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VISITOR MOTIVATIONS FOR TECHNOLOGY ESCAPE IN WISCONSIN'S LARGEST STATE FOREST

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Abstract

Outdoor recreation managers are increasingly challenged with determining whether and how to provide opportunities for technology use in forests and parks. Decisions can be informed, in part, by better understanding visitor motivations regarding technology. To this end, four new “technology escape” motivation items were developed and measured in a survey of visitors to Northern Highland – American Legion State Forest. Visitors completed 815 surveys in summer 2013 (response rate = 90%). The four motivation items were grouped together into a single escape technology domain. Overall, NHAL visitors placed moderate importance on this motivation. Small differences in technology escape were found by respondent group size, gender, and place attachment. However, no significant relationships were found by primary activity, education level, age, income, or experience use history. Moderate to strong correlations suggest that the new technology specific domain may not be particularly distinct from existing recreation experience domains targeted at escaping everyday pressures.

1.0 Background

Outdoor recreation managers are tasked with balancing benefits and challenges presented by new trends and technologies. From accommodating the family pet to allowing extreme sports, managers must determine what types of opportunities to provide as society's interests change. Today, forests and parks are adapting to ubiquitous use of personal technology. Technology is embraced as a way to connect with tech savvy visitors, to reach new audiences, and to deliver timely information. For example, the National Park Service has highlighted a number of technology success stories in its 100th anniversary “Call to Action”. Noted accomplishments include: interpretive apps, a junior web ranger program, and “Skype a ranger” (NPS, 2015). At the same time, personal technology has presented its share of challenges, from visitors simply being annoyed by others technology use to more serious links between social media, vandalism and risk taking (e.g., “bear selfies”) (MacFarlane, 2013; Millward, 2014).

Potential technology management actions range from improving connectivity to encouraging visitor etiquette to establishing “technology free” zones. Decisions about how to manage this issue can be informed, in part, by better understanding visitor motivations regarding technology. The recreation experience preference (REP) scales (Driver, 1983) have been extensively applied to measure motivations in outdoor recreation. The scales and

larger domains are meant to represent a full spectrum of potential recreation experiences; nevertheless, additional experiences and domains have been identified since the scales were originally published (Moore and Driver, 2005). Current advances in personal technology, and lack of a technology-specific domain, provide an opportunity to consider whether this may be a distinct outdoor recreation motivation. More specifically, consideration is given to preferences for technology escape and how this motivation might differ among recreational visitors.

The issue of technology is well suited to Northern Highland – American Legion State Forest (NHAL), located in Boulder Junction, Wisconsin. Spanning 236,000 acres, NHAL is Wisconsin's largest state forest. With an abundance of primitive forest recreation opportunities, spotty cell phone coverage, and no electric campsites, the forest is a place where one could indeed "escape" technology. At the same time, NHAL has taken steps to embrace technology, being the first in the state forest system to offer a campground reservation app. As the forest seeks to more clearly define its recreation niche in the state forest system, technology is a timely topic to consider. In this exploratory study, we examine visitor motivations for technology escape and consider how these motivations compare with traditional REP domains. Relationships between technology escape and experience use history, place attachment, and demographic variables are considered.

2.0 Methods

Data for the study were gathered through an 8-page on-site questionnaire. Recreation experience preferences were measured using eleven of the established REP domains (Manfredo et al., 1996) and four new items developed to measure technology escape: "to be free from the distractions of modern life," "to get away from technology," "to be free from the obligations of email/telephone," and "to experience a 'screen free' zone." Respondents evaluated the importance of each motivation item on a 5-point scale from "very unimportant" to "very important." Three dimensions of experience use history were included: years of visitation, visits over a lifetime, and visits over the past year. Three dimensions of place attachment – place identity, place dependence, and place bonding – were measured using established scales (Kyle et al., 2005). Respondents indicated their agreement with place attachment items on a 5-point scale from "strongly disagree" to "strongly agree." The survey also included questions regarding primary activity, group size, gender, age, education level, and income level.

To ensure adequate representation of a diverse spectrum of forest visitors, visitors were contacted following a stratified random sampling process. Between May and August, 2013, research assistants rotated between four distinct areas: 1) campgrounds, 2) trails, 3) boat landings, and 4) lakes. Sampling occurred at all campgrounds, trails, and boat landings within the forest and at a representative sample of lakes. Visitors were intercepted between 7:00 am – 8:00 pm each day. Each group encountered at a sample site was approached and asked to participate in the study. If they agreed, one adult member per household (the one with the most recent birthday) was asked to complete a survey. Visitors completed 815 surveys (response rate of 90%).

3.0 Results

3.1 Visitor Characteristics

Survey respondents came from 23 states, with most visiting from towns and cities in Wisconsin (82%). Families were the most common group type (70%), followed by groups of friends (17%). A slight majority (53%) were female. Nearly all (99%) were white. Survey participants ranged in age from 18 to 87. A majority had completed a college degree or higher and earned an annual household income of \$65,000 or more (67% and 55%, respectively).

Most respondents (91%) were repeat visitors to NHAL and many indicated a long relationship with the forest (on average 22 years since the first visit). Respondents averaged more than 55 visits over the course of their lifetime, and more than 6 visits within the past year. Collectively, respondents exhibited moderate, positive place attachment to NHAL. Visitors engaged in a wide variety of activities on the forest; the most common primary activities included camping (45%), fishing (15%), and hiking (15%).

3.2 Technology Escape

Respondents evaluated the four technology escape items as somewhat important to important to their experience at NHAL. Importance ratings declined slightly as item wording became more specific regarding technology. This reflects an increase in the number of respondents providing an ambivalent rating (“neither unimportant nor important”) for items mentioning technology, email/telephone, and “screen free” zones (Table 1).

Table 1. Descriptive findings for escape technology motivation items

	n	Mean	SD	Importance (%)				
				-2	-1	0	1	2
To be free from the distractions of modern life	796	1.05	0.96	2.9	3.1	16.6	40.6	36.8
To get away from technology	796	0.72	1.11	4.9	7.0	28.5	29.9	29.6
To be free of the obligations of email/telephone	788	0.63	1.09	4.7	8.5	30.6	31.6	24.6
To experience a “screen free” zone	776	0.51	1.07	5.4	8.2	37.4	28.2	20.7

Response scale: -2 = “very unimportant”, -1 = “unimportant”, 0 = “neither unimportant nor important”, 1 = “important”, 2 = “very important”

Moderate to strong correlations were found between the four scale items (Table 2). Given this, and a Cronbach’s alpha value of 0.848, the items were grouped together into an escape technology motivation domain.

Table 2. Correlations between escape technology scale items

	To be free from the distractions of modern life	To get away from technology	To be free of the obligations of email/telephone	To experience a “screen free” zone
To be free from the distractions of modern life	--			
To get away from technology	.60	--		
To be free of the obligations of email/telephone	.51	.60	--	
To experience a “screen free” zone	.47	.56	.71	--

All correlations significant at $p < 0.001$

3.3 Technology Escape and Traditional Motivations

Escape technology was positively correlated with 11 of the traditional REP domains. These correlations were moderately strong for two of the domains: escape personal and social pressures and escape physical pressures (Table 3).

Table 3. Correlations between escape technology and traditional motivations

	Escape Technology		
	n	r_s	p
Escape Personal and Social Pressures	757	.61	0.00
Escape Physical Pressures	754	.59	0.00
Autonomy/Leadership	762	.55	0.00
Enjoy Nature	767	.41	0.00
Learning	762	.40	0.00
Achievement/Stimulation	756	.39	0.00
Physical Fitness	762	.33	0.00
Nostalgia	758	.29	0.00
Family Togetherness	763	.18	0.00
Similar People	762	.15	0.00
New People	757	.07	0.04

3.4 Technology Escape, Experience Use History, Place Attachment, and Demographics

The importance of technology escape differed significantly according to respondent group size and gender. Visitors in medium groups (three to four people) placed slightly greater

importance on technology escape than those in large groups (five or more people). Likewise, women placed slightly greater importance on this motivation than men. No significant differences in technology escape were found by respondent education, age, primary activity, or income level (Table 4). Similarly, no significant relationships were found between three dimensions of experience use history and technology escape (Table 5). However, weak positive relationships were found between three dimensions of place attachment and technology escape (Table 6).

Table 4. Analysis of variance for escape technology motivation by visitor characteristics

	n	Mean*	SD	F	p
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Group size

1-2	275	0.73 ^{a,b}	0.90		
3-4	222	0.85 ^a	0.78	4.39	0.01
5+	258	0.62 ^b	0.89		
<u>Gender</u>					
Female	407	0.79	0.86		
Male	354	0.65	0.88	4.81	0.03
<u>Education</u>					
High school or some college	242	0.64	0.91		
College graduate	301	0.72	0.89	2.02	0.13
Graduate school or degree	208	0.81	0.80		
<u>Age</u>					
18-24	30	0.63	0.81		
25-44	264	0.81	0.88		
55-64	169	0.71	0.86	1.30	0.27
65+	89	0.63	0.90		
<u>Primary Activity</u>					
Camping	336	0.72	0.90		
Fishing	113	0.78	0.92	0.81	0.47
Hiking	108	0.84	0.87		
<u>Income</u>					
<\$25	45	0.71	1.02		
\$25 to <\$40	52	0.79	1.00		
\$40 to <\$65	139	0.64	0.80		
\$65 to <\$85	146	0.74	0.84	0.48	0.79
\$85 to <\$100	79	0.69	0.91		
\$100+	235	0.77	0.84		

*Mean values based on scale of -2 = “very unimportant”, -1 = “unimportant”, 0 = “neither unimportant nor important”, 1 = “important”, 2 = “very important”. Means with a different superscript letter are significantly different at $p < 0.05$ following Tukey’s post-hoc test.

Table 5. Correlations between escape technology motivation and experience use history dimensions

	Escape Technology		
	n	r _s	p
Years of visitation	648	.013	.737
Visits over lifetime	599	.024	.556
Visits over past year	548	-.003	.943

Table 6. Correlations between escape technology motivation and place attachment dimensions

	Escape Technology		
	n	r _s	p
Place bonding	742	.235	.000
Place identity	754	.283	.000
Place dependence	753	.258	.000

4.0 Discussion

This study considered technology escape as a potentially distinct outdoor recreation motivation, and explored how this motivation differed among recreational users in a Wisconsin state forest. Overall, NHAL visitors viewed technology escape as moderately important to their experience on the forest. Evaluations were consistent across experience use history, education level, age, income, and three primary activities, while small differences were found by group size, gender, and place attachment. These findings provide managers with an initial view of visitor motivations regarding technology, and suggest a management approach that provides opportunities for technology escape without excluding it altogether.

More detailed planning would need to be informed through collection of additional data. For example, a majority of visitors evaluated technology escape as important or very important to their experience at NHAL. At the same time, a substantial minority were ambivalent in their ratings of items that specifically mentioned technology or types of technology. A more detailed survey might address the cause of this ambivalence. Are these visitors torn between wanting to get away from technology and feeling an obligation to be constantly connected to their individual devices? Or is technology simply a minor consideration compared with other dimensions of the visitor experience? A more complete picture would emerge by also considering visitor motivations for technology use. As with the traditional REP domains of family togetherness and escape family, a measure of both technology escape and technology use would more fully examine this contemporary issue.

Technology escape as a distinct motivation should also be considered. The four technology escape items measured in this study were grouped together into a single domain. Moderate to strong correlations were found between the technology escape domain and two traditional REP domains. Technology escape might be more appropriately conceptualized as an experience within the larger domain of escape personal and social pressures.

Finally, this study examined technology through motivations. This issue could be more fully examined using normative theory and methods. While motivations provide insight into the types of experiences recreationists seek, social norms could provide insights into how much and what types of technology are appropriate in particular recreation areas, and which associated management actions are acceptable to visitors.

5.0 Citations

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