

DIFFERENCES IN REPORTED SATISFACTION RATINGS BY CONSUMPTIVE AND NONCONSUMPTIVE RECREATIONISTS: A COMPARATIVE ANALYSIS OF THREE DECADES OF RESEARCH

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Abstract.—This paper updates a previous comparative analysis article (Vaske et al. 1982) by analyzing differences in satisfaction ratings reported by consumptive and nonconsumptive recreationists over a 30-year period. In the 1982 article, consumptive recreationists reported significantly lower satisfaction ratings than did nonconsumptive recreationists. Based on these findings, two hypotheses were advanced: (1) the pattern of findings between the two activity types will persist; and (2) the pattern will remain constant over study years. Data were obtained from published and unpublished sources. A total of 59 consumptive and 66 nonconsumptive recreation contexts (e.g., resident deer hunters in Colorado, kayakers on the Poudre River) were examined. Each study used the same 6-point satisfaction question (“Overall, how would you rate your day/trip/experience?”). Following Vaske et al. (1982), responses were collapsed into three categories (“poor/fair,” “good/very good,” “excellent/perfect”). The independent variables were activity type and study year. Consistent with hypothesis 1, consumptive recreationists reported lower satisfaction ratings than did nonconsumptive recreationists. With both activity type and study year included in the model, the pattern of the interactions provided support for hypothesis 2. Implications for theory, management, and future research are discussed.

1.0 INTRODUCTION

Analysis of multiple data sets using comparative analyses and/or meta-analyses highlights replication of research and generalization of results over different settings and time periods (Vaske and Manning 2008). Such analyses can demonstrate long-term patterns and trends, discern causal factors, and generate support for theories, which are not possible with a single data set or study. Comparative analyses have been reported for concepts such as crowding (Kuentzel and Heberlein 1992, Shelby and Vaske 2007, Vaske and Shelby 2008), norms (Donnelly et al. 2000, Laven et al. 2005, Vaske and Donnelly 2002), motivation (Manfredo et al. 1996), and satisfaction (Vaske et al. 1982). This paper replicated the Vaske et al. (1982) analyses comparing the satisfaction ratings reported by consumptive and nonconsumptive recreationists. By using data obtained over the last 30 years, we sought to generalize the original findings over a wider range of evaluation contexts and time periods.

1.1 Satisfaction

Satisfaction has been a focal point in the study of recreation behavior since the 1970s (Floyd 1997). The concept is commonly used as a measure of recreation quality, and satisfaction can be defined as “the congruence between expectations and outcomes” (Manning 1999, p. 10). Quality of and satisfaction from recreation experiences reflect management goals and visitor expectations. Individuals bring their own expectations to an experience, and these expectations influence the kinds of satisfaction they receive. The multiple satisfactions approach recognizes the diversity of experiences that visitors seek (Hendee 1974). Different types of satisfaction include communing with nature, testing skills, harvesting game, exercising, and relaxing (Manfredo et al. 2004).

Although widely accepted, the multiple satisfactions approach makes it difficult to compare satisfaction ratings among different individuals, activities, and time periods as is necessary for a comparative analysis. Similar to Vaske et al. (1982), we define satisfaction as “an overall rating of a recreation experience as good or bad. It is a composite of the particular expectations and needs, expressed as a single numerical rating. An average score can be calculated for all participants in an activity and the activities can be compared directly” (p. 198). Defined this way, satisfaction has been operationalized with a single question such as “Overall, how would you rate your day/trip/experience?” (Vaske 2008).

1.2 Consumptive vs. Nonconsumptive Recreation Activities

Recreation activities can be organized along a consumptive to nonconsumptive continuum (Wagar 1969). Recreationists on the consumptive end of the continuum seek to catch or capture and consume an element of the environment (Vaske et al. 1982). The focus is on a commodity or product to be consumed. Examples of consumptive activities include hunting, angling, gold panning, and mushroom collecting. Nonconsumptive recreationists tend to focus on experiences (e.g., being with friends or experiencing nature) over commodities and products. Examples of nonconsumptive activities are viewing scenery, canoeing, hiking, backpacking, climbing, and camping. Viewing scenery, for example, is almost completely nonconsumptive, as “the viewer can often gain substantial benefits without any impact on the resource or the experience available to the next viewer” (Wagar 1969, p. 258).

Consumptive and nonconsumptive activities differ in at least two ways (Vaske et al. 1982). First, recreationists in the two activity types differ in the specificity of their goals. Consumptive recreation activities are generally dominated by one clear and specific goal: the acquisition of the commodity or product to be consumed. For instance, hunters seek to harvest game; anglers want to catch fish. Although

acquiring a specific product is the most important goal, consumptive recreationists have other goals that can influence a satisfying experience. For example, hunters, anglers, or mushroom collectors may also enjoy the solitude of being in nature if alone or the companionship offered by others if in a group. Despite these secondary goals, “seeing, shooting, and bagging game are still the most central evaluative criteria for the recreationist” and are “the strongest predictors of overall satisfaction” (Vaske et al. 1982, p. 197). Realization of the secondary goals is only a partial substitute if the chosen product is not acquired (Vaske 2008). In contrast, the goals of nonconsumptive recreationists are more general and less well-defined (Vaske et al. 1982). Backpackers or campers, for example, may be motivated to experience nature, test skills, experience solitude, or be with friends. These goals can be achieved throughout the entire experience, do not depend on acquiring a specific product, and are more easily substituted if one goal is not satisfied.

A second key difference between consumptive and nonconsumptive recreation activities is the amount of control participants have in fulfilling their goal(s) (Vaske et al. 1982). Consumptive recreationists generally have less control than nonconsumptive recreationists. Despite the best efforts of hunters or anglers to select an area that ensures successful acquisition of the desired game/fish, there is rarely a guarantee that their goal will be met. Without this control, overall satisfaction for this group is likely to be low. By comparison, nonconsumptive recreationists generally have greater control in achieving their goals than their consumptive counterparts. For the nonconsumptive recreationists, it is relatively easy to choose a location that guarantees goal achievement. Unexpected events (e.g., accidents, injuries, flat tires, forgotten equipment, and poor weather conditions) can disrupt the desired experience, but nonconsumptive recreationists usually have more control over their experience and goals, which is likely to result in higher levels of overall satisfaction (Vaske et al. 1982).

1.3 Hypotheses

Based on theory and prior research (Vaske et al. 1982), the following hypotheses were advanced:

- H₁: Consumptive recreationists will report significantly lower levels of satisfaction than nonconsumptive recreationists.
- H₂: The overall pattern of findings will remain constant over study years.

2.0 METHODS

2.1 Sampling Design

Data for this paper were obtained from journal articles, dissertations, theses, published and unpublished reports, and proceedings reported in the literature over a 30-year period (1975 to 2005). Satisfaction ratings were examined for 125 evaluation contexts (e.g., resident deer hunters in Colorado, kayakers on the Poudre River). A total of 59 consumptive recreation contexts and 66 nonconsumptive recreation contexts were examined. Consumptive activities included hunting (i.e., deer, elk, geese, turkey) and angling (i.e., salmon, trout); nonconsumptive activities included boating, rafting, canoeing, kayaking, climbing, biking, hiking, mountain biking, and sightseeing.

Including all evaluation contexts, the analysis represented 17 states and 2 Canadian provinces. Responses were obtained from 37,075 individuals. Response rates ranged from 39 percent to 100 percent, with an average response rate of 79 percent. Survey methodologies included onsite surveys (70 contexts), mailed surveys (45 contexts), phone surveys (3 contexts), or a combination of onsite and mailed surveys (6 contexts).

2.2 Variables

Two independent variables were analyzed: activity type and study year. Activity type was a dichotomous measure representing consumptive (n = 59) and nonconsumptive (n = 66) contexts. Study year was coded as three time periods: 1975-1984 (n = 33), 1985-1994 (n = 45), and 1995-2005 (n = 47).

Each study analyzed used the same satisfaction question: "Overall, how would you rate your day/trip/experience?" Responses were coded on a 6-point scale representing "poor," "fair," "good," "very good," "excellent," and "perfect." Following Vaske et al. (1982), responses were collapsed into three categories ("poor/fair," "good/very good," "excellent/perfect"). For each evaluation context per study, the percentage of participants choosing each of the three responses was calculated and analyzed as three separate dependent variables (potential range = 0 to 100 percent for each variable).

2.3 Analysis

The relationship between activity type (consumptive vs. nonconsumptive) and overall satisfaction ("poor/fair," "good/very good," "excellent/perfect") was examined using t-tests. Three 2-way ANOVAs were used to test for significant interactions between the two independent variables, activity type and study year. These 2-way ANOVAs tested the hypothesis that the overall pattern of findings would remain constant over study years).

A relationship was considered statistically significant at $p < .05$. Eta (η) was used to indicate the strength of a relationship. An eta (or effect size) of .10 was considered a "minimal" relationship, .30 represented a "typical" relationship, and an $\eta > .50$ reflected a "substantial" relationship (Vaske 2008).

3.0 RESULTS

The means for all three satisfaction variables differed significantly ($p < .001$) between consumptive and nonconsumptive recreationists (Table 1). About 36 percent of consumptive recreationists and 4 percent of nonconsumptive recreationists gave a "poor/fair" rating, $t = 11.59$, $p < .001$, $\eta = .737$. On average, 41 percent of consumptive and 30 percent of nonconsumptive recreationists rated their overall satisfaction as "good" or "very good," $t = 4.19$, $p < .001$, $\eta = .348$. Finally, 66 percent of the nonconsumptive recreationists (on average) rated their experience as "excellent" or "perfect," compared to only 24 percent of consumptive recreationists who

Table 1.—Differences in reported satisfaction ratings by activity type

Satisfaction Rating	Activity Type		t-value	p-value	η
	Consumptive ¹	Nonconsumptive ¹			
Poor/Fair	35.7	4.2	11.59	< .001	.737
Good/Very Good	40.7	29.7	4.19	< .001	.348
Excellent/Perfect	23.5	66.1	13.22	< .001	.762

¹ Values in cells denote mean percentage of consumptive and nonconsumptive recreationists giving each response.

gave this response, $t = 13.22$, $p < .001$, $\eta = .762$. These results support hypothesis 1 and illustrate that consumptive recreationists report significantly lower levels of satisfaction than nonconsumptive recreationists do.

To test the interaction effect proposed by hypothesis 2, three 2-way ANOVAs were analyzed (Table 2). When both activity type and study year were included in the model, significant interactions were observed for the “poor/fair” ($p = .018$) and “excellent/perfect”

($p = .012$) variables. The interaction between activity type and study year was not significant ($p = .062$) for the “good/very good” variable. The general pattern of these interactions showed a higher percentage of consumptive recreationists reporting “poor/fair” and “good/very good” responses over time and a higher percentage of nonconsumptive recreationists reporting “excellent/perfect” responses over time. Figures 1 and 2 show the results for the “poor/fair” and “excellent/perfect” response categories. These patterns are consistent with hypothesis 2.

Table 2.—Interaction between the effects of activity type¹ and study year² on reported satisfaction ratings

Satisfaction Rating	df	MS	F-value	p-value	η^2
Poor/Fair	2	743.63	4.16	.018	.066
Good/Very Good	2	571.71	2.85	.062	.046
Excellent/Perfect	2	1439.35	4.57	.012	.072

¹ Dichotomous variable measured as 0 “consumptive” and 1 “nonconsumptive.”

² Categorical variable measured as “1975-1984,” “1985-1994,” and “1995-2005.”

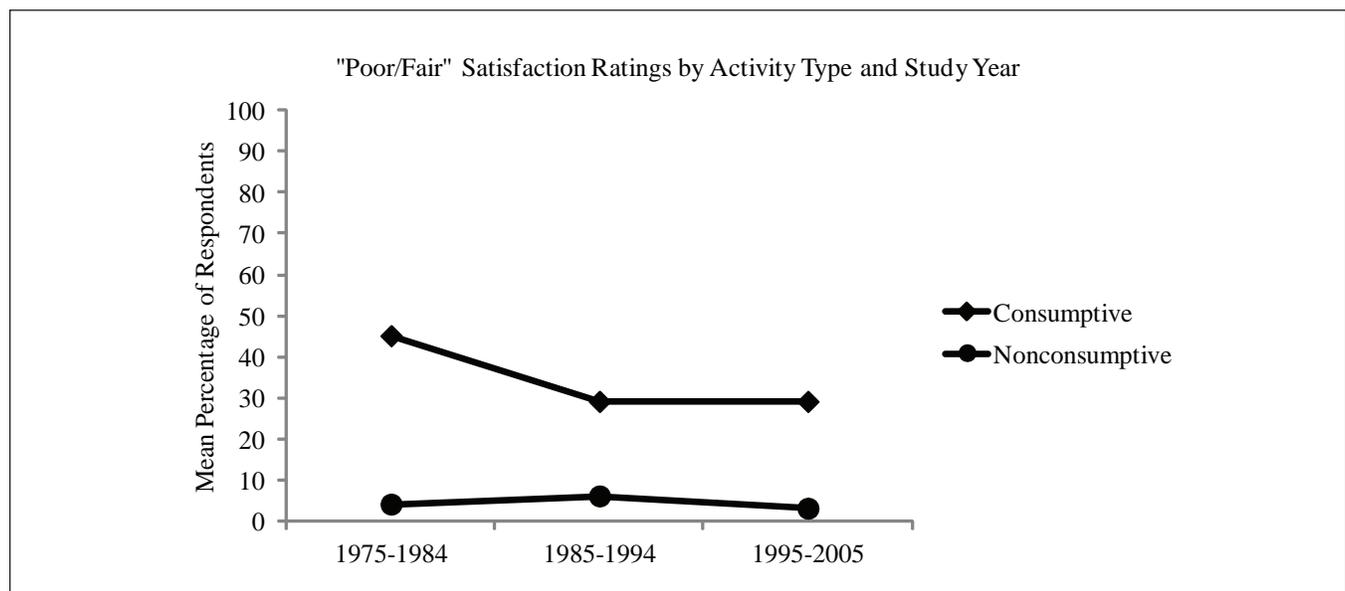


Figure 1.—Mean percentage of consumptive and nonconsumptive recreationists reporting “poor/fair” satisfaction ratings over time.

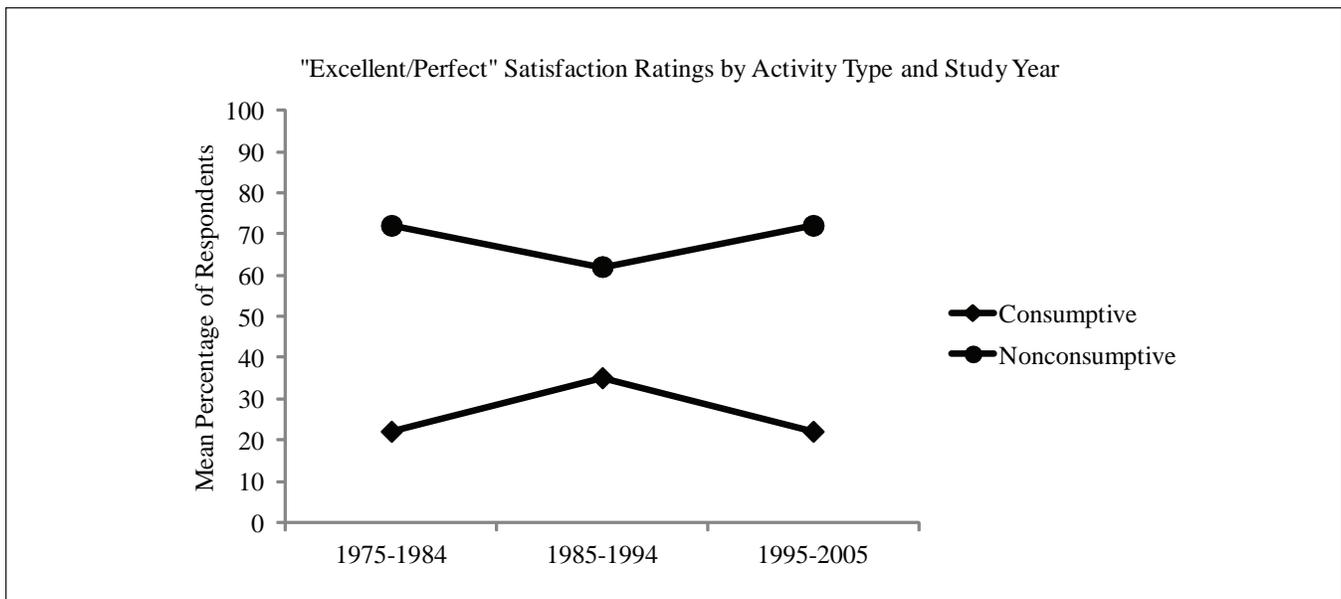


Figure 2.—Mean percentage of consumptive and nonconsumptive recreationists reporting “excellent/perfect” satisfaction ratings over time.

4.0 DISCUSSION

Overall, study findings supported the two hypotheses. First, the pattern of findings reported by Vaske et al. (1982) was replicated. Consumptive recreationists still reported significantly lower levels of satisfaction than did nonconsumptive recreationists. The 1982 comparative analysis was based on six consumptive and 11 nonconsumptive activities. Analyses reported in this article were based on 59 consumptive and 66 nonconsumptive evaluation contexts. With the increased sample size, we have more confidence in generalizing the findings. Second, when both activity type and study year were included in the model, the general patterns supported the second hypothesis; consumptive recreationists reported significantly lower levels of satisfaction levels than nonconsumptive recreationists did over time. These findings have theoretical implications for the concept of satisfaction and the differences between consumptive and nonconsumptive recreation activities. They also have managerial implications and present opportunities for future research.

4.1 Theoretical Implications

Results reported here enhance our understanding by demonstrating long-term trends in satisfaction

ratings reported by consumptive and nonconsumptive recreationists and by supporting theories regarding differences between the two activity types. The pattern of differences in reported satisfaction ratings by consumptive and nonconsumptive recreationists has remained constant over the study years. Consistent with prior theorizing (Vaske et al. 1982), the two main differences in these activity types—goal specificity and amount of control—appear to be influencing this pattern. With a smaller chance of successfully achieving their primary goal (bagging game/catching fish), consumptive recreationists reported lower levels of satisfaction than did nonconsumptive recreationists.

4.2 Managerial Implications

The results presented in this article also have managerial implications. First, findings from multiple data sets allow managers to compare data from their site against comparable locations and make more informed decisions (Vaske and Shelby 2008). Second, although satisfaction is still an important management objective, it should not be the only management criterion (Manning 1999). Our results show that while satisfaction is lower for consumptive recreationists, there are clear reasons for the findings.

4.3 Opportunities for Future Research

Despite its widespread application, there is still a need to further understand what influences satisfaction (the motivations and expectations that determine a person's evaluation of an experience). Managers are interested in the relationship between satisfaction and participation, which may not be a direct relationship. A person can have a dissatisfying experience but continue to participate in an activity and vice versa. Certain satisfactions may be more important and outweigh others. Future research should continue to examine the relative importance of different facets of satisfaction and the other factors that motivate behavior.

This article, as well as the 1982 comparative analysis, argued that consumptive and nonconsumptive recreationists differ in the specificity of their goals and their control in achieving these goals. However, there are some nonconsumptive activities like hunting and angling, which have goals that are more specific. The goal of mountain climbing is to reach the summit. The goal of bird watching and other wildlife viewing is to observe particular species of wildlife. For these activities, the recreationists may have more control in goal achievement by choosing climbing routes that match their skills and abilities, or by selecting habitats known to have populations of the desired wildlife species. Examination of the satisfaction ratings reported by individuals engaged in these goal-directed nonconsumptive activities who did and did not achieve their objective would shed additional light on the conceptual distinctions advanced here.

Finally, results reported here were based on a comparative analysis of consumptive and nonconsumptive recreationists. There are, however, other statistical techniques such as meta-analysis that could be used in future analyses. Because meta-analyses incorporate specific effect size measures, the magnitude of the difference between the activity types could be assessed more formally.

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