Ranger programs have been a very popular component of NPS efforts to educate and inform the public about Park issues.

The Isle Royale project suggests a different educational and interpretive approach within the NPS because it involves natural resource researchers presenting the results of their research directly to the public rather than in presentations by NPS interpreters. Researchers in cultural resources have for many years presented their findings directly to the public in many settings, but public presentations are more unusual for the natural resources researcher.

NPS research is often funded by the public through taxes and donations yet generally not understood or even seen by those that pay the bill. Research results are generally presented at conferences to an audience of other researchers. Studies may be published in journals that researchers view but are rarely read by the general public. There are exceptions including the annual report of the wolf-moose study conducted by Dr. Rolf Peterson of MTU that is published by the Isle Royale Natural History Association.

This project is referred to as a "new-old approach" in recognition of interpretation done by researchers in other fields. For example, interpretation has been done by cultural researchers here in Michigan at Fort Michilmackinac for forty years. At that park archeologists are viewed by the public while they are conducting their research by uncovering the old fort sites and interpreting the artifacts as they are uncovered (DNR, interview 1999). This Michigan State Park is a good example of cultural resource researchers interacting directly with the public in a manner that happens in many parks in this country. There are park units that have a few presentations by researchers during a season, but none to my knowledge are attempting the numbers of programs that the Isle Royale project has already successfully accomplished. There are also a small number of NPS units that are starting to suggest an incorporation of researchers into their interpretive programs (NPS, 1999). One example is the conference that Fire Island National Seashore provides biennially where the public can hear researchers explain their studies (NPS interview, 2001).

Isle Royale National Park

Isle Royale National Park is the project site and there are many park personnel that are very supportive of these efforts. Isle Royale was authorized as a National Park in 1931 as one of the nation's first nature parks rather than a scenic park (Runte, 1997). Isle Royale National Park is an archipelago of 400 islands, located within the northwest corner of Lake Superior. The islands, which include the largest island in Lake Superior, vary in size from over 40 miles in length to only a few square feet (NPS, 1995). In addition to the islands, the National Park Service manages the surface of Lake Superior four and one-half miles out from the shoreline. This results in approximately 80% of the Park consisting of water (Isle Royale National Park Pamphlet, 1996). The total area of the Park is approximately 571,790 acres of which approximately 133,782 acres are land. (National Park Service, 1995). In 1976, 98% of the land area of the Park was designated as Wilderness by the federal government. This percent has since been increased to 99% (NPS, 1995). Today, Isle Royale National Park remains one of the largest federally designated wilderness areas in the Midwest. In 1980, the United Nations declared the Park an International Biosphere (DuFresne 1991). This designation is one indicator of the importance of the natural resources in this park for all peoples of the world. Isle Royale National Park is one of the least visited parks in the National Park system, due in part to the difficulty in traveling to it. The total number of annual visitors is less than 20,000 (Isle Royale Report, 1999).

Isle Royale Project

This project involves the presentation of a new format of interpretive programs on board the ship *Ranger III* as it crosses Lake Superior with Isle Royale National Park visitors. *Ranger III* is a 165-foot ship operated by the National Park Service and carries up to 125 passengers per six hour trip. This ship makes approximately 64 round trips from Michigan to Isle Royale National Park per season. Park Interpretive Programs traditionally have been offered to the visitors by a NPS Ranger to prepare them for their visit to this wilderness national park. These Ranger programs have presented topics such as rules/regulations of the Park, safety, and low impact camping. Since 1996, programs have been expanded to include presentations by researchers discussing the results of their research at Isle Royale. The topics of those presentations have included wolf-moose balance, Lake Superior, geology, remote sensing, astronomy, habitat fragmentation, frog, flower and bird studies, climate change and loon research. The impact of these presentations by researchers on visitors' knowledge and attitudes has not yet been studied.

During the summer of 1999, researchers used a large screen television and a computer to display their research directly to the public as part of their interpretive presentations. These presentations incorporate technology through the use of computers (PowerPoint) as well as being able to display research as it is generated. This "real-time" data display is unusual in the field of natural resources interpretation. Some researchers onboard the *Ranger III* present their data, using this technology, directly to the public as soon as they receive it. For example, Lake Superior water study data (primarily temperature) is collected from the *Ranger III* using probes. When these probes are dropped into the lake they transmit their data directly to the researcher's computers onboard the ship and then this data can be displayed to the public.

How Effective Are These Programs?

The public has responded very positively, both verbally and in writing, to programs by natural resources researchers. While there is interest in expanding these presentations, it would be useful to understand the impacts of presentations by researchers on visitors experiences, knowledge, and behavior during their Park visits; as well as the researchers' presentation style on the audience's enjoyment and education. What do Park visitors experience and learn due to their direct involvement and exposure to natural resources research?

Proposed Procedures

- To qualitatively interview Park visitors during summer of 2001.
- To assess impact by collecting informal feedback from Park visitors and staff.
- To develop and pilot an instrument during 2001 that will assess impact of the project to be used during summer 2002.
- To administer the instrument to Park visitors during the summer of 2002.

Conclusion

I believe this project will be of interest and benefit to at least three groups. First, the National Park Service will be able to better understand the public's ability to learn from interpretive programs and therefore be able to add to the present formats of programs being presented. The second group that could benefit are the researchers and their related institutions. They will have a better understanding of useful approaches to the public in presenting their research. Finally, the public may develop a greater understanding of and interest in the research that is occurring in the National Parks. Through that understanding, there may be a change in behaviors that adversely affect the Parks and their resources. Additionally, the public may become more supportive of the financial needs of the Park Service and related research efforts.

One side benefit of this research project is that it is not limited to a narrow field of interest but rather it could appeal to anyone who wants their research better understood by the public. Additionally, researchers may find presentations beneficial in meeting with other researchers. An example of this occurred when two different groups of researchers became aware of each other's efforts that are similar during a presentation.

Finally, the public may be the biggest beneficiary of this project. Last summer after participating in one of the "real time" programs, an individual exclaimed that it was the first time he had been treated like an adult in a National Park interpretive program in several years. He concluded by saying that unless you are exposed to programs that are over your head you will not learn (Park Interview, 2000).

Another visitor to Isle Royale National Park wrote the following to the Park Superintendent, "I believe the National Parks were created under the same guidelines as the Constitution. They were created by the people for the people. If the people do not feel welcome, they will cease to come. If they cease to come, they will cease to bring their children. These children will be the ones who will inherit Isle Royale. If they do not know her, when the time comes for funding cuts, they will not hesitate killing something they do not know" (Personal letter, 1998). The Isle Royale Project is one of the many cooperative projects that are being undertaken by the NPS and researchers to help our park visitors understand the unique resources that we all have inherited.

Bibliography

Albright, H. M. (1985). The birth of the National Park Service. Chicago, IL: Howe Brothers.

Bilecki, M. (1997). Does the public care about research and inventory projects in the park? Park Science, 17(1), 12.

Blodgett, S. (1999). 1999 Interpretive sourcebook. Syracuse, NY: National Association for Interpretation.

Burzynski, R. (1991). Promoting land ethics: A challenge for interpretation. Trends, 28(3), 31-34.

Crosbey, A. (1996). Is interpretation being confused with information? The Interp Edge, 3(3), 19.

Dahlen, D. (1998). Interpretive development program: Defining an NPS standard. Journal of Association of National Park Rangers, 14(3), 2-4.

Fazio, J. & Gilbert, D. (1986). Public relations and communications for natural resource managers. Dubuque, IA: Kendall/Hunt.

Knapp, D. (1998). Ecology versus issue interpretation: The analysis of two different messages. Journal of Interpretation, 3(1), 21-36.

Knudson, D., Cable, T., & Beck, L. (1995). Interpretation of cultural and natural resources. State College, PA: Venture.

Kohen, R., & Sikoryak, K (1999a). Comprehensive interpretive planning. Legacy, 10(4), 25-30.

Kohen, R., & Sikoryak, K. (1999b). The effective planning of parkwide interpretive programs. Washington DC: US Department of the Interior.

Lime, D., Pierskalla, C., & Anderson, D. (1996). Isle Royale National Park 1996 visitor survey.

Lime, D., Pierskalla, C., & Anderson, D. (1997). Isle Royale National Park 1997 visitor survey.

Ma, X., & Bateson, D. (1999). A multivariate analysis of the relationship between attitude toward science and attitude toward the environment. Journal of Environmental Education, 31(1), 27-32.

Mackintosh, B. (1986). Interpretation in the National Park Service: A historical perspective. Washington, DC: National Park Service.

National Park Service. (1997). Achieving excellence in interpretation. Washington DC: US Department of the Interior.

National Park Service. (1998). General management plan: Isle Royale National Park. Washington DC: US Department of the Interior.

National Park Service. (1999). Hawaii Volcanoes National Park comprehensive interpretive plan. Hawaii Volcanoes National Park.

National Park Service. (1996). Home page, Isle Royale National Park.

National Park Service. (1998). National Parks Omnibus Management Act of 1998. The George Wright Forum, 15(4), 13-15.

National Park Service. (1997). San Francisco maritime final general management plan. Washington DC: US Department of the Interior.

National Park Service. (1995). The National Parks: Index 1995. Washington DC: US Government Printing Office.

National Park Service. (1991). The National Parks: Shaping the system. Washington DC: US Government Printing Office.

National Park Service. (1992). The Vail agenda. Montpelier, VT: Capital City Press.

National Park Service. (1999). Wilderness and backcountry management plan. Newsletter. Houghton, MI: Isle Royale National Park.

Neel, S., & Schullery, P. (1998). Historical perspectives on science and management in Yellowstone National Park. The George Wright Forum, 15(4), 16-18.

Peterson, R. (1997). The ecological studies of wolves on Isle Royale - 1996/1997. Annual Report. Houghton, MI: Isle Royale Natural History Association.

Peterson, R. (1998). The ecological studies of wolves on Isle Royale - 1997/1998. Annual Report. Houghton, MI: Isle Royale Natural History Association.

Peterson, R. (1995). The wolves of Isle Royale. Minocqua, WI: Willow Creek Press.

Reilly, P. (1997). Parks as classrooms - Model programs reaching new audiences. Trends, 34(2), 40-43.

Runte, A. (1997). National Parks: The American experience. Lincoln: The University of Nebraska Press.

Shelton, N. (1997). Superior wilderness: Isle Royale National Park. Houghton, MI: Isle Royale National History Association.

Tilden, F. (1977). Interpreting our heritage. Chapel Hill: The University of North Carolina Press.

Van Frankenhuyzen, G. (1992). Impressions of Isle Royale. Michigan Natural Resources, 61(5), 28-35.

MOUNTAIN BIKE TRAIL COMPACTION RELATION TO SELECTED PHYSICAL PARAMETERS

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Abstract: The purpose of this research is to explore the rates of compaction and their relation to trail contextual aspects of: soil type, slope and crown cover on a newly established mountain bike trail in the northern reach of Vermont. A random sample of 52 sites was selected for monitoring on the 1.09-mile trail. Three penetrometer readings were taken at each of the sample sights on two-week intervals beginning the day after trail construction was complete. Soil core samples were also taken at each site to determine soil type. Crown cover estimates were determined using the USDA Forest Service code-a-site estimation categorization, and slope aspect was evaluated by the use of a clineometer.

The data collected in this study support the basic premise found in (Hammitt & Cole, 1998) that compaction is curvilinear. Compaction on the midpoint of the trail occurred within six weeks of the inception of the trail and stasis was reached by the fourth time period (eight weeks). Compaction for the tread as a whole likewise occurred, but at a slower rate and to a lesser degree.

No interaction effect was observed between the effect of compaction measurement over time with slope and crown cover. The lack of an interaction effect between compaction and slope may have been a result of the relatively small deviation in slope among sites. The lack of an interaction between compaction over time and crown cover may be a result of the relatively virgin characteristics of the soil. The duff layer of organic material is being pulverized and compacted but is still able to dry even in areas with significant crown cover. The lack of variability in soils at this stage in the trail lifecycle may account for the non-significant interaction with soil type and compaction.

The study has multiple implications for managers of mountain bike trail systems in the eastern United States. Managers will need to monitor trails once stasis is reached because the forest duff levels are pulverized and the trails are susceptible to erosion. As established trails are compacted managers may: prefer to confine users to existing tracks by narrowing trial side conditions; hardening the track to minimize erosion and by educating riders to stay within the established track, and limiting access during prolonged wet conditions.

The relationship of the contextual or setting aspects of a trail to compaction rates and the interrelation with recovery rates provide a better understanding of the physical parameters of trail location. Understanding and study of these relationships can aid in trail planning and enable managers to build a sustainable trail. A study of this type can be easily replicated in other areas to account for differences in soil and vegetation type.

Introduction

Compaction of recreation trails and use areas is well documented in the literature. Increase in compaction vary with regard to soil type, type of use, and soil characteristics such as moisture content, texture and structure. Most studies have examined such compaction as a result of human trampling, pack stock, and off road vehicle use; and have focused on existing trails or use areas (Wilshire, Nakata, Shipley, & Prestegaard, 1978; Manning, 1979; Marion & Cole, 1996; Hammitt & Cole, 1998). Little literature has examined the compaction on newly established trails, especially by mountain bicycle users, nor related such compaction to other physical aspects of the setting. As more areas allow such use on new and established trails, there is a need to study the effects of compaction on soils in the context of slope, soil type, and crown cover as they are the basic structure for understanding vegetation loss and erosion.

This research was conducted on a trail managed Kingdom Trails Association (KTA) in East Burke Vermont. The trail was designed to utilize the natural contours of the landscape, thus eliminating the need for excavation. The site was chosen because it extended the existing system, the owner allowed trail development, and the new trail provided a scenic river vista. A Youth Conservation Crew from the Vermont Leadership Center in East Charleston Vermont cleared the trail, which was laid out by KTA. The crew cleared a tread to 20 inches in width and of 36 inches in width up to 7 feet high. The ground compacted as bicycles began to use the trail.

The purpose of this research was to explore the rates of compaction and their relation to trail contextual aspects of slope, crown cover, and soil type on a newly established mountain bike trail in the northern reach of Vermont. The trail is divided into two segments. The first is essentially a linear segment of four-tenths of a mile that allows the user to crossover to an intersection of trails, one of which was cut at the same time as the new linear segment and is essentially a loop approximating seven-tenths of a mile in length. A random sample of 52 sites was selected for monitoring compaction on the 1.09-mile trail. Sites were selected at intervals of 105 feet from the trailhead of the linear segment. The trail varies in vegetation type, slope, soil type, and degree of mature vegetation crown cover.

Methods

Three penetrometer readings were taken at each of the sample sites on two week intervals beginning the day after the trail construction was completed; readings continued until the first heavy frost penetration on unprotected sites

the beginning of November 2000. Penetrometer readings were taken perpendicular (across) to the trail, one in the estimated middle of the trail, and one each, 25 centimeters on each side of the middle reading. Baseline data was collected at each of the 52 field sites on July 27, 2000, the first day after the cutting of the trail was completed. Five of the seven data collection days were dry; two were misty with intermittent light precipitation. Subsequent to the baseline data collection, increasing use of the trail was observed from July through the end of October. Although no actual counts were taken, it was estimated by observation and interpolation that an average of eighteen to twenty five riders used the trail segments weekend days and ten to twelve used them during weekdays.

Soil core samples were also taken at each site to determine soil type. Soil samples were taken at each site at a constant depth of approximately four inches and were subsequently typed by a soil scientist of the USDA Natural Resource Conservation Service. Crown cover estimates were determined using the USDA Forest Service code-a-site estimation categorization, and slope aspect was evaluated by use of a clineometer. The relationship between compaction rate and percent of crown cover and degree of slope was tested using Repeated Measures ANOVA.

Results

The mean penetrometer measures from the initial reading and the final seventh reading indicated an increase in the resistance levels for each of the three site measurements (middle, left, and right side of trail), over the 52 sites. An averaged reading over the three measurements at each of the 52 sites had a similar pattern, showing a significant difference between the baseline measurement and the end of the season (see Table 1). The middle trail reading indicates a higher compaction differential than the two outside readings on the trail tread.

Repeated measures ANOVA were calculated for both the averaged penetrometer readings and for those in the middle of the trail, comparing the penetrometer readings of the 52 sites at seven different times. A significant effect was found ($F(6,306)= 41.91$, $p< .000$) for the averaged penetrometer readings. Protected t tests were used to compare the time periods; because we are in essence conducting tests on all possible pairs (21 tests) and therefore inflating our Type I error rate, we used a significance level of .0024 (.05/21) instead of .05. Protected t tests revealed that averaged penetrometer readings did not increase from the first time period (m=201.07, sd=85.14) to the second time period (m=200.23, sd=60.03), but increased from the second time period to the third (m=225.51, sd=56.12), and again increased from third to fourth time period (m=260.43, sd=72.45). There was no significant increase from the fourth time period (m=260.43, sd=72.45) to the fifth (m=267.85, sd=46.02), no significant difference from fifth to the sixth (m=274.53, sd=55.02), and again, no increase from the sixth to the final, seventh time (m=295.35, sd=58.15, $p= .007$). This indicates that most of the compaction occurred across the tread before the fifth penetrometer reading.

The repeated measures ANOVA, with slope as a covariate, for the middle of the trail readings, revealed a similar pattern—there was a significant effect ($F(6,300)= 37.45$, $p<. 000$) for the penetrometer readings taken in the middle of the trail. Follow-up protected t tests (see Table 2) indicated an increase in penetrometer resistance in the middle of the trail from the first time period (m=252.85, sd=104.98) to the second period (m=300.82, sd=57.36), again from the second time period to the third period (m=345.81, sd=69.91), but not from the third to the fourth period (m=403.64, sd=148.16). No significant differences were found between successive time periods from the third period. This suggests that compaction occurred more quickly in the middle of the tread than across the width of the entire tread.

An analysis of within subject effects of the covariate of slope with the middle of trail penetrometer readings over time indicated no interaction effect ($F(6,300)= .998$, $p>.05$). Similarly, there was no interaction of penetrometer readings over time and the covariate crown cover ($F(6, 300)= 1.462$, $p= .191$).

Table 1: Paired Sample Differences in Penetrometer Resistance (psi) for the Three Measurement Points on the Trail

Measurement Point	Mean PSI	Std. Deviation	Paired samples t	Sig.
Middle of Trail				
Pair Mid 1-	252.85	104.98	-10.42	.000
Mid 7	429.24	73.29		
Left Side				
Pair Left 1-	241.04	100.92	-2.53	.015
Left 7	274.14	75.45		
Right Side				
Pair Right 1-	208.73	91.70	-48.20	.000
Right 7	282.02	81.12		
Average Over Three				
Pair Ave 1-	201.07	85.14	-8.58	.000
Ave 7	295.35	58.15		

Table 2: Paired Sample Tests for Seven Successive Time Periods

Pairs	Mean	Std. Deviation	Paired samples t	Sig.
Pair Mid 1- Mid 2	252.85 300.82	104.98 57.36	-3.56	.001
Pair Mid 2- Mid 3	300.82 345.81	57.36 69.91	-5.36	.000
Pair Mid 3- Mid 4	345.81 403.64	69.91 148.16	-2.49	.016
Pair Mid 4- Mid 5	403.64 426.55	148.16 63.24	-1.13	.266
Pair Mid 5- Mid 6	426.55 418.23	63.24 63.15	.764	.448
Pair Mid 6- Mid 7	418.23 429.24	63.15 73.29	-.868	.389

Discussion

The data collected in this study supports the basic premise found in Hammitt and Cole (1998) that compaction is curvilinear (see Figure 1). Compaction on the midpoint of the trail occurred within six weeks of the inception of the trail and stasis was reached by the fourth time period. No statistically significant compaction occurred after the third time period for the middle of the trail. Compaction for the tread as a whole (average in Figure 1) likewise occurred, but at a slower rate and to a lesser degree.

No interaction effect was observed between the effect of compaction measurement (penetrometer readings) over time and slope or crown cover characteristics of the trail at each site. Slope gradients averaged 5.15 degrees, sd = 4.31, and other than three outliers, the gradients ranged between 1 and 11 degrees; only thirteen percent of sites were over 9 degrees in slope.

The decline in compaction between the fifth and sixth time period may be the result of the level of compaction that was measured at the fifth time period in which wet soil

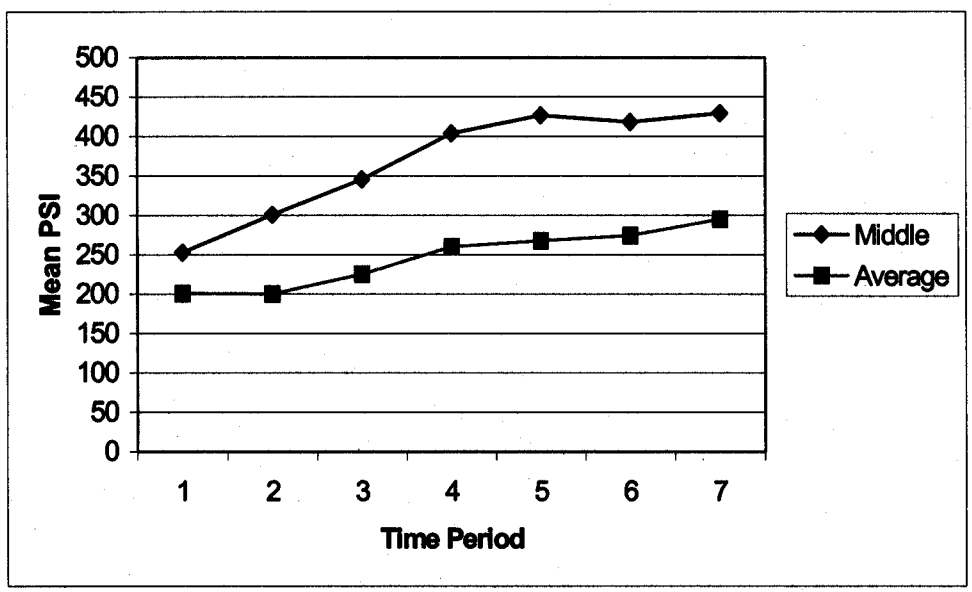

Figure 1: Mean PSI for Middle of Trail and Average over Tread for Seven Time Periods

conditions occurred after two days of steady rain. The lack of an interaction effect between compaction and slope may have been a result of the relatively small deviation in slope among sites. The lack of an interaction between compaction over time and crown cover may be a result of the relatively virgin characteristics of the soil, the duff layer of organic material is being pulverized and compacted but is still able to dry even in areas with significant crown coverage.

Implications

The study has multiple implications for managers of mountain bike trail systems in the eastern United States. Similar to previous studies in the west, mountain bike trails compact quickly. Little traffic causes compaction to accelerate fairly rapidly—there was observable evidence of compaction within three days of the trail opening and significant compaction occurred within six weeks, at which time stasis appears to have been reached. Managers will need to monitor trails during periods of this stasis, as this appears to be the point at which forest duff levels are pulverized and susceptible to erosion. As established trails are compacted, managers may prefer to confine trails to existing tracks by altering trail side conditions, harden the track to minimize erosion, and by educating riders to stay within the established track. Wet soils resulted in greater compaction, suggesting that managers may wish to limit access during prolonged wet conditions.

The relationship of contextual or setting aspects of a trail resource to compaction rates and their interrelation with recovery rates provides a better understanding of the physical parameters of trail location for more effective trail planning and for decisions regarding trail maintenance. Such a study can be easily replicated in other areas to account for differences in soil and vegetation type.

KTA saw a need to develop a monitoring system in order to quantify the rate of change as trail use increases. The results provide criteria for future monitoring (i.e. desirable slope, canopy cover and sustainable soil characteristics) as KTA studies the effect of freeze-thaw conditions on trail recovery, rates of compaction the second year, and as soil duff levels dissipate and erode to the mineral level. The monitoring of the trail over time may also provide management with indicators for implementing action strategies such as hardening the trail before over use occurs.

Future Monitoring Activities Will Incorporate:

1) number of users – with the use of counters;
2) how a trail effects the surrounding vegetation;
3) extent of recovery and subsequent acceleration of compaction; and
4) continued monitoring of the relationship between compaction over time and slope, crown cover, and soil type.

References

Hammitt, W. E., & Cole, D. N. (1998). Wildland recreation: Ecology and management. New York: John Wiley & Sons.

Manning, R. E. (1979). Impacts of recreation on riparian soils and vegetation. Water Resources Bulletin, 15(1), 30-43.

Marion, J. L. & Cole D. N. (1996). Spatial and temporal variation in soil and vegetation impacts on campsites. Ecological Applications, 6(2), 520-530.

Wilshire, H. G., Nakata, J. K., Shipley, S., & Prestegaard, K. (1978). Impacts of vehicles on natural terrain at seven sites in the San Francisco Bay area. Environmental Geology, 2, 295-319.

INTERNET & BRANDING: A PERFECT MATCH OR A FATAL ATTRACTION? ANALYSIS OF FIFTY STATES OF THE U.S. OFFICIAL TOURISM WEBSITES

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Abstract: Internet plays a significant role in generating new business and facilitating customers' need for a better way to plan and book their trips. From a marketers' perspective, one of the seemingly "fatal attractions" of the Internet for DMOs is that it can be an extremely effective tool in terms of both cost effectiveness and market penetration compared with other traditional forms for destination branding. Employing a content analysis of the slogan, graphic projection, verbal expression, and other explicit or implied messages at the official tourism website of each state, the study attempts to delineate unique selling propositions (USP) and positioning strategies of destination organizations at the state level. Also, the state's tourism slogans were analyzed and categorized into types for an evaluation of their efficiency in terms of USP and targeting. Five types of slogans emerged as the result of content analysis: 1) Buy us because we are good; 2) Attribute based but not unique; 3) Focused on unique product attributes; 4) unique appeal; and 5) no possible categories. As for the USP, almost all states emphasized nature and culture/heritage as USP. However, many of the states' official websites do not maximize their utility as a marketing tool due to a lack of consistency among the elements.

Introduction

Electronic commerce has far reaching impact on the way travel is marketed, distributed, sold and delivered (Williams & Palmer, 1999; Pollack, 1995). The importance of the U.S. State official travel website has been recognized not only as a key promotional vehicle but also as a major distribution channel for domestic and international tourism with 167 million Americans (Nielsen/Netratings, 2001) with Internet access and 400 million worldwide (Computer Industry Almanac, 2001). In the most recent survey of Internet usage by Neilsen/Netratings (Dan Creekmore, personal communication, April 27, 2001) conducted during March 2001, 34.8 million Americans visited a tourism/travel related website. This represents 39.9% of the active Internet market. During each visit they stayed for an average of 10.5 minutes. In 2000, Americans made purchases of travel and travel related goods and service over the Internet worth more than $13 billion (Patkose, Stueve, & Cook, 2001). The Travel Industry Association (2001) estimates that at least 90 million Americans over the age of 18 with Internet access are part of the travel market; of those, more than 59 million people have used the Internet to make plans for travel (Figures 1 & 2). The Internet has put consumers in control of their plans.

One of the "fatal attractions" of the Internet for DMOs is that it can be an extremely effective tool in terms of both cost effectiveness and market penetration, compared with other traditional forms such as pamphlet, print, and media materials, for destination branding. Benckendorff and Black (2000) studied the Regional Tourism Authorities of Australia who had a WWW site and found that the Internet

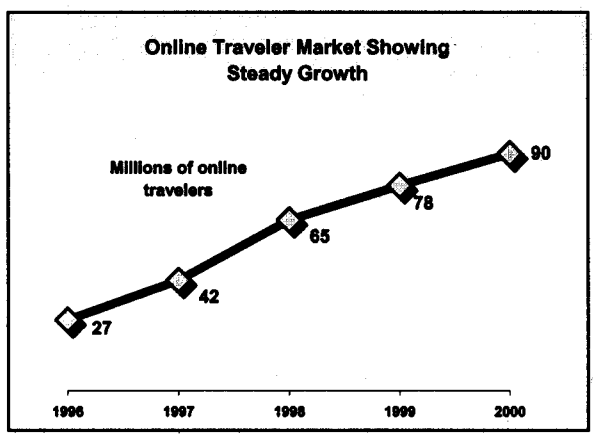

Figure 1. Online Travel Market Growth

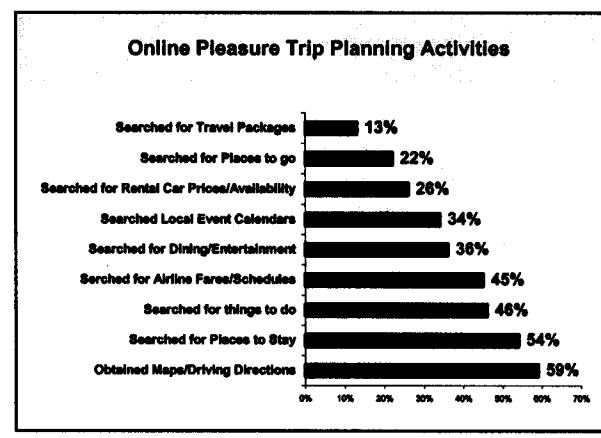

Figure 2. Online Pleasure Trip Planning Activities

Source: Travel Industry Association of America [TIA]. (2001, March). Newsline.

was most useful for tasks such as building visitor awareness, providing customer service, and public relations and education. Although it is a recent phenomenon, Internet marketing for tourism destinations, destination branding, and as a core positioning strategy, has become a key issue for both private industry and public tourism organizations alike. In destination branding, image plays a pivotal role. The purpose of this paper is to analyze 50 U.S. state tourism organizations' official websites, assessing their brand and image strategy in terms of the slogan and graphic messages. Based on the image projection and brand creation of each state in vehicle of slogan, graphic projection, and verbal expression, the unique selling points (propositions) and positioning issues are addressed.

Specifically the objectives of the study were to: 1) analyze the graphic/verbal images of each state website and interpret in terms of branding & targeting; 2) analyze the state's tourism slogan and categorize them into types; and evaluate their efficiency in terms of USP and targeting.

Literature Review

Branding Tourism Destinations

Branding has long been popular in consumer goods marketing. Even though branding management has been introduced in tourism research rather recently, in the hospitality and tourism marketing arena, it is recognized as a powerful force. However, branding a tourism destination is relatively new development (Gnoth, 1998). A brand is a name, term, sign, symbol, design or a combination of these elements that is intended to identify the goods or services of a seller and differentiate them from competitors to influence the behavior of the consumer (Kotler, 1999; Crawford-Welch, 1998). Branding as marketing strategy is to create and manage these components of a brand, which is key to winning the battle of "market positioning." Branding strategy is developed for "encouraging awareness and establishing perceptions of quality and favorable associations" (Henderson, 2000, p. 37). When market competition gets fierce in today's tourism marketplace, branding becomes the most effective and powerful strategy for market positioning, making the product stand out in the minds of existing and prospective customers relative to its competition in terms of benefits and promises (Crawford-Welch, 1998). Given that the definition of destination brand image is the set of beliefs potential tourists hold about a particular destination, it is well established that tourist destinations with a positive and clear image create stronger market positioning over those without it.

Image as a Pivot in Destination Positioning

In destination market positioning, destination image plays a pivotal role. Brand image is a key component in the formation of a clear and recognizable brand identity in the market (Williams et al., 1999). Due to the interrelationship between destination choice behavior and destination image, there is an increased interest in destination image as a predictor variable in the destination choice model. Diverse literature on travel behavior research has supported the proposition that destination image plays a significant role in a traveler's destination choice (Hunt, 1975; Woodside & Lysonski, 1989; Crompton, 1977; Pearce, 1982; Tourism Canada, 1986-1989; Gartner, 1989; Martin & Eroglu, 1993; Milman & Pizam, 1995). As Bojanic (1991) posits, tourist preferences for destinations largely depend on the positive perception future visitors possess of the destination. Court and Lupton (1997) also illustrate that destination image determines the segment membership among three categories of tourism consumers, adapters, inactives, and rejectors. As earlier researchers such as Mayo (1973) and Hunt (1974) posited, destination image is a critical factor in a traveler's destination choice.

State Tourism Slogan

A slogan is used to deliver a message about unique selling propositions (USP) of a product to the market. It has long been widely used in various products as part of advertising campaigns. Slogans are believed to play a crucial role in advertising (Richardson & Cohen, 1993). Moriarity (1991) posited that slogans are "battle cries" of advertising campaigns. He emphasized that slogans must reflect the character or personality of the product to play this role of "battle cries" successfully. The product personality and character can be summarized in "image." Ultimately, a good state tourism slogan should express the USP of the destination brand pleasantly and effectively to the eyes and mind of the audience.

A review of all American states' official tourism website leads to intriguing results in the entities involved. Each state tries to present a slogan to represent its destination image and key selling points in order to increase the awareness of brand and stimulate interest from their potential visitors.

Methodology

The current study is based on a content analysis of the fifty U.S. states' official tourism websites. The official websites of the individual states were located through the official website of each state and from *http://www.july15.com/julia/statetravel.htm*. Each tourism website differs from each other in terms of its contents and format. Therefore, the authors tried to analyze common elements, limiting to the first three tiers of each site. Content analysis as an "observational research method is used to systematically evaluate the symbolic content of all forms of recorded communications" (Kolbe & Burnett, 1991, p. 243). It is believe to offer several benefits in consumer research including unobstrusiveness, a possibility to assess environmental variables and to provide an empirical starting point (Kolbe & Burnett, 1991), and it also has potential as a companion research method in multimethod studies (Brewer & Hunter, 1989).

Results

The Slogan, Image, and Branding & Positioning

The official websites of each of the U.S. states are analyzed in terms of slogan and graphic and verbal image projection for an analysis of its selling points and target market (Table 1).

Table 1. Analysis of Official Tourism Websites of Fifty States in the U.S.

Name of States	Slogan	Graphic/ Verbal Image	Selling Points -> Branding	Target Market -> Positioning
Group 1: "Buy us because we are good"				
Iowa	"Come be our guest"	Limited graphics	Culturally rich cities Authentic American farms Many things to do and see	Midwest vacationers
Kansas	"Simply Wonderful" theme "Heart of American West"	Sunflowers	Friendly Midwest hospitality Sunflower state Special interest travel opportunity Wild beauty Sports	Vacation destination - traveling alone/family/ group tours/special interest traveling
Nebraska	"Genuine Nebraska"	Peaceful graphic image Native American dancer	Wildlife Birds' native habitat Tranquility of environment *Separate Wildlife site	Crowdedness avoiders Birdwatcher Urban escapers
Tennessee	"Sounds good to me"	Riverboat passing through river Aquarium with children around "Listen its Tennessee"	Authentic mountain music Sunrise above the mountain Individualized itinerary/ tailored trip schedule	Not specified
Georgia	"Georgia on my mind"	Limited graphics	Not specified *International assistance-exchange rate	Not specified
Alabama	"Unforgetable"	Black jazz musician playing music	Provided in separated links	Not clear
California	"Find yourself here"	Limited graphics	Very descriptive website-decentralized by region or cities	*Regional focus
Massachusetts	"Massachusetts, take a real vacation"	Affective wordings such as feel, under the star, swing music, candle light, swan	To see & do Travel experience such as local cousin	Not specified (the web was very sophisticated urban image with elaborated wordings)
Connecticut	"We are full of surprise"	Rowing boat picture	Poor website	NA
North Carolina	"A better place to be"	Wallpaper type of beach image	Heritage Natural beauty	Weekend market
Indiana	"Enjoy Indiana"	Limited graphics	History Hoosier people	Getaway weekenders
Illinois	"Right Here Right Now"	Limited graphics	State of Lincoln African American heritage Hispanic culture Diverse theme trips Budget travel	Getaway trip
Ohio	"A Perfect Getaway"	Fall colors	Wide spectrum of activities Buckeye state	Family getaways
Wyoming	"Like no place on earth"	Natural scenes	Natural scenery Friendly people Heritage & value Great nature	Urban dwellers
Group 2: Attribute based but not unique				
Missouri	Missouri, "Where the river runs"	City image	State of diversity Proud heritage Music & musicians Cities	Family holiday Fun & adventure seekers
Arkansas	"The natural state"	Limited graphics	Feel free to do everything Catch your breath Family fun Outdoor activities Natural beauty Star gazing	Family Outdoor escape *Seniors' site
Vermont	"Vermont is plain beautiful"	Green mountain Farm files Villages Lakes, ponds	Small scales Intimacy Peaceful scenery	Family travelers/ package tourists, searching for diverse themes

Table 1. Analysis of Official Tourism Websites of Fifty States in the U.S. (Cont.)

Name of States	Slogan	Graphic/ Verbal Image	Selling Points -> Branding	Target Market -> Positioning
Group 2: Attribute based but not unique (cont.)				
Oklahoma	"Parks, Resorts & Golf"	A young camping couple Natural parks	Strong outdoor recreation focus State Parks Golf World class equestrian trail State park Package special (*CEO Membership program)	Outdoor recreationists State Park visitors Golfers
Mississippi	"The south's warmest welcome"	Sunset in a mountain Nature	Golf Casino Highway 61 tour Delta blues Beaches Heritage African American heritage *International site and domestic group tour sites provided	Domestic group tourists International tourists
Texas	"It's like a whole other country"	Rodeo Cowboys Wild West graphic image	"Wild west Texas adventure" Cultural diversity-"Texas melting pot" Sea, sands, & sights	Tourists seeking 3-5 day vacations and getaway/ package tourists
New Mexico	"Put yourself in a state of enchantment"	A train passing cross mountain	Beauty of ancient cultures Rich landscape Nature with deep contrast, i.e., mountain & dessert, lake, forest	Not clear
Washington	"A little trip to the extraordinary"	Limited graphic image	Not specifically presented	No distinctive message at all
*Nevada	"Home of adventure & entertainment"	Night life-bright lights Natural scenes	Entertainment/Night life Casino Hotels Nature Outdoor recreation-ski, fishing Silver state Sports events Bypass Wedding-official tourism offices provide marriage information for the visitors & tourists * Korean/Japanese websites – detailed information in Korean and Japanese languages, also very detailed guidelines against crime and theft	Korean & Japanese tourists-try to attract these markets also to nature and outdoor, sports event in conjunction with casino and city tour Domestic city tourists for entertainment (casino) and nature-based tour
N. Dakota	"Discover the spirit" "Begin the adventure"	American Indians & frontiers faces	Salient message: visit a land where history never gets old "Place of American democracy" "The Faces" festival	History/culture oriented tourists
Maine	"The Maine attraction"	A light house	Marine resources Seafood Natural treasure Summer youth camp Outdoor recreation Culture	Clear target on summer vacationers/youth campers
Pennsylvania	"Pocket edition of World"	17C Sail boat Verbal image projection - "relaxed," "unique" and "authentic"	Hunting/fishing Wildlife observing Unspoiled natural beauty Beer festival 100% pure Pennsylvania	Nature lovers and culture oriented travelers
Delaware	"The first state"	Limited graphic image	Easy access to the one third of the nation's population Culture/history Tax free shopping (top 10 shopping place in the U.S.)-Value for money	Geographic target-NY, Washington D.C. Family pleasure vacationers Overnight stoppers Getaway weekenders Short stay

Table 1. Analysis of Official Tourism Websites of Fifty States in the U.S. (Cont.)

Name of States	Slogan	Graphic/ Verbal Image	Selling Points -> Branding	Target Market -> Positioning
Group 2: Attribute based but not unique (cont.)				
W. Virginia	"Wild and Wonderful"	Limited graphic image	Web is being improved	NA
New Hampshire	"The road less traveled"	Picture of children	Tax free shopping Theme parks	Kids and families/people traveling with children
*South Carolina	"Smiling face, beautiful places"	A couple on the beach	Adventure Climate Theme parks Golf Beach Nature based activities Value & variety	Domestic market *Strong international focus: German and Japanese sites
Group 3: Focused on Unique product attributes				
Minnesota	"Explore Minnesota-Take home a story"	Lakes & mountain	Giant ridge golf Long trails Outdoor activities Scenic bypass	Family tourists Fun and education seekers Fall-breakers
Arizona	"Grand Canyon state"	Highway crossing desert Canyon	Outdoor recreation Nature wonders Old west attractions Desert adventures-attractions/cacti gardens	Hikers Desert adventure seekers Travelers Outdoor recreationists
Kentucky	"Heart of America"	NA	Getaway- mini vacation, long weekend	Not clear
Michigan	"Great Lakes Great Times"	Harbor light	Summer golf capital Snowmobiling/skiing Culture	Personalized vacation with variety experience
Colorado	"Totally Winteractive"	Mountains Skiers	Snow ski Ecotourism sites	Not clear
Montana	"Big sky country"	Natural scenes	Ski (Rocky ski area) Wildlife watch Cousin: Big-sky-way Cooking recipes Ghost town tour Crystal lake/canoeing Mountain bicycling	Outdoor recreationist Wildlife watchers Sight-seeing tourists
S. Dakota (Provided better cite than N. Dakota)	"Great faces, great places"	Great faces and mountains	History Great faces American Indian culture-history Adventure history	Family vacationers Fun seekers Getaway Active outdoor vacationers: "Vacation, it is not virtual, it is reality"
Utah	No official state slogan, a catchphrase instead: " The great snow on earth"	Limited graphic image except Olympic promotions	Ski Rafting Winter Olympic 2002: Salt lake 2002- Emblem "Contrast-Culture-Courage"	Winter Olympic attendees
Group 4: Unique appeal				
Hawaii	"Visiting the Aloha state", "The island of Aloha"	Tropical colors Pictures of Hawaiian women	Adventure in paradise Action Adventure opportunities World-class event Shopping * Decentralized webs	Family vacationers Honeymooners
New York	"I Love NY"	"Nobody beats New York state!" Ski Family Youth Horseback riding pictures	Hudson river-America's identity Rich heritage & diversity History Romance Outdoor activities Road trip Family gathering NYC weekends Waterways	Domestic tourists from all around the U.S. International travelers

Table 1. Analysis of Official Tourism Websites of Fifty States in the U.S. (Cont.)

Name of States	Slogan	Graphic/ Verbal Image	Selling Points -> Branding	Target Market -> Positioning
Group 4: Unique appeal (cont.)				
*Wisconsin	"Stay just a little bit longer"	Pictures of little children Mountains Lots of beautiful nature pictures	Memory Beauty of nature Wonderful people & wonderful nature Scenic beauty	Family for nature-based vacations Families with young children Nature-based tourism
Virginia	"Virginia is for Lovers"	History Beaches Mountain graphic image	Beaches Mountains Mountain trails History-first English settler	Outdoor recreationists Vacationers *International tourists-very detailed, well organized international sites in several languages
Group 5: No possible categories				
Idaho	"Come fine Idaho" - Come find Idaho and come back to life	Waterfalls Resort	Waterfalls Resorts Ski Ranch Scenic byways	Not specified
Florida	"FLA USA, Visit Florida"	Palm trees on the beaches	Hospitality Kids fun (Disney) Sophisticated big city tour Nature Cultural attractions Beaches/sugar white sands	For all or Not clear
New Jersey	"New Jersey and you, perfect together"	Limited graphic image	Family vacation Getaway Something for everyone	Getaway weekenders Family vacationers
Rhode Island	"Ocean Current"	Traditional English mansion English men in costume	Tradition English culture Culture rather than Nature	Cultural interested
Currently No slogan				
Oregon	NA	Mt. Hood	Japanese website	*Japanese travelers
Alaska	NA	Limited graphic image	Decentralized & descriptive	NA

The list is ordered in geographical regions, i. e., Mid-west, South Regions, Western Regions, and Eastern. The analysis was based on the information available as of November 2000. * indicates particularly good or unique features

The Slogans for USP

The slogans of the U.S. states tourism department seem to fall into one of five types: The first group takes a "buy us because we are good" approach, such as "Come be our guest" (IO), "Simply Wonderful" (KA), and "Genuine Nebraska" (NE), for example. These slogans did not identify what brand image and USPs they try to make. More of these types are: "Sounds good to me" (TE), "Unforgettable" (AL), Idaho's "Come find Idaho", "Find yourself here" (CA), "Take a real vacation" (MA), and " A better place to be" of (NC). The second type tries to present the personality of their brand based on product attributes that are not unique. For example, "Missouri, where the river runs", tries to emphasize its beautiful rivers, but others have beautiful rivers as well. Others like this include Arkansas, "The natural state", Texas, "It's like a whole other country", "The road less traveled" (NH), "Smiling face, beautiful place", South Carolina. These slogans try to make USP but fail to differentiate themselves from others.

The third group focuses on unique product attributes, such as "The Faces"(SD), "Grand Canyon"(AZ), "Great Lakes" (MI), "Totally winteractive" (CO), and Montana's "Big sky country". The fourth category of slogans is different from three categories described above. They are "I love NY" (NY, since 1977), which successfully evokes emotional attachment to the state; Hawaii, which uniquely creates a foreign tropical atmosphere with "The island of Aloha" (Aloha means hello); Wisconsin, "Just stay a little longer"; and "Virginia is for lovers" (VA) are persuasive and deliver a clear message. Finally, there are some slogans characterized by ambiguity of meaning or mismatch with their image such as "The first state" (DE, first of what?), Rhode Island's "Ocean current" (Is it a slogan? If so, what does it say about itself?).

The majority of state slogans seem to fall in the first three categories. As for the USP, almost all states emphasized nature and culture/heritage as USP, only to make it common and usual.

Conclusions

There seems to be ample opportunity to improve states' websites with respect to brand image, personality and creating slogans that better focus on the unique selling points of each state tourism products. Five types of slogans emerged as the result of content analysis (Table 1). However, many of the states' official websites do not maximize their utility as a marketing tool due to a lack of consistency among the elements. In other words, the slogan and graphic/verbal image are not consistent, the target market is ambiguous, and they fail to clearly deliver the USP. The shot-gun approach ("We offer you all you want") was rampant. On the other hand, the majority of state slogans seem to fall in the first three categories: (1) Buy us because we are good; (2) Attribute based but not unique; and (3) Focused on Unique product attributes. As for the USP, almost all states emphasized nature and culture/heritage as USP, making it common and usual.

One challenge, however, that the state marketing managers may confront seems to be heterogeneity of their tourism products in terms of geographical, cultural, and natural resource diversity within a state. This is well evidenced in large tourism host states such as Hawaii, Florida, New York, California and Illinois (national top spenders of tourism budget for websites). Their state tourism organizations seem to decentralize their organizations. The decentralization tendency is well reflected in their official websites, which hardly project a uniquely concentrated personality for their brand. Empirical research example on the topic discussed and analyzed in the current paper is limited and still in its infancy. Therefore, the topic warrants more empirical research both by industry practitioners and academia.

References

Benckendorff, P. J., & Black, N. L. (2000). Destination marketing on the Internet: A case study of Australian regional Tourism Authorities. Journal of Tourism Studies, 11(1), 11-21.

Brewer, J., & Hunter, A. (1989). Multimethod research: A synthesis of styles. Newbury Park, CA: Sage.

Bojanic, D. D. (1991). The use of advertising in managing destination image. Tourism Management, 12 , 352-355.

Crawford-Welch, S. (1998). To brand or not to brand? That is the question. Developments, 30-40.

Computer Industry Almanac. (2001, April 24). Computer Industry Almanac. Retrieved May 2, 2001, from the World Wide Web: http://www.c-i-a.com/200103iu.htm

Court, B., & Lupton, R. (1997). Customer portfolio development: modeling destination adapters, inactives, and rejecters. Journal of Travel Research, 49, 35-43.

Crompton, J. L. (1977). A systems model of the tourist's destination selection decision process with particular reference to the role of image and perceived constraints. Unpublished doctoral dissertation, Texas A & M University, College Station.

Gartner, W. C. (1989). Tourism image: Attributes measurement of state tourism products using multidimensional scaling techniques. Journal of Travel Research, 28, 16-20.

Gnoth, J. (1998). Branding tourism destinations. Annals of Tourism Research, 25(3), 758-760.

Goodrich, J. N. (1978). A new approach to image analysis through multidimensional scaling. Journal of Travel Research, 16, 3-7.

Henderson, J. C. (2000). Selling places: The new Asia-Singapore brand. Journal of Tourism Studies, 11(1), 36-44.

Hunt, J. D. (1974). Image: A critical influence in tourism. Logan: Institute of Outdoor Recreation and Tourism, Utah State University.

Kolbe, R. H., & Burnett, M. S. (1991). Content-analysis research: An examination of applications with directives for improving research reliability and objectivity. Journal of Consumer Research, 18(September), 243-250.

Kotler, P., Bowen, J., & Makens, J. (1998). Marketing for hospitality and tourism (2nd ed.). Upper Saddle River, NJ: Prentice Hall.

Martin, I. M., & Eroglu, S. (1993). Measuring a multi-dimensional construct: Country image. Journal of Business Research, 28, 191-210.

Mayo, E. J. (1973). Regional image and regional travel behavior. In Proceedings of the Travel Research Association Fourth Annual Meeting (pp. 21-218).

Milman, A., & Pizam, A. (1995). The role of awareness and familiarity with a destination: The central Florida case. Journal of Travel Research, 33, 21-27.

Moriarity, S. E. (1991). Creative advertising: Theory and practice. Englewood Cliffs, NJ: Prentice Hall.

Nielsen/Netratings Hot off the Net (2001, April 27). Milpitas, CA: NetRatings, Inc. Retrieved April 27, 2001, from the World Wide Web: http://209.249.142.22/contact_us.asp?country=north+america

Pearce, P. L. (1982). Perceived changes in holiday destinations. Annals of Tourism Research, 9, 145-164.

Patkose, M., Stueve, A. M., & Cook, S. D. (2001). E-Travel Consumers: How they plan and buy leisure travel online. Washington, DC: Travel Industry of America.

Pollack, A. (1995). Occasional studies: The impact of information technology on destination marketing. EIU Travel and Tourism Analyst, 3, 66-83.

Richardson, J., & Cohen, J. (1993). State slogans: The case of the missing USP. Journal of Travel & Tourism Marketing, 2, 91-109.

Tourism Industry Association [TIA]. (2001, March). Newsline.

Tourism Canada. (1989). Market Facts of Canada Limited. In Toronto pleasure travel markets to North America: West Germany. Ottawa, Canada.

Williams, A. P., & Palmer, A. J. (1999). Tourism destination brands and electronic commerce: Towards synergy? Journal of Vacation Marketing, 5, 263-275

Woodside, A., & Lysonski, R. (1989). A general model of traveler destination choice. Journal of Travel Research, 27, 8-14.

JOB SATISFACTION AMONG RECREATION PRACTITIONERS

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Abstract: Job satisfaction among recreation professionals can be affected by many working conditions. This study has investigated the impact fourteen variables had on the job satisfaction of recreation practitioners. The sample consisted of 106 responses from members of the Resort and Commercial Recreation Association (RCRA). The results of the regression analysis for job satisfaction indicate that for recreation practitioners, five variables (type of work you do, goals of organizations, control in work life, hours per week and current salary) out of fourteen lead to greater job satisfaction; the strongest variable was "type of work you do". This may lead us to believe that the more important and worthwhile the work is for the employee, the more satisfied the employee will be with their job. One variable (current salary) led to both greater overall job and overall career satisfaction. Only one variable (working conditions) led to only overall career satisfaction. This may show support for the job characteristics theory, whereby the more involved the employee is with his/her job the higher the chance of job satisfaction.

Introduction

An understanding of the relationship between perceived job characteristics and job satisfaction would enable public and private leisure service managers to more effectively manage their resources. According to the job characteristics theory, enrichment and the resultant motivating potential of jobs is determined by the core job dimensions. When these core dimensions are highly evident in jobs they trigger three critical psychological states in individuals: experienced meaningfulness, sense of responsibility, and knowledge of actual work results (Nogradi, Yardley, & Kanters, 1993). Nogradi. et al. (1993) noted an employee who experiences these psychological states is more likely to be satisfied, willing to exert effort toward task accomplishment, and thus prosper at work. The primary purpose of this study was to determine what factors determine a recreation professional's job satisfaction.

This study was performed to better understand what characteristics of the recreational profession led to overall job satisfaction in the field. Specifically, this study sought to determine what variables were most highly correlated to job satisfaction and overall career satisfaction. This research asked the following questions:

1. What variables lead to overall job satisfaction?
2. What variables lead to overall career satisfaction?
3. Does overall career satisfaction differ based on current job satisfaction?

Literature Review

The labor force in the leisure services profession is changing, organizational structures are being evaluated and reorganized, social and economic forces are new, diverse, and constantly evolving as are client leisure interests. The future labor force will reflect the values of baby boomers that place importance on jobs with variety, flexibility, choice, emphasis on autonomy, and ownership (Robinson, 1989). In these days of rapid and diverse changes, it is essential for leisure managers to gain new insights into employee motivation. The greater appreciation and understanding of critical work related employee values currently are seen as important links to increasing organizational output and individual productivity. It is important for managers of recreation and leisure service organizations to help employees feel and become empowered within their area of responsibility. Hobbs (1987) noted that employees in parks and recreation "appreciate the opportunity to express their ideas about how their job could be made easier, more productive, or less wasteful. Peters and Waterman (1982) have argued that productivity of an organization should be through people: Creating awareness that their best efforts are essential and that they will share in the rewards of the organizations success.

Research about motivation has been a popular subject written about in organizational literature. Herzberg (1959) developed a model to explain employee motivation known as the two-factor theory. Herzberg argued that two sets of variables were relevant to the question of motivation. One set, the "hygiene factors" related to job dissatisfaction; the other set, "motivators" related to job satisfaction. Herzberg theorized that variables associated with job satisfaction (recognition and opportunities for achievement) would lead to increased productivity and motivated workers. He argued that improvements in hygiene factors such as pay would not increase job satisfaction; instead any improvements would simply reduce dissatisfaction. This theory of motivation indicates that to motivate employees the job must be challenging. Higher level needs can be defined as job growth, achieving work related goals, and have a role in decision making. Lankford (1992) noted that the opposite of job satisfaction is not job dissatisfaction but rather "no job satisfaction". Consequently, motivators and hygiene factors should not be considered opposite; they should be seen as complimentary. Both must be maintained at the highest level, or the result may be employees who are not operating at full proficiency.

Controversy about the effect of job satisfaction and performance can go back as far as the Hawthorne studies conducted during 1920 and 1930. Some authors have interpreted the findings of these studies as indicators that higher levels of job satisfaction lead to higher levels of worker performance, a conclusion that some argue was never present in the original research reports and is thus a

misinterpretation (Organ, 1986). Whether it is a misinterpretation or not the Hawthorne studies are usually credited for the discovery that a happy worker is a more productive worker.

Job characteristics theory continues to be the most prominent model for assessing and designing jobs. This distinction is due to the evidence that enriched jobs have a positive effect on job effectiveness outcomes. According to job characteristics theory, enrichment and the resultant motivating potential of jobs is determined by the core job dimensions. When these core dimensions are highly evident in jobs, they trigger three critical psychological states in individuals: experienced meaningfulness, a sense of personal responsibility and a knowledge of the actual work results. Employees who experience such psychological states are more likely to be satisfied, willing to exert effort toward task accomplishment, and thus prosper at work (Nogradi et al, 1993).

In spite of the popularity of job characteristics theory, research efforts have been burdened with problems. Job characteristics theory posits that core job dimensions interact with certain individual difference variables in determining job effectiveness outcomes. Enriched jobs merely hold the potential for motivating individuals. Transformation of this potential into reality is contingent on the attributes of the person involved. Much of job characteristics research has either ignored person-work environment relationship or has almost exclusively focused on variables that have been explicitly included in the original theory.

Methods

This study was conducted in the summer of 2000. Data was collected from members of the Resort and Commercial Recreation Association (RCRA). A total of 444 members were sent a mail survey and 160 individuals responded, resulting in a 36% response rate. Job satisfaction variables were measured on a 5-point Likert scale, where 1 was "very satisfied" and 5 was "very unsatisfied". Overall job satisfaction and overall career satisfaction was measured on a 5-point Likert scale, where 1 was "very satisfied" and 5 was "very unsatisfied".

All data were analyzed using SPSS 10.0 for Windows. A stepwise regression analysis was performed to test which variable contributed to overall job satisfaction and overall career satisfaction.

Results

Descriptive Analysis

The results of the descriptive analyses are shown in Table 1. Sixty-seven percent of the respondents were female while 33% were male. Thirty percent were between the ages of 26 and 30. Twenty-one percent were between the ages 31 and 35. Of the respondents, nearly 70% possessed a bachelors degree and 15% held a masters degree. Eighty seven percent of the respondents were directors of recreation or activities and 25% were department/program managers. Twenty five percent earn between 30,000 and 35,999 dollars. The largest group of respondents (26.8%) had been in the field 6-10 years.

Table 1. Descriptive Statistics

Gender	N	%
Male	106	66.9%
Female	54	33.1%
Age	**N**	**%**
<21	2	1.3%
22-25	22	13.8%
26-30	48	30.2%
31-35	33	20.8%
36-40	16	10.0%
41-45	14	8.8%
46-50	13	8.2%
51+	11	6.7%
Education	**N**	**%**
Associates Degree	10	6.0%
Bachelors Degree	111	69.0%
Masters Degree	24	15.0%
Doctorate	1	.6%
Responsibility	**N**	**%**
Administrator	118	73.8%
Supervisor	30	18.8%
Line staff	3	1.9%
Other	9	5.6%
Compensation	**N**	**%**
under 24,000	29	18.1%
24,000 - 29,999	30	18.8%
30,000 - 35,999	41	25.6%
36,000 - 41,999	24	15.0%
42,000 - 47,999	9	5.6%
48,000 - 53,999	11	6.9%
54,000 - 59,999	4	12.7%
60,000 - 65,999	2	12.1%
66,000 - 71,999	2	19.7%
72,000 - 77,999	1	26.8%
78,000 - 83,999	1	9.6%
84,000 - +	6	19.1%
Years in Career	**N**	**%**
0-1	20	12.7%
2-3	19	12.1%
4-5	31	19.7%
6-10	42	26.8%
11-15	15	9.6%
16-55	30	19.1%

Job/Career Satisfaction Scores

As seen in Table 2, respondents seemed to be most satisfied with the type of work they do (1.54), the community they live in (1.74) and their housing situation (1.84). They were least satisfied with their Current salary (2.85), Free time (2.82) and the hours per week that they worked (2.50).

Table 2. Job/Career Satisfaction Scores

Item	Mean	sd
Type of work you do	1.54	0.65
Community you live in	1.74	0.78
Housing situation	1.84	0.93
Your co-workers	1.85	0.71
Working conditions	1.88	0.82
Satisfied with this job	1.98	0.84
Benefits package	2.14	0.90
Control in personal life	2.15	0.96
Goals of organization	2.17	0.89
Control in work life	2.24	0.98
Management of organization	2.25	1.03
Professional respect	2.30	1.08
Hours per week	2.50	1.03
Free time	2.82	1.22
Current salary	2.85	1.01

Note: Items were measured on a 5-point Likert Scale with 1 = high satisfaction and 5 = low satisfaction

Inferential and Multivariate Analysis

The results of the regression analysis for job satisfaction (Figure 1) revealed that five variables contributed to job satisfaction. These were "control in work life", "type of work you do", "current salary", "goals of the organization" and "free time". The most important variable impacting job satisfaction was the "type of work you do". This may lead us to believe that the more important and worthwhile the work is for the employee, the more satisfied the employee will be with their job.

The results of the regression analysis for overall career satisfaction yielded four significant variables: "the type of you do", "current salary", "working conditions" and "free time". The variable "type of work you do" was the strongest correlation with career satisfaction but "current salary" also had a strong correlation. The revealed that the current salary of an employee has a strong effect on their overall career satisfaction. The variables "type of work you do", "current salary" and "free time" were shared by both job satisfaction and career satisfaction. "Control in work life" and "goals of the organization" affected job satisfaction, but not career satisfaction. This may show support for the job characteristics theory, whereby the more involved the employee is with his/her job the higher the chance of job satisfaction.

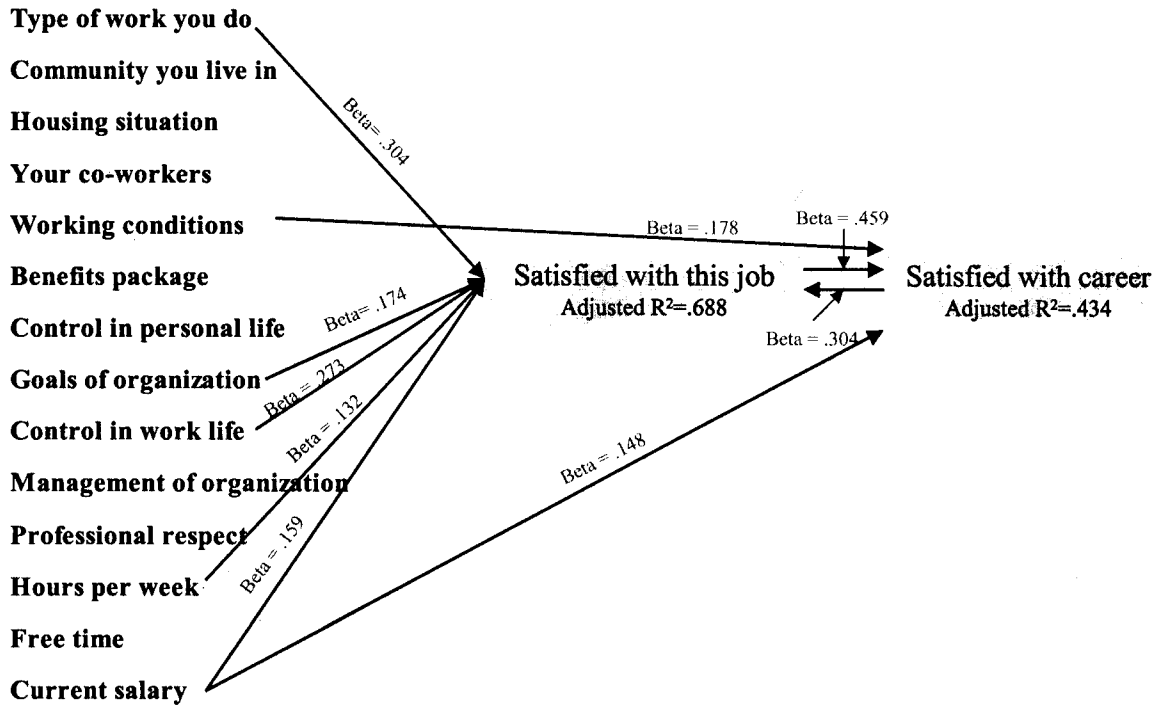

Figure 1. Regression Model

Discussion and Conclusions

The results of this study indicated that a recreation professional's job satisfaction and career satisfaction is impacted mostly by the satisfaction in the type of work he or she performs and his/her current salary. An important finding is that employers might be more successful in their business if they ensure their employees are content with the type of work they do and that their salary level is adequate. Thus an employee is more likely to be satisfied, more willing to put forth extra effort and overall be more satisfied with work if these two criteria are met.

Attracting and retaining qualified staff is a major challenge for recreation managers in all sectors particularly in times of low unemployment. This issue is particularly important in the hospitality industry where annual turnover is reported as high as 90% - 130% (Angelo & Vladimir, 1999). The tourism industry is characterized as offering low salaries, long hours, and little career satisfaction. This study found the respondents were less than happy with their compensation and working hours, respondents to this survey were fairly satisfied with their jobs and careers. A better understanding of the factors other than wages and hours that affect job and career satisfaction for this group could assist in attracting and retaining employees in other areas of the recreation and hospitality industries.

Bibliography

Herzberg, F. (1959). The motivation to work. New York: John Wiley.

Hobbs, D. (1987). Productivity through worker incentive and satisfaction. In Current Issues in Leisure Services: Looking ahead in a time of transition. Washington DC: ICMA.

Lankford, S., Neal, L., & Buxton, B. (1992). An examination and comparison of work motivators in public, private/commercial, nonprofit, and armed forces leisure service organizations. Journal of Park & Recreation Administration, 10(4), 57-70.

Nogradi, G., Yardley, J., & Kanters, M. (1993). The relationship between work-related attention, motivating potential of jobs, and job effectiveness outcomes. Journal of Park & Recreation Administration, 11(3), 37-50.

Organ, D. (1986). A review of management and the worker. Academy of Management Review, 11(2), 459-464.

Peters, T., & Waterman, R. (1982). In search of excellence: Lessons from America's best run companies. New York: Warner Books.

Robinson, D. G. (1989, June). The 1990s: From managers to leading. Supervisory Management, 5-10.

Smale, B., & Frisby, W. (1992). Managerial work activities and perceived competencies and municipal recreation managers. Journal of Park & Recreation Administration, 10(4), 81-108.

Yen, T., & McKinney, W. (1992). The relationship between compensation satisfaction and job characteristics: A comparative study of public and private leisure service professionals. Journal of Park & Recreation Administration, 10(4), 15-36.

EXTENSITY AND INTENSITY OF GRANTS USAGE IN OBTAINING FUNDING FOR RECREATION SERVICES AND CAPITAL IMPROVEMENT PROJECTS AMONG PARK AND RECREATION AGENCIES IN THE STATE OF MICHIGAN

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Abstract: The purpose of this research was to examine the use of grants among park and recreation agencies in the State of Michigan. A mail-out questionnaire was used to collect data. The sample was obtained from a listing of park and recreation directors. The data indicate that grant writing is regarded as a necessary activity among some leisure services providers to accomplish their aims of providing services and capital improvement projects that otherwise could not be provided. A number of statistics are provided that describes the grants received by the park and recreation agencies. The data also offers insight into grant activity in the state both among the agencies and the agency representatives.

Introduction

Directors of public park and recreation departments consistently cite the need for funding to provide quality leisure services for community residents. It is increasingly through grants that agencies, public and private, seek funding for a variety of social and recreational services and capital improvement projects to fulfill their missions. Overall, the state level grant application process, the source of many of the grants received at the community level in Michigan, has been simplified to the point that a minimum of forms are required that detail the project, the budget, and the time line for completion. Removing the cumbersome literature reviews has made grant seeking a desirable managerial activity. According to Bauer (1999) the primary motivator for grant seekers is not money; it is the interest and desire to accomplish a project, something that has high value to the individual or group. In addition, grant seekers strive for recognition from their agency and their colleagues. Successful grant seekers are persistent in their efforts to secure grants. The attitude required is that grant writing is a necessary management activity, not something to be done when time permits. Although the necessity for and the application for grants has long been recognized and is an on-going process among some park and recreation agencies, little is known about how extensive grant seeking is among public service agencies in recreation nor the amounts nor the kinds of services and capital improvement projects made possible by grant funds.

Objectives of the Research

The objectives of the research are to examine the extensity of use of grants by leisure service agencies in the State of Michigan, that is, how widespread is the activity among park and recreation professionals. This research also examines the intensity or depth of involvement in grant usage relative to:

a. The characteristics of the grants: status of grant usage over the previous fiscal year, current dollar amounts awarded, current sources of grant funds (federal, state, foundations, corporations, individuals, or other), current project/services that grants were used for, and the importance of the grant funds in accomplishing the projects.
b. The characteristics of the agencies: the operational level of the leisure service agency (local, regional, or state), the size of the agency's annual budget, the number of full time employees, and the size (population) of the community or area served.
c. The characteristics of the agency administrator: his/her job title, length of service with the agency, length of service in providing leisure services, his/her responsibility for obtaining grant funding, and the perceived importance of grant writing skills among park and recreation professionals.

The Sample

The sample for this research was obtained from a listing of leisure service agencies who are members of the Michigan Recreation and Park Association. The population consisted of 256 leisure service agencies. The sample size is 89 agencies.

The Data Collection Instrument

The data collection instrument was a mail-out questionnaire. The questionnaire was one page in length printed front and back. It contained a study title, Grant Usage Survey 2001, followed by a brief introduction to the survey. The data collection instrument was divided into three sections, the first section contained questions about the number, size, and source of grants, the kinds of projects grant monies were used for, and the importance of grant writing skills among park and recreation professionals. Section two asked questions about the agency, the kind of agency (public or private, local, regional, or state), the size of the agencies' annual budget, number of full and part time employees, and the population served. The third section asked the agency administrator to state his/her job title, the length of service with the present agency as well as his/her total length of service in the leisure services provision, his/her responsibility in obtaining grant funding, and the current most important problems facing his/her agency. The questionnaire ended by thanking the respondent for completing the survey.

There was one mail out. No attempts were made at reminders nor additional mail out questionnaires to non-respondents. Eighty-nine agencies returned completed questionnaires, a return rate of 34.7%.

Findings—Characteristics of the Grants

- 68 of the 89 agencies (76.4%) participating in this survey used grants to fund a variety of recreation services and capital improvement projects. The number of grants received in FY99-00 ranged from 1 to 13 among the 68 agencies awarded grants. The average number of grants received was 2.07 (s.d.=2.34).
- 48% of the agencies awarded grants in FY98-99 indicated that they increased the number of grants awarded to their agencies in FY99-00, 24% indicated no grant activity, and 17% of the agency respondents replied they had remained the same in FY99-00 as in FY98-99.
- Grants ranged in size from $100 to $260,000 at the low end range. At the high end grants awarded ranged from $6,000 to $2,800,000. The average size of grants received at the low end was $43,900, and at the high end the average size of grants received was $356,100.
- 49% of the agencies awarded grants in FY99-00 stated they had an increase in amount of grant monies received, 8% indicated a decrease in grant funds received, and 16% stated they remained the same as in FY98-99.
- The primary source of grant monies awarded came from state agencies (66.6%) followed by federal agencies (14.5%), foundations (10.1%), and corporations and community agencies, each at 1.5%.
- The primary use of grant funds awarded in FY99-00 supported facility development (36.9%), park development (20.0%), youth programs (13.8%), land acquisition (7.7%), waterfront development (6.1%), equipment for programs/areas (6.1%), recreation programming (4.2%), senior/adult programs/services (3.1%), and transportation (1.5%). Refer to Table 1 for a listing of specific projects funded by grant monies.
- Among those agencies awarded grant funds for projects, agency directors reported that the projects either were unlikely to be completed without the grant funds (60.0%) or grants speeded up the process (24.6%). Only 7.7% of the respondents stated that the projects supported by grants would have been completed without grant funds.
- Among those agencies receiving from 1 to 4 grants in FY99-00 (55 of 65 agencies or 84.6%), 21.8% of those agencies provided recreation services to communities less than 14,999 population, 29.1% serviced populations between 15,000 to 35,999, and 45.5 served community populations from 40,000 to 999,000. Only 3.6% of the 55 agencies that received from 1 to 4 grants in FY99-00 served populations of 100,000 or more.
- There is no relationship between the number of grants awarded and the number of agency full-time employees. The number of full-time employees among those agencies receiving from 1 to 4 grants ranged from none to 240. Approximately one-half of these agencies employed 6 or less full-time persons, 26% employed between 7 to 13 full-time persons, and 23% had more than 13 full-time employees.

Findings—Characteristics of the Agencies/Respondents

- 58 of the 89 respondents (65%) are male and 31 (35%) are female.
- 83% of the respondents are directors or superintendents of park and recreation agencies.
- 85.4% of the agencies are local or regional park and recreation departments, 9.0% are public school agencies followed by private nonprofit leisure service agencies (2.2%). The average annual budget of agencies receiving grants was $2,283,900 in FY99-00. Annual budgets for these agencies in FY99-00 ranged from $45,000 to $56,700,000.
- 79.7% of the respondents claimed full responsibility for securing grants, 7.8% assisted in writing grants, and 6.3% had a grant writer.
- 68 of the 89 agencies (76.4%) used grant monies to fund a variety of recreation services, maintenance, and capital improvement projects.
- The average number of years employed in the present agency among those securing grants was 14.2 years (s.d. of 10.3 years). Among those not securing grants the average number of years employed in their present agency was 9.9 years (s.d. of 9.1 years).
- The average number of years employed in the field of leisure services among those securing grants was 18.8 years (s.d. of 8.9 years). Among those not securing grants was 17.5 years (s.d. of 9.8 years).
- All respondents stated that grant writing skills among park and recreation professionals were extremely important (41.8%), very important (39.5%), or important (13.9%), a total of 95.2%.
- The current first most important problem cited by respondents were funding (49.4%), the need for and condition of facilities (19.3%), staffing (13.3%), marketing services and/or image of the department (4.8%), meeting the needs of community residents (4.8%), meeting ADA requirements (2.4%), and providing quality services (2.4%).
- The second most important problem cited by respondents was staffing (28.2%), funding (24.3%), facilities and/or park development (16.6%), marketing/customer services (11.5%), planning and coordination with other agencies (5.1%), and creative programming (3.8%).

Conclusions

Many agency directors or superintendents in this sample population (76%) are active in the grant writing process. It is, however, not possible to generalize this finding among all park and recreation directors throughout the State of Michigan. The limitations of the sample do not permit such a generalization, as the sample is limited in size (a 35% return rate) and sample respondents were taken from a membership listing obtained from a state recreation association. Despite these limitations, there are some interesting conclusions. Throughout the state there are some very notable activities going on to provide recreation amenities as listed in Table 1. Most of the grant monies received are being funneled to the local and/or regional

levels through state agencies. The state agency in Michigan that administers grant applications for public monies for recreation (among other natural resource concerns) is the state Department of Natural Resources. The application process is a step by step procedure unencumbered by exhaustive literature reviews quite properly characteristic of private foundations. In its simplistic form the state requires a description of the project, a map if needed, a budget, and submission by a given date. To access more foundation monies, directors need to collaborate with recreation resource specialists, sociologists, psychologists, and political scientists among others to access specific expertise that is required for thorough literature reviews in, for example, such areas as at-risk youth. Most of the projects funded in this study (71%) were for capital improvement projects and the remainder (29%) was used for providing recreation services. A balance among both tangible and intangible projects can be achieved through interdisciplinary collaboration. Moreover, agency directors need to carefully examine park and recreation long range planning efforts to find needs to support social and environmental community vitality. With the focus on the health and sustainability of the community, park and recreation managers can find areas where their resources and grant monies can be applied. The extra effort required will position park and recreation departments in new market areas that will strengthen the organization through increased community participation, increased public support, and an improved public image as a comprehensive social services agency.

Agency directors reported that only 8% of the projects funded with grant monies in this study would have been completed anyway, that is, without grant money. This fact is impressive in that it indicates the importance of an active grant writing program among recreation providers. Grant monies made possible an impressive array of areas, structures, facilities, equipment, and services reported earlier in this paper. Overwhelmingly, 95% of directors and superintendents cite the need for grant writing skills among recreation professionals. This fact is particularly true given that 80% of the directors and/or superintendents in this study claimed full responsibility for writing and applying for grant monies, and, secondly, funding was listed as the current first most important problem facing Michigan park and recreation agencies. Some university recreation departments have recognized the importance of grant writing skills among present and future park and recreation professionals by requiring a grant writing course as part of the park and recreation curriculum.

Reference

Bauer, D. G. (1999). The "how-to" grants manual: Successful grants seeking techniques for obtaining public and private grants (4th ed.). Westport, CT: Greenwood Publishing Group.

Table 1. Projects Funded by Grant Money among Michigan Park and Recreation Agencies in FY99-00

Areas	Structures	Facilities	Equipment	Services
Landscaping	Tennis courts	Community Center	Computers	Youth programs
Playground	Waterfront boardwalk	Park improvements	Play equipment	Recreation programs
Land acquisition	Fishing dock	Restrooms		After school programs
River dredging	Picnic shelter	Nature interpretation building		At risk youth programs
Golf course construction	Seawall construction	Marina expansion		Intergenerational programs
Trails	ADA accessibility			Park/greenway planning
Rail trail	Picnic tables			Day care
Parking area				Youth scholarships
In-line skating area				Computer instructional classes
Bikeway				Professional development

RESIDENT CAMP DIRECTORS, SPIRITUALITY, AND WILDERNESS

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Abstract: A vast majority of resident camp directors in this study perceived wilderness to hold spiritual qualities. In addition, resident camp directors also valued educational components for campers and staff as important before they ventured into wilderness areas. Resident camp directors influence the lives of millions of youth and they are an important provider of wilderness experience programs. Resident camp directors' attitudes and preferences toward wilderness can be helpful in the development of the perception of wilderness by the youth staying at their camps. Consequently, camp directors should not be overlooked as a constituent group for both developing future attitudes towards wilderness and support for wilderness management strategies.

Introduction

Organized camping is a well-established industry. Organized camping has evolved into a year-round industry servicing children, adults, families, businesses and other organizations. From 1970 through 1991, over four million boys participated in the Boys Scouts of America and over two and a half million girls participated in the Girls Scouts of American (Chadwick & Heaton, 1996). At least fifty-five hundred resident (overnight) camps operate in the United States (Knudson, Cable, & Beck, 1995; ACA, 1998b). The total economic impact of the eleven thousand two hundred organized camps operation in the Unites States in 1982 was $2,418,192,000 (Organized Camping Resources Center, 1984).

Resident camps can be defined as having a fixed site and permanent facilities located in a natural setting and where campers live for a period of time usually from a few days to eight or more weeks (Mitchell & Meier, 1983; Shivers, 1989). Camps not already located in primitive locales frequently take advantage of trip camping programs to provide wilderness experiences and new challenges for campers (Shivers, 1989; Gager, 1996). The use of wilderness experience programs is of particular interest to this study. The following passage is the *Recommended Wilderness Ethics for ACA Camps:*

> As camp people we have a unique opportunity to teach youngsters and adults to care for and respect, to feel at ease in, and to come to love the natural world around them. We should always seek to go through the woods and forests, the deserts, and the canyon lands and across the mountains so no one will know we have passed that way. We should seek to instill a reverence for all living things, and where possible, point out their interrelationships. (American Camping Association, 1993, p. 227)

The importance of positive values for natural areas is clear from this statement. And one that is both compatible with wilderness management strategies and with educating the public to take proper care of wilderness areas.

Resident camps are among the key providers of wilderness experience programs in the United States (Gager, 1996). Early exposure in life to wild lands can shape attitudes toward wilderness for life (Bixler & Floyd, 1997). Spiritual growth and renewal has been found to be an important reason for engaging in many outdoor recreation activities (Driver, Dustin, Baltic, Elsner & Peterson, 1996). Since camps can play a strong role in forming people's attitudes toward wilderness (Atkinson, 1990), this paper examines some spiritual values associated with wilderness reported by resident camp directors. In addition, this paper examines their opinions on other values of wilderness and its uses. Resident camp directors, who oversee programs under their direction, are an important group to study in the formation of attitudes held by youth.

Methods

The subjects for this study were camp directors. Subjects for this study were selected from the American Camping Association's (ACA) *Guide to ACA-Accredited Camps* (1998a). The guide contains a listing and brief description of all its camp members. Only camps which provided their own summer resident camping program, were included in the study. Specialty camps (e.g., computer camp and sports camps) were not included. A total of 1,240 camps were identified as having a traditional resident camp program. Of this group, 630 camps had an e-mail address listed. All of these camps were contacted first with a post card sent by first class mail. A week later the questionnaire was sent by e-mail. A second questionnaire was sent a week after the first. A thank you note was sent by e-mail to every respondent within 24 hours.

A random sample of 40 camps, which did not have e-mail addresses listed, was contacted and surveyed by telephone to inquire whether the camp's director had access to e-mail. A group of 12 non-respondents (to the e-mail survey) was randomly selected and survey by telephone. Both of these samples' responses were compared with the main data group. They were found to be very similar in character.

As part of a broader focused questionnaire, Likert-type questions were used. The answer categories ranged from *strongly disagree* to *strongly agree* to measure perceived values of wilderness by resident camp directors. An expert panel of three recreation and leisure studies researchers and two resident camp directors served as judges in the evaluation of the content validity and clarity of the original pool of survey questions. Ten camping professionals (e.g.,

program directors) participated in a pre-test of the questionnaire. Wordings of items were modified in response to the results of these efforts.

Results

Approximately 54 percent (68 of 125) of the respondents were male. The mean age for a camp director in this samples was about 40 years old. The mean level of formal education was 17.5 years (with this being skewed to the low side as the top of the scale was "19+" and 18 respondents checked this category). The mean level of experience for camp directors was 8.9 years (range .10 to 35 years). The mean number of years respondents had been camp professionals was 13.2 years (range .25 to 37 years). The average number of years the camps of the directors had been operating was 57 years (range 5 to 112). The percentage of respondents who indicated that they had led a wilderness trip within the past two years was 31.1 percent. The mean number of trips led over this time was 4.2 per person. The percentage of respondents who indicated that they had ever led a wilderness trip while working for a resident camp was 72.8 percent with the mean number of trips equal to 18 per person over this time.

Two items of the questionnaire asked directly about the spiritual value derived from wilderness experiences. On both items over 90% of the respondents agreed or strongly agreed that wilderness experiences did provide spiritual value. Wilderness experiences were felt by 87.1% of respondents felt that wilderness is a factor in regards to one's spiritual health. In response to weighing the relative value of wilderness as a spiritual resource versus recreation, scientific, economic, education, and/or aesthetic use, 80.6% of respondents agreed or strongly agreed that spiritual value was at least of equal value. When asked if they felt closer to God in wilderness areas, 75.8% agreed or strongly agreed, and 57.3% felt that spiritual considerations should be considered in decisions concerning wilderness regions.

On other issues, 87.1% or resident camp directors agreed or strong agreed that camps should inform and educate campers and staff about cultural sensitivity and local people before departure on wilderness trips. Wilderness areas were seen as important to camps by 84.8% of respondents who agreed or strongly agreed with that statement. A high percent of respondents (85.5% agreeing or strongly agreeing) that educational and interpretive programs should be provided to campers before they venture into wilderness areas. And, 82.3% agreed or strongly agreed with the wilderness ethic statement of the American Camping Association cited in the introduction above.

Discussion and Conclusions

Resident camp directors have a great deal of experience both in directing camps and in using wilderness to supplement the camping experiences of resident campers. Their education level is high and their interest in properly preparing campers to fully appreciate their wilderness experiences is also high.

Given this predisposition to support and promote wilderness, resident camp directors may represent a relatively unrecognized advocacy group for wilderness. Wilderness managers may wish to consider tapping this resource where such resident camp directors are found in proximity to the lands that they manage.

Little research has been conducted on the benefits of nature-based recreation that may arise from a possible relationship between nature and the human spirit (Elsner, Lewis, Snell &Spitzer, 1996). For man, wilderness has a spiritual quality (Jaakson & Shin, 1992). Spiritual growth and renewal has been found to be an important reason for engaging in many outdoor recreation activities (Driver, Dustin, Baltic, Elsner & Peterson, 1996).

The high degree of agreement with the importance of spiritual values in association with wilderness should draw attention for future research. While certainly difficult to quantify, the spiritual value of wilderness should be addressed when significant changes are planned in managing wilderness areas. And in learning of these values, resident camp directors may be a rich source of future information.

Resident camp directors are in a unique position to influence future generations in their attitudes and values associated with wilderness. For those who manage these lands, a long range approach in shaping future attitudes and values should include resident camp directors. And this same group may be able to articulate spiritual values of wilderness that are presently left unsaid in much of the literature.

References Cited

American Camping Association. (1993). Standards for day and resident camps: The accreditation programs of the American Camping Association (Rev. ed.). Martinsville, IN: American Camping Association.

American Camping Association. (1998). Guide to ACA-accredited camps.

Atkinson, G. (1990). Outdoor recreation's contribution to environmental attitudes. Journal of Physical Education, Recreation and Dance, 61, 45-48.

Bixler, R. D., & Floyd, M. F. (1997). Nature is scary, disgusting, and uncomfortable. Environment and Behavior, 29(4), 443-467.

Chadwick, B. A., & Heaton, T. B. (1996). Statistical handbook on adolescents in America. Phoenix, AZ: Oryx Press.

Driver, B. L., Dustin, D., Baltic, T., Elsner, G., & Peterson, G. (1996). Nature and the human spirit: Overview. In B. L. Driver, T. Baltic, G. Elsner & G. Peterson (Eds.), Nature and the human spirit: Toward an expanded land management ethic (pp. 3-8). State College, PA: Venture Publishing.

Elsner, G., Lewis, D., Snell, F., & Spitzer, W. (1996). The role of public lands in maintaining and rejuvenating the human spirit. In B. L. Driver, D. Dustin, T. Baltic, G. Elsner & G. Peterson (Eds.), Nature and the human spirit: Toward an expanded land management ethic (pp. 9-13). State College, PA: Venture Publishing.

Gager, D. (1996). Agency policies and wilderness managers' attitudes toward wilderness experience programs: A nationwide study of U.S. Forest Service, National Park Service, Bureau of Land Management, and U.S. Fish and Wildlife Service. Unpublished master's thesis, University of Idaho, Moscow.

Jaakson, R., & Shin, W. S. (1992). Purism and wilderness campers. The Journal of Social Psychology, 133(4), 489-493.

Knudson, D. M., Cable, T. T., & Beck, L. (1995). Interpretation of cultural and natural resources. State College, PA: Venture Publishing.

Mitchell, A. V. & Meier, J. F. (1983). Camp counseling: Leadership and programming for the organized camp (6th ed.). New York: CBS College Publishing.

Organized Camping Resources Center for Research and Advanced Study University of Southern Maine. (1984). The economic impact of organized camping in the United States in 1982: An estimate and analysis. Martinsville, IN: American Camping Association.

Shivers, J. S. (1989). Camping: Organization and operation. Englewood Cliffs, NJ: Prentice Hall.

SOCIAL GROUPS PREFERENCES RELATION TO MOTIVATIONS AND ABILITY LEVELS OF WHITEWATER KAYAKERS

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Abstract: Social groups play an important role in many adventure recreation activities. The purpose of this study was to examine the social group preference relation to motives and ability levels of whitewater kayakers. When participants go out on a kayaking trip they are seeking varying degrees of experiences, a major contributor to that experience comes from the members of their group. Looking at level of ability and motivations as two primary indicators, such indicators should provide deeper insight into social group preferences. Data was collected from 283 participants, through the use of a hand distributed survey instrument on the Deerfield River near the town of Charlemont, Massachusetts. The data was analyzed through the use of a factor-cluster analytical technique using motivational variables and ability levels to identify sub-segments of participants; these were then related to ability level.

Motivations were seen to play an integral part of the social group decision for kayakers' who were there for the challenge compared to the those who were skill/experience oriented. If participants share the same type of motivations for kayaking, then it is likely that they will be drawn to people with similar motivations.

The research found there were significant differences in social group preferences among the three different levels of self reported ability: Beginner, Intermediate and Advanced; and it was made apparent that each ability level had a specific type of social group or groups to which they were drawn.

Introduction

The purpose of this study was to examine the relationship between preferences for social group and motivations for participating in whitewater kayaking. The study also examined the relationship between ability levels and preferred social group. There has been little research done which has examined the importance of the social group in adventure recreation activities (Schuett, 1995), and little research which has attempted to relate motivations to group preference.

When participants go out on a kayaking trip they are looking for varying degrees of experiences and a major contributor to that experience comes from the members of their group. The social group participants can be any number or type of people ranging from family members, peers, neighbors, friends, club associates, or workmates. Relationships with other members tend to be one of the main reasons why people choose the recreational activity in which they participate, and they influence what, when, and how recreation participation occurs (Bergier, 1981). Social interactions can lead to learning more about an individual recreation participant's identity (Kelly, 1990).

Methods / Instrument

Data were collected using a self administered survey instrument that was hand distributed to a population of whitewater kayakers on the different sections of the Deerfield River in Charlemont, Massachusetts during the summer of 2000. The survey looked at the social group preferences, motives and ability level of whitewater kayakers using this river.

The researcher surveyed a purposive sample of kayakers at the put-in and take-outs of each section of river and administered the questionnaire to participants signing up for instructional classes at Zoar Outdoor Adventure Resort. The survey was three-and-a-half pages in length and took approximately three to five minutes to complete.

The questions on the survey were focused on people's ability level/ skill, length of time they had been kayaking, favorite rivers/ rapids, how frequently they kayak with varied groups of people and their motivations.

The different sections of the Deerfield River were chosen for approaching potential respondents because of the wide variety and ability levels of kayakers available. Zoar Outdoor, a local kayaking school, also agreed to allow the researcher to survey their instructional programs, which are primarily directed to beginners. The Deerfield River offers three different sections of river that were used by private boaters of all ability levels, The Dryway (Advanced), Zoar Gap (Intermediate/Beginner) and the Lower Deerfield (Beginner/Instructional). There were 100 surveys collected from each of the three sections of the river during the course of the summer.

Results

Data were collected for this research and analyzed with regard to the relationship of paddlers' motives, ability/ skill levels and type of groups with which they paddle. Principle Components Factor Analysis and K-means Cluster Analysis were employed to develop motivational types. A one way ANOVA test was then used to test if there were any differences between the motivation types and respondent's preferences for participating in kayaking with six selected social groups and preference for paddling alone.

In the initial analysis, three groups of kayakers were identified based upon the section of the Deerfield River that they paddled and self reported ability level. These three groupings were (1) paddlers on the Dryway rapids,

considered as Advanced (X=100); (2) paddlers on Zoar Gap, classified as Intermediate paddlers (X=92); (3) those participating in instructional classes with Zoar Outdoor classified as Beginners (X=91).

A total of 300 surveys was hand distributed to a purposive sample of kayakers, 283 surveys were returned with usable data. Of the missing surveys 15 of them were not returned, and there were two refusals by participants. The number of surveys collected resulted in a 94.3% return rate. The age brackets for respondents ranged from 18 years of age to over 56 years in age. This suggests that a younger age group responded to the questionnaire. The gender of respondents was 189 males and 93 females.

Descriptive Results and Findings

Data were analyzed in two steps. First, descriptive statistics were obtained to illustrate the characteristics of the sample and mean scores for the sample of kayakers that were identified. Second, a factor-analysis with varimax rotated components, allowed for the 18 original motivational variables to be broken down into linear combinations; these were then examined and factor loadings were used to label the factors. (See Table 1.) The labels of each factor represent the meaning of the variables on which the factors loaded (>.05).

The principle component factor scores were then used in a non-hierarchial (K-means) cluster analysis to develop a motivational typology of respondents. A five-cluster solution was developed based on cluster centers, stability of clusters, and interpretability (see Table 2). The first cluster was labeled Close to Nature (2.19066). The second cluster was identified as Internal Control as it loaded positively on this factor (.89820). The third cluster was identified by high mean standard deviation on Challenge (.89391). The forth cluster was identified with the Escapism factor (1.64740), and the fifth cluster could not be labeled directly from the original 5 linear variables. This latter grouping showed that there was an inverse relationship to the factor variables challenge, internal control, and escapism. A cross-tabs test was run using the 5 new cluster types against "ability level"; the fifth cluster was strongly related to advanced ability level, suggesting those respondents of this latter cluster were skill/experience oriented.

Table 1. Rotated Component Matrix (Factor Scores)

Variables	Group 1	Group 2	Group 3	Group 4	Group 5
	Close To Nature	**Challenge**	**Internal Control**	**Social Aspect**	**Escapism**
To View the Scenery	0.913				
To Be Close to Nature	0.880				
Enjoy the Wilderness	0.856				
To Be with Friends and Family					
Challenge and Risk		0.794			
Personal Testing		0.791			
Feeling of Accomplishment		0.733			
Excitement		0.717			
To Think			0.805		
Creativity			0.757		
To Develop My Abilities			0.534		
To Gain Control			0.528		
To Be Known As a Kayaker				0.886	
Recognition				0.880	
To Help Others				0.618	
To Get Away					0.790
For Relaxation					0.784
To Slow My Mind					0.745

Extraction Method: Principle Component Analysis

Table 2. K-Means Final Cluster Centers to Show the New Cluster Centers

	Close to Nature	Internal Control	Challenge	Escapism	Skill/ Experience*
REGR factor score 1 for: **Close to Nature**	**2.19066**	-.56175	-.16590	-.41595	.20886
REGR factor score 2 for: **Challenge**	.15136	-.07950	**.89391**	-.61128	-.58329
REGR factor score 3 for: **Internal Control**	.84907	**.89820**	-.32911	.03304	-.73619
REGR factor score 4 for: **Social Aspect**	-.01020	-.59871	.30596	.16589	.15973
REGR factor score 5 for: **Escapism**	.46958	-.42970	.18001	**1.64740**	-.66468

*Label identified through the use of cross-tabs

Social group preferences were then analyzed with One-way ANOVA, using a Post Hoc Scheffe test to determine differences in motivation in their expressed social group preferences in kayaking the Deerfield River (see Table 3). The ratings of social group preference ranged from "Always" = 1 to "Never" = 5.

The results of the One-way ANOVA and Post Hoc Scheffe tests indicates motivational types were differentiated on their preferences for paddling with "Friends" and "Fellow Paddlers of Similar Experience". The Post-Hoc Scheffe test suggests the motivational types "Challenge" and "Experience Oriented" were differentiated in preferences for paddling with friends and paddlers of similar experience level, this can be seen in the super-script.

A One-way ANOVA test was also performed to see if there was any difference among ability levels and preferences for the Social Group (see Table 4). This table shows that there is significance among all levels of ability in their preferences for social groups while paddling. The Advanced level group differs from both the Beginner and Intermediate groups in preference for paddling with "Friends", "People in Classes or Instruction Groups", "Teachers and Mentors" and "With a guide". Differences among ability levels are displayed by the superscripts in Table Four. The Advanced group differs from beginners on "preferences for paddling with fellow paddlers of a similar experience," and in their preference for paddling "alone." Advanced kayakers lower means on these two variables indicates a higher preference for paddling alone or with those of the same experience level.

The Beginner and Advanced level groups differ from the Intermediates on the preference for "Groups from Outing Clubs or Organizations" variable. It is speculated that Beginners differ from the Intermediates in that they do not want to feel uncomfortable in front of more experienced people. Beginners want to be with people who are kayaking at the same level. The Advanced level group on the other hand do not want to be involved with organization Groups or Clubs, this group is much happier paddling on their own or with people they are comfortable with at the same skill/experience level.

Table 3. Social Groups vs. Motivational Types

Preferences	Close to Nature[a]	Internal Control[b]	Challenge[c]	Escapism[d]	Skill/ Experience [e]	F=	Sig.
Friends	**2.05**	**1.91**	**2.17[e]**	**2.00**	**1.50[c]**	3.475	**0.009**
People in Classes or Instructional Groups	3.00	3.77	3.46	3.32	3.58	2.023	0.092
Alone	3.94	4.38	4.33	4.42	4.17	1.269	0.283
Fellow Paddlers of Similar Experience Level	**2.53**	**2.25**	**2.62[e]**	**2.37**	**2.03[c]**	3.533	**0.008**
Teachers/ Mentors	3.10	3.27	3.34	3.03	3.04	0.798	0.528
Groups from Outing Clubs or Organizations	3.95	3.82	3.87	4.10	3.87	0.383	0.820
With a Guide	3.60	4.10	4.19	4.00	3.90	0.305	0.269

- Superscript shows difference between Social Groups on each of the Motivational Types.

Table 4. Level of Ability vs. Social Groups

Preferences	Beginner[a]	Intermediate[b]	Advanced[c]	F=	Sig.
Friends	**2.33[c]**	**1.72[c]**	**1.61[ab]**	12.033	0.000
People in Classes or Instructional Groups	3.06[c]	3.74[c]	3.76[ab]	11.311	0.000
Alone	4.63[bc]	4.32[a]	3.83[a]	19.277	0.000
Fellow Paddlers of Similar Experience Levels	**2.65[c]**	**2.30**	**2.09[a]**	7.451	0.001
Teachers/Mentors	2.69[c]	3.41[c]	3.50[ab]	14.336	0.000
Groups from Outing Clubs or Organizations	4.11	3.64[c]	3.91[b]	4.644	0.010
With a Guide	3.51[c]	4.15[c]	4.33[ab]	13.024	0.000

- Superscript shows differences between the Ability Levels on each Social Group.

This study lends some insight about understanding social group preferences of one group of adventure recreators, whitewater kayakers. Motivations were seen to play an integral part of the social group decision for kayakers' who were there for the challenge compared to the those who were skill/experience oriented. If participants share the same type of motivations for kayaking, then it is likely that they will be drawn to people with similar motivations.

The research also found there were significant differences in social group preferences among the three different levels of self reported ability: Beginner, Intermediate and Advanced. It was made apparent that each ability level had a specific type of social group or groups to which they were drawn, and it was also apparent that ability was a more discriminating variable than motivational type in differentiating paddlers' preference for social group.

Discussion

Whitewater kayaking experience is multifaceted; therefore, the reasons why these individuals pursue this adventure recreation activity are varied. Even though this type of adventure recreation involves more risk and danger than passive outdoor recreation pursuits such as picnics and bird watching, the social aspect is still an important underlying dimension (Schuett, 1995). We were able to see the differences among ability levels in their preferences with whom they preferred to kayak.

The Beginners appeared to prefer "people in classes or instructional groups" and "Teachers/Mentors," this suggests that they were looking for people who were most likely just starting to kayak and are less skilled. This would place the beginner in a non-threatening environment where they are most likely surrounded by people of similar ability.

By examining the means in Table 4, the Intermediate ability level preferred paddling with "Friends," and also showed a preference for "Fellow Paddlers of Similar Experience." This indicates intermediate level kayakers have developed their abilities/skills to a certain level and are looking for people with whom to share a good time; they are less focused on honing their skills/abilities.

Advanced level kayakers looked for "Friends" and "Fellow Paddlers of Similar Experience," they were differentiated from the intermediate and beginner level with a lower mean score on the preference for paddling with "Friends" and more differentiated from beginners in preference for paddling with "Fellow Paddlers of Similar Experience". This tells us that they are not looking to improve upon their skills and abilities, but participating in kayaking for the social aspect of being with friends and people who share the same abilities.

All of the social group variables involve kayaking with others and few participants' kayak alone (see means on Table 4). The importance of the social groups in kayaking was apparent, kayaking alone is not seen as desirable. All preferences with the exception of "alone" involve social contact. Kayakers consider paddling a social sport, but the motivational types of participants and ability level groupings vary in preference with whom they prefer paddling.

References

Bergier, M. J. (1981). A conceptual model of leisure-time choice behavior. Journal of Leisure Research, 13(2), 139-158.

Bryan, H. (1979). Conflict in the great outdoors (Sociological Studies No. 4). University of Alabama, Bureau of Public Administration.

Buchanan, T., Christensen, T. E., & Burdge, R. J. (1981). Social groups and the meaning of outdoor recreation. Journal of Leisure Research, 13, 254-266.

Ewert, A. W. (1993). Differences in the level of motive importance based on the trip outcome, experience level, and group type. Journal of Leisure Research, 25(4), 335-349.

Ewert, A. W. (1985). Why people climb: The relationship of participant motives and the experience level to mountaineering. Journal Leisure Research, 17(3), 241-250.

Hammit, W., & McDonald, C. D. (1983). Past on-site experience and its relationship to managing river recreation resources. Forest Sciences, 29, 262-266.

Hautaluama, J., & Brown, P. J. (1978). Attributes of the deer hunting experience: A cluster analytical study. Journal of Leisure Research, 10, 271-287.

Heywood, J. L. (1987). Experience preferences of participants in different types of river recreation groups. Journal of Leisure Research, 19(1), 1-12.

Katzell, R., & Thompson, D. E. (1990). Work motivation: Theory and practice. American Psychologist, 45(2), 144-153.

Kelly, J. R. (1990). Leisure (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Manfredo, M. J., Driver, B. L., & Brown, P. J. (1983). A test of concepts inherent in experience based setting management for outdoor recreation areas. Journal of Leisure Research, 15, 263-283.

Priest, S., & Gass, M. A. (1997). Effective leadership in adventure programming.

Schreyer, R., & Lime, D. (1984). A novice isn't necessarily a novice: The influence of experience use history on subjective perceptions of recreation participation. Leisure Sciences, 6, 131-149.

Schreyer, R. (1982). Experience level affects expectations for recreation participation. In D.W. Lime (Ed.), Forest and river recreation: Research update (pp. 154-159). St. Paul: Minnesota Agricultural Experiment Station.

Schuett, M. A. (1995). Predictors of social group participation in whitewater kayaking. Journal of Park and Recreation Administration, 13(2), 42-54.