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THE RELATIONSHIP OF SATISFACTION TO VISITOR
ACTIVITIES IN A PARK SETTING

A Thesis

by

STEPHEN MURRAY HOLLAND

Submitted to the Graduate College of
Texas A&M University
in partial fulfillment of the requirement for the degree of
MASTER OF SCIENCE

May 1979

Major Subject: Recreation and Resources Development

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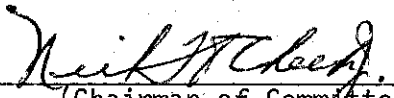
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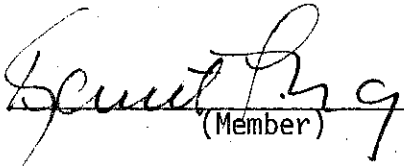
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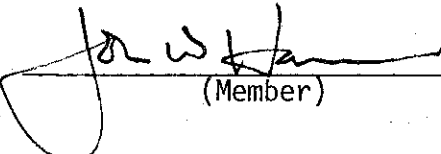
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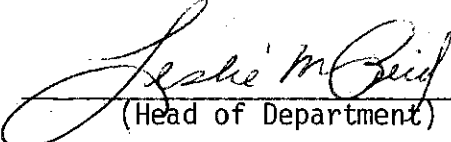
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ABSTRACT

The Relationship of Satisfaction to Visitor
Activities in a Park Setting. (May 1979)

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Chairman of Advisory Committee: Dr. Neil H. Cheek, Jr.

This thesis focuses on various aspects of leisure satisfaction among visitors to a park setting. Satisfaction is conceptualized within discrepancy theory to be related to the congruence of expectations and accomplishments. Visitors completed a questionnaire related to their expectations upon arrival at the park and another questionnaire on their accomplishments just before leaving the site. Unobtrusive observation identified the activities of approximately one-half of the sample.

Of the 134 people who completed the first questionnaire, 77 returned to complete the second questionnaire (57%). The most popular reasons for coming to the park were to learn and discover a relationship with nature, escape pressure and to be with the family. These were also the experiences that visitors accomplished the most, yet many did not accomplish as much as they expected. Satisfaction levels were high with 96% of the respondents reporting some degree of satisfaction with their visit. Couples and families were the predominant visitor group type. Satisfaction was not shown to vary across different individual characteristics.

Discrepancy theory was not supported as the congruence of expectations and accomplishments was not related to satisfaction levels. Members of groups tended to report similar satisfaction levels. Satisfaction did not vary across most of the observed activities. The only exception was photography which resulted in a higher satisfaction level. With one exception (Picnickers), activity patterns showed no variation in domains of satisfaction.

Implications of this study are that the existing theories of satisfaction are intended primarily for non-social, work situations. They may be inadequate for application to leisure situations. Satisfaction may be an integral part of the leisure experience and attempts to relate dissatisfaction and leisure may be nonsensical. Arguments for a theory of leisure satisfaction, distinct from other satisfaction theories, are presented.

ACKNOWLEDGMENTS

Writing a thesis, like leisure, is a social process. I would like to pay tribute to a few of the "significant others" of this thesis.

Dr. Neil Cheek, Jr., as chairman of my advisory committee, taught, challenged and guided me throughout my graduate career, as well as during this thesis. He has led me to a deeper understanding of research methodology and a deeper appreciation of the social nature of leisure.

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CHAPTER I

INTRODUCTION

Recreation land managers control human and natural resources within their park boundaries. Their actions in planning, developing, and managing the recreational resources of an area can influence the factors that visitors consider important in a recreation experience. If it can be established that people like to camp to gain a sense of isolation, then campgrounds can be designed with this in mind. Or, if they come to learn things about nature, interpretive programs can be increased. The allocation of resources in a rational manner should increase the benefits for all concerned.

A common measure of the degree of benefit of a recreational experience is our satisfaction with it. But just how does a person become satisfied? What cognitive judgments result in a feeling of satisfaction or dissatisfaction? How can this feeling be measured? The concept of job satisfaction is familiar to most people. The quality of life indices of recent years attempt to gauge satisfaction levels with various aspects of life. Reviewing these areas should help illuminate past methods used in assessing satisfaction.

How does the feeling of satisfaction relate to the leisure experience? It is generally accepted that a primary objective of the administration of recreation lands is to maximize the benefits derived

The citations on the following pages follow the style of the Journal of Leisure Research.

from these lands over time (Craine 1963). Some writers suggest that a feeling of pleasure, goodness, and wholeness (satisfaction?) accompanies leisure behavior (Brightbill 1960; Kerr 1962). Shivers (1967:127) says: "The affective state of satisfaction is, therefore, the primary objective of recreational participation." Yet, the concept of leisure satisfaction is foreign to most people. It is a relatively undeveloped concept. What are some of the factors which affect leisure satisfaction? Do different types of people experience similar or different types of leisure satisfaction? Is it an individual or social phenomena? What do people do in parks that contributes to a sensation of being satisfied?

This thesis is an exploratory examination of the concept of leisure satisfaction in a park setting. Its foci are the factors that influence satisfaction, the effect of demographic and social characteristics and the differences in satisfaction levels across various activities.

The objectives of this study are:

- (1) To contribute to the understanding of leisure satisfaction.
- (2) To specify those variables which meaningfully correlate with different levels of satisfaction.
- (3) To examine the influence of social groups on individual satisfaction.
- (4) To determine which specific expectations and activities contribute to visitor satisfaction in a park setting.
- (5) To document visitor behavior in a park setting.

This thesis will address these objectives in six chapters. Each chapter is listed below with a synopsis of the contents.

I. Introduction - Development of the research problem and statement of objectives is discussed.

II. Literature Review - Research on the subject of satisfaction in the park and recreation field and other majors areas is reviewed to place this study in context with past works.

III. Theoretical Framework - A discussion of theoretical issues pertinent to an investigation of leisure satisfaction and the evolution of hypotheses for this study are given.

IV. Methodology - Methods used to select a sample, implement the study and analyze the data are discussed.

V. Results - The numeric results of frequency distributions, contingency tables and hypothesis testing are presented.

VI. Conclusions - Results are summarized and conclusions drawn based on the objectives of the study.

CHAPTER II

REVIEW OF THE LITERATURE

The literature on leisure satisfaction is limited and mostly atheoretical. To understand the role of satisfaction in leisure behavior, it is helpful to examine what scientists in other fields have theorized regarding satisfaction. This will provide some perspective from which one can judge research from the leisure sciences. The literature will be examined in three sections: 1) general satisfaction literature, 2) job satisfaction research literature, and 3) leisure satisfaction research literature.

General Literature

The general literature on satisfaction includes definitions and current usage of the term. The word "satisfaction" is a derivative of "satisfy." The etymology of satisfy is from the Middle English word "satisfien" which was derived from the Middle French word "satisfier." This was a modification of the Latin "satisfacere" from satis (enough) and facere (to do, make) (Cove 1972:765). The roots of the word show that its original meaning was "to make enough" or "to do enough." A philosophy dictionary (Wuellner 1966:272) interprets satisfaction in several ways:

1. The act of gratifying or bringing content to someone's desires, hopes, etc.
2. The act of fulfilling a need or meeting an obligation in full.
3. The experience of calm and pleasure upon knowing that one's needs, desires, hopes, etc. are sufficiently realized; the psychological rest in the quietness of the eagerness of desire.
4. The object,

service payment, compensation, etc. that brings contentment or that fulfills some obligation.

All of the above definitions are rather divergent and speak of satisfaction as an experience, a transaction, an emotion, an object, and a state-of-being. They may help one understand how satisfaction is defined but do little to convey the substance of what satisfaction is and how it operates.

Relatively little is known about the determinants and consequences of satisfaction. Most of the psychological research on motivation has not been concerned with the kind of affective reactions that people experience in association with motivated behavior (Lawler 1973:61). The behavioral school of psychology has tended to concentrate on observable phenomena and has not been interested in affective feeling-states such as satisfaction (Murray 1951). Most of the research that has been done has been of the applied type with little or no interest in the theoretical foundations of satisfaction (Lawler 1973:61). A plurality of this research concerns work or job satisfaction. A listing of journal articles published from 1960 through 1970 on measuring satisfaction (Chun et al. 1975:18-53) showed that 39% of the articles were on job satisfaction, 25% were on global (overall) satisfaction, 13% were on satisfaction in general, and the remaining 23% were scattered among various domains (group, life, marital, and need satisfaction). Since most of the research on leisure satisfaction cite job satisfaction studies, by examining the research in job satisfaction, the major trends in understanding satisfaction can be seen.

Job Satisfaction

"He is well paid that is well satisfied."
Shakespeare, The Merchant of Venice

The above statement perhaps best summarizes the reason why satisfaction has been the subject of study in the occupational arena. A belief arose that a worker who is satisfied will be a better worker, socially and productively. This interest in increasing productivity, as in so many other areas, is another primary stimulus for investigating satisfaction. In a parallel manner, the interest in increasing the benefits of recreation experiences motivates studies into leisure satisfaction.

Several theories regarding satisfaction and performance on the job have evolved over time. Need theory, two factor theory and discrepancy theory each conceptualize satisfaction in a different way. The role of job satisfaction in quality of life is also being examined. The scope of viewpoints presented in these theories may hold relevant concepts for investigating leisure satisfaction.

Industrial psychologists have conducted hundreds of studies on workers in search of factors which influence job satisfaction. One of the first was the classic Western Electric study (Rothlisberger and Dickson 1939). This emphasized the importance of worker attitudes, feelings and perceptions toward their job. It demonstrated that affective reactions to the job situation can modify worker behavior.

Performance and Satisfaction

An early question addressed by investigators was how satisfaction relates to job performance. Supervisors and managers were interested in increasing job performance. Originally, it was thought that the satisfied worker was the most effective worker, i.e., satisfaction leads to better performance. A correlation of .68 between job satisfaction and productivity was reported by Brody (1945). However, Brayfield and Crockett (1955) published a review of the literature and concluded: "There is little evidence in the available literature that employee attitudes. . . bear any simple, or for that matter, appreciable relationship to performance on the job." This finding was echoed by several other authors. Hage (1972:270) even found a negative correlation. Katz et al. (1951) found that the most productive railroad workers were somewhat less satisfied with their work than other workers who were less productive. Correlations between job satisfactions and performance were found to vary within a large range with a median correlation of .14 in a review of twenty studies by Vroom (1964).

An alternative theory began to emerge. Instead of satisfaction causing better performance, it was suggested that perhaps performing better on a task might result in increased satisfaction (Vroom 1964: 182). Katzell et al. (1961:72) found that the correlational nature of satisfaction and performance is open to several interpretations. He preferred to consider job satisfaction and performance as dependent variables and situational characteristics as independent variables. A series of experiments began to support this idea (Brown & Siegal 1970; Farris & Lim 1969:495; Locke 1965). A model was proposed by Lawler and

Porter (1967) of how performance might lead to satisfaction. They posed a logical argument; if we assume that rewards cause satisfaction and that in some cases performance causes rewards, then it is possible that the relationship found between satisfaction and performance comes about through the actions of a third variable -- rewards. Briefly stated, good performance may cause rewards which in turn lead to satisfaction. Significant correlations between performance and rewards, and rewards and subsequent satisfaction, were reported by Greene (1972), in agreement with the Lawler and Porter model.

Need Theory

Several general theories of job satisfaction have been proposed beyond the relationship of performance and satisfaction. The idea that job satisfaction is directly related to the needs of the individual was advanced by Schaffer (1953). Vroom (1964) believed that job satisfaction varies according to the degree to which a job provides the person with positively valued outcomes. These are both offshoots of the psychological need theory. Many research studies demonstrate that satisfaction is a function of both how much is received and how much one should or wants to receive (Locke 1969). An assembly-line worker may be satisfied with a salary of \$12,000 while a company vice-president may not be satisfied with \$30,000, even though he clearly receives more than the worker. The difficulty of defining a person's "needs" and how they vary according to his "wants" has been problematic for need theorists.

Two-Factor Theory

An alternative theory is the two-factor theory which was originally proposed by Herzberg et al. (1957). It proposes that worker satisfaction consists of motivators which cause satisfaction and of hygienes that cause dissatisfaction. The most unique concept of two-factor theory is that satisfaction and dissatisfaction do not exist on a single continuum running from dissatisfaction through neutral to satisfaction. Two separate scales exist, one ranging from satisfaction to neutral and the other running from dissatisfaction to neutral. One set of factors contributes to satisfaction and another group of factors determine the dissatisfaction level.

This theory has not received much support from other researchers since most tests of it have concluded with negative or ambiguous findings. One hundred and thirty-eight accountants and engineers attributed both satisfied and dissatisfied feelings to the same factors (Wernimont 1964). A flurry of other studies (Friedlander 1964; Graen & Hulin 1968; King 1970; Lindsay et al. 1967; Wernimont 1966) have failed to support the theory. Dunnette et al. (1967) have argued that the evidence against the theory is formidable and that it should be "buried peaceably."

Discrepancy Theory

Discrepancy theory attempts to account for individual differences in levels of satisfaction. It conceptualizes satisfaction as determined by the differences between the actual outcomes a person receives and some other outcome level (Lawler 1973:66). This theory contends that

a person compares what is received with some other desired level and if this desired level is below the received level, the amount of the difference is related to the amount of dissatisfaction. Several investigations (Katzell 1964; Klass 1952; Morse 1953; Spector 1953) have presented evidence that an individual's satisfaction is determined by the ratio of what he gets to what he wants to get.

Many discrepancy theorists argue that total job satisfaction is influenced by the sum of the discrepancies that are present for each job factor (Lawler 1973). For example, job satisfaction would be contingent on the discrepancy between expected salary and perceived salary, expected foreman personality and perceived foreman personality, expected working conditions versus perceived working conditions, etc. There has been some discussion of weighting the important factors but Locke (1969) believes that such weighting is redundant since the discrepancy score itself comes from a measure of importance which is inherent in the theory. Discrepancy theory demonstrates the importance of what a person wants in determining satisfaction. It is the inclusion of these wants which elevate this theory above the simple fulfillment of needs ideas. But what determines what a person wants?

Reference groups play an important role in determining the aspirations of the individual (Merton & Kitt 1950). This was demonstrated in The American Soldier (Stouffer et al. 1949). Because the chances of becoming a sergeant in the military police unit were less than in the air force unit, those military policemen who became sergeants were more satisfied with their rank than sergeants in the air force unit. The effect is known as relative deprivation (Merton 1957). A further

investigation (Patchen 1958) found that those people who were deprived relative to their fellows derived less enjoyment from doing their jobs than did people who had no one with whom to compare themselves. A further conclusion is that the effect of relative deprivation on satisfaction is a special case of the general determination of satisfaction by what a person gets in relation to what he wants to get (discrepancy theory). A variation is suggested by Adams (1965) who argues that satisfaction is determined by the perceived ratio of what a person receives from his job relative to what he puts into his job compared to other people. The equity of their rewards compared to other people as well as their own expectations determine their satisfaction level.

Quality of Life

Recently, the spotlight of research into satisfaction has shifted towards the quality of life and social indicators realm. In a national study of more than five thousand Americans and their perceptions of "well-being" (Andrews & Withey 1976:16), the authors state that while discrepancy theory is not a fully-developed theory, they concur with its premise that satisfactions are the result of some comparison between a perception of the environment and a set of aspirations. The authors of another national survey on the quality of life (Campbell et al. 1976:8) conclude: "Satisfaction implies a cognitive experience. . . (which) can be defined as the perceived discrepancy between aspiration and achievement, ranging from the perception of fulfillment to that of deprivation."

Summary

In summary, interest in increasing job performance seemed to spark the initial research into job satisfaction. The empirical evidence refuted the claim that satisfied workers perform better and supported the theory that workers who perform better are the more satisfied. Need theory evolved to explain satisfaction as the fulfillment of needs. Two-factor theory attempted to segregate factors into those that caused satisfaction and those that caused dissatisfaction. Discrepancy theory developed by comparing what a person receives to what he wants to receive. The empirical evidence supports discrepancy theory as one of the stronger theories that have arisen to explain job satisfaction.

Leisure Satisfaction

The literature on leisure satisfaction is sporadic and scattered in source and direction (Shanks 1977). There are no original theoretical concepts of satisfaction that have their origin in the leisure research literature. Some of the studies have been based on a common sense understanding of satisfaction. Others have some footing on theories developed in other social sciences, notably the job satisfaction literature. Neulinger (1974) and Cheek and Burch (1976) have presented some theoretical basis for particular domains of leisure satisfaction but theory development is just beginning.

There seems to be no discussion of the performance-satisfaction relationship in regard to leisure. Early job satisfaction theorists argued that the satisfied worker is likely to perform better and later

concluded that those workers who performed better were most likely to be satisfied. The entire question seems to have arisen in the interest of increasing work productivity. Since productivity is rarely associated with leisure (and may even be the antithesis of it), there has been little interest in testing whether the satisfied person performs leisure activities better. Although rarely stated, almost all leisure satisfaction research is unconsciously based on the premise that better performance leads to greater satisfaction. The interest is invariably in improving the resources or personnel of a park to allow the visitor to perform his activities better and, hopefully, increase his satisfaction.

Satisfaction Indicators

One of the commoner uses of satisfaction in the leisure field has been as an indicator. Without reference to any particular theory, these studies use ratings of visitor satisfaction as indices of the quality of facilities provided in parks.

The ORRRC Study used visitor satisfaction as a measure of the quality of recreation areas (Reid et al. 1961). The purpose of the study was not to investigate satisfaction per se, but to identify various environmental and management factors which influenced the quality of visitor experience. Expressions of satisfaction were used as an index of visitor responses to certain factors. The authors found this technique useful as a means of measuring the quality of the features and facilities of various recreation areas. Satisfaction was briefly discussed as being a function of the degree of realization to

anticipated enjoyment according to the formula:

$$\text{User Satisfaction} = f\left(\frac{\text{realizations}}{\text{anticipations}}\right)$$

This formula has its roots in discrepancy theory. The authors denoted two major classes of dissatisfaction: dissatisfaction caused by factors beyond the control of management, e.g., weather; and dissatisfactions due to factors under the control of management, e.g., crowding, not enough docks, etc.

Brewer (1966) and Brewer and Gillespie (1967) developed a satisfaction index for estimating satisfaction levels of outdoor recreationists. The index was computed by finding the percentage of respondents naming an activity as their preferred activity or the one they enjoyed participating in the most. Then, the percentage of respondents that engaged in the activity during the year was determined. Finally, the percentage from step one was divided by step two and multiplied by 100 to obtain the satisfaction index:

$$\text{Satisfaction Index} = \frac{P_{ij}}{E_{ij}} \times 100$$

P_{ij} is the percentage of people who preferred the i -th activity in any specific j -th group of people. E_{ij} is the percentage of people engaged in the i -th set of activities for any specific j -th group of people. The index gives a relative value that can be compared across activities to determine the most satisfying activities. The index is actually an index of availability of facilities and is only superficially related to satisfaction. The authors tend to use terms such

as availability, enjoyment, interest in participation, and satisfaction interchangeably which confuses the issue. No other reference to this index has been located.

Visitor satisfaction as an indicator of successful commercial campground operation was suggested by a National Forest Service Research Paper (LaPage 1968). Over 300 campers were asked to evaluate their satisfaction with campgrounds. There was a tendency for the more satisfied visitors to stay longer than the dissatisfied visitors. The author also presented evidence that a greater number of satisfied visitors planned to return compared to less satisfied visitors. The concern in these studies is not with satisfaction itself but with satisfaction as a predictor variable of other factors.

Need Theory

A few studies are based on need theory (Mercer 1973). Wagar (1966) believes that recreation area visitors are motivated by human needs. The motivations that are most common, according to Wager, are exercise, healthful environment, self esteem and social prestige, understanding, esthetic enjoyment, freedom of choice, early traditions and conditions, self-reliance, change and escape, and companionship.

Five dimensions of camping satisfaction were proposed by Bultena and Klessig (1969). These components were: type of resource base required, style of camping, level of physical activity, pattern of social interaction, and the nature of derived values. The authors believe that these values grow out of deep-seated needs and are constantly sought in camping. They suggest that satisfaction in camping

is more highly associated with the magnitude of discrepancy between aspirations and perceived reality on some dimensions more than others. It is suggested that satisfaction research into camping behavior might provide the basis for developing a classification of camper types or help uncover factors that affect the ability of individuals to effectuate their camping aspirations.

Tinsley and Kass (1978) attempt to identify the need-satisfying characteristics of leisure activities. They detected patterns of needs which were fulfilled through certain leisure activities. The need-satisfying dimensions exhibiting the greatest discrimination among activities were catharsis, independence, advancement, getting along with others, reward, tolerance, activity, ability utilization, and exhibition. Satisfaction was conceptualized as the fulfillment of a need. Other studies have also investigated the various factors that influence leisure satisfaction.

Nielson et al. (1977) suggest that satisfaction should be conceptualized as having a number of facets. They believe that multiple item indicators of visitor satisfaction should be developed. Potter et al. (1973) and Hendee (1974) have attempted to do this for hunting. A multiple satisfaction model of hunting is based on the assumption that hunting satisfaction is dependent on many elements that can be grouped conceptually into dimensions. They found that some dimensions are important in all forms of hunting while others are important to specific types of hunting. A hierarchy of dimensions according to importance is also formulated. A similar study related to tourism satisfaction has also been completed (Pizam et al. 1978).

Clawson (1960) expanded leisure satisfaction along a temporal dimension. He divided the total recreation experience into five parts: 1) planning or anticipation, 2) travel to the area, 3) on-site activities, 4) travel back, and 5) recollection. Satisfaction can be derived from any of these phases for a particular activity or trip. Mercer (1971) reiterated the role these phases play in satisfaction.

Roggenbuck (1975) studied motivation of float trip participants and included a measure of overall satisfaction. He reported a high rate of satisfaction and that trip motives (factors) mattered little in determining level of satisfaction.

Discrepancy Theory

A method to determine relationships between factors of satisfaction and overall enjoyment of an outdoor recreation experience (skiing) was proposed in a thesis by Greist (1968). Attitudes toward seven elements of satisfaction for particular ski trips were measured on five-point Likert scales. The seven elements were: skill improvement, social interaction, equipment, area, change from everyday life, travel, and club. The first five yielded significant satisfaction factor relationships to overall satisfaction (ranging from .45 to .59; Kendall rank order correlation). Support for the discrepancy theory of satisfaction was shown by results which indicate skiing level to be poorly related to overall satisfaction ($r = .16$) while satisfaction with skill level achieved had the strongest relationship to overall satisfaction ($r = .59$).

Peterson (1971, 1974) made a significant contribution by adapting discrepancy theory to leisure satisfaction research. He utilized an overall satisfaction index as well as a measure called "relative congruity" in his survey of Boundary Waters visitors. Respondents were asked to rate how important 53 trip objectives were. The list was then repeated to determine how well the area provided each opportunity. These two measures were tested for congruence in accordance with discrepancy theory. The procedure was also used by Graefe (1977) in studying satisfaction of a float trip experience.

Bassett et al. (1972) suggested that satisfaction of recreationists is a function of desired outcomes and the perceived characteristics of the on-site situation. The importance of several needs or outcomes were determined for fishermen and canoeists and compared with their views on specific on-site situations. The results indicate that the desired outcome influences the perception of actual outcomes derived from the river experience. In many cases, the perceived outcome from river use was not congruent with desired outcomes which then initiated complaints. These indications of dissatisfaction are in line with discrepancy theory (Roggenbuck 1975).

Quality of Life

London et al. (1977) investigated the contribution of job and leisure satisfaction to the quality of life. They found that, overall leisure items were better predictors of quality of life than work measures. The results suggest that leisure variables may be more important to a full life than job satisfaction for some sub-groups of

the population. This finding is also supported by Schesta (1975). These studies add new impetus to the study of leisure satisfaction.

Summary

Satisfaction is a term that has been used in a multitude of ways. The empirical investigation of satisfaction has been largely the result of research into job satisfaction. There have been two theoretical perspectives used in leisure research--need theory and discrepancy theory. The results to date show some success with each of them.

Literature cited in this chapter communicates the substantive findings of previous empirical research. The following chapter will introduce the theoretical and conceptual orientation of this study.

CHAPTER III

THEORETICAL FRAMEWORK

As the literature review suggested, leisure satisfaction has been primarily conceptualized within two theories--need theory and discrepancy theory. In this chapter, both theories will be briefly examined, principles compared and the choice made to utilize the one most suited to this study. Hypotheses will be generated from the objectives of this thesis and the theoretical orientation adopted in this chapter.

Need Theory

Need (or drive) theory is based on psychoanalytic theory. They both place importance on the motivation of behavior, especially unconscious motivation. A need-based theory of satisfaction was introduced by Schaffer (1953). His theory states that satisfaction is a function of the extent of gratification of one's needs. Thus, if the needs can be identified, then the level of satisfaction of these needs can be ascertained. This identification of needs has been the impetus behind studies into leisure needs, leisure motivation and factors of satisfaction.

There are problems involved in trying to explain human behavior with need theory. There is widespread discontent with theories of motivation built on drives and needs (Berger & Luckmann 1966; White 1959). These theories have been found wanting for explanations of

exploratory and general behavior. The entire concept of viewing motives as the causal antecedent variable to some event or as a "state" of persons engaging in behavior has been questioned (Blum & McHugh 1971). They argue that far from the private mainspring that drives people, motives are public and observable courses of action. Motives are observer's rules for conceiving of social action and they acquire their analytic force as observer's rules for depicting grounds of conduct. The important difference between actor and observer perceptions of behavior has been pointed out by Jones and Nisbett (1971).

Need theory is not strictly a theory of satisfaction. It is actually a theory of motivation and satisfaction is a term used to describe the fulfillment of a need. Satisfaction is a by-product of need theory, not the actual *raison d'etre* for the theory. A theory which focuses more on satisfaction with fewer conceptual difficulties would be preferable to need theory.

Discrepancy Theory

Discrepancy theory, an offshoot of expectation theory (Brophy 1959), states that satisfaction is based on the relationship between what the individual desires and what he receives from his environment. Ninety years ago, James (1890) suggested the formula that self-esteem is equal to the ratio of success to pretensions. Early tests of the theory proved promising (Filer 1952; Katzell 1964; Spector 1953, 1956). The success of discrepancy theory within both job and leisure realms was demonstrated in the previous chapter. An additional strength of discrepancy theory is the ability to include relative deprivation

effects (Spector 1956). Relative deprivation has been demonstrated to be important to job satisfaction (Patchen 1958; Stouffer et al. 1949). Since leisure activities are shared with others more than work activities area (Cheek 1971; Cheek & Burch 1976), one might expect the relative deprivation effect to be even stronger in leisure activities. For these reasons, discrepancy theory is the theory of choice for the investigation of leisure satisfaction in this thesis.

According to discrepancy theory, satisfaction is determined by the differences between the actual outcomes a person receives and some other outcome level. The other outcome level is sometimes hypothesized to be what the person feels like he should receive (Porter 1961), what he wants to receive (Locke 1969), or what he expects to receive (Spector 1956). By asking a person what his reasons for coming to an area are, it is possible to tap both what he wants and what he expects. The act of arriving in a park expresses a person's desires to be there and his expectation that this park will fulfill his desire. This is especially true with the relatively unconstrained, free use of time that leisure connotes. The reasons why a person comes to a park should be a reasonable approximation of his intentions, more than by just knowing his wants or feelings on what he should receive. Intentions are a better predictor of behavior than attitudes or beliefs (Fishbein & Ajzen 1975).

Discrepancy theory, as employed in this thesis, hypothesizes that levels of satisfaction are determined by the discrepancy between what a person expects and what he actually attains or accomplishes.

Expectation is defined as the consciously perceived importance of

engaging in a particular experience. Accomplishment is the consciously perceived participation in particular experiences. Specifically, the theory postulates the greater the discrepancy between expectations and accomplishments, the less the satisfaction, or conversely, the greater the congruence between expectations and accomplishments, the greater the satisfaction.

Before attributing the determination of satisfaction level to discrepancy theory, it is necessary to ascertain the role of various other factors. Does satisfaction vary across individuals with different characteristics? Various worker characteristics have been related to job satisfaction (Fournet et al. 1966; Robinson & Connors 1963) including age, education, sex, pay, job characteristics, size of group, longevity, etc. There is empirical evidence that some characteristics effect leisure activities (Cheek & Burch 1976). If evidence surfaces that leisure satisfaction varies in a pattern with certain visitor characteristics, the attribution of variance in satisfaction will be clearer. For example, since expectations should be more realistic for repeat visitors, are their satisfaction levels higher or lower (Vincent 1975:55)?

Is discrepancy theory as valid in predicting satisfaction in leisure settings as in work settings? The literature review indicated some success for discrepancy theory in both realms. There have been several tests of the theory in leisure settings. Further testing is needed to verify the position of this theory in relation to leisure.

Reference groups influence job satisfaction levels (Adams 1965; Patchen 1958). Leisure is a social experience yet group variables are

routinely filtered out of much research which concentrates on the individual (Cheek & Burch 1976). The question of how satisfaction levels vary within groups is still open, especially within leisure experiences.

Several studies have implied that satisfactions vary across different activities (Graefe 1977; Roggenbuck 1975; Tinsley & Kass 1978; Tinsley et al. 1977). They also attempt to link certain domains of satisfaction with specific activities. If this effort is to prove successful, many studies on different leisure activities are needed to accumulate empirical evidence from which to draw out certain regularities and to formulate theories.

In response to the issues raised in the literature review and theoretical discussion, the following hypotheses are advanced:

- H₁ Satisfaction is not related to visitor demographic characteristics.
- H₂ Satisfaction is not related to the congruence of expectations and accomplishments.
- H₃ For any individual (P) of group (U), satisfaction is not related to the satisfaction of other individuals (Q....i) of group (U).
- H₄ Satisfaction does not vary with the activities being pursued.
- H₅ Activity patterns do not relate to domains of satisfaction.

The methodological operationalization of these hypotheses is discussed in the following chapter.

CHAPTER IV

METHODOLOGY

This chapter details the design and techniques utilized in this thesis to explore the hypotheses. Integration of the various phases of the scientific process are crucial to obtaining valid results. The foundation established in the methodology determines the ability of the data to address the issues raised in the hypotheses. The chapter is ordered in six broad sections: research design, setting selection, sampling procedure, data acquisition, instrumentation, and data analysis procedures.

Research Design

Selection of a research design appropriate to test the hypotheses is a critical issue in research. The design must meet the requirements of the theory being employed in the study. Operationalization of discrepancy theory required taking two measurements, expectations and accomplishments. Testing for variance across activities (Hypotheses 4 and 5) requires a third measurement, activity participation. The developmental nature of satisfaction (originating with expectations and concluding with accomplishments) indicates it has a temporal dimension. This temporality can be taken into account through use of a longitudinal design.

A variation of the one-group pretest-posttest design (Campbell & Stanley 1963:7) was selected as appropriate for this study. The one-group pretest-posttest design involves an initial observation, an

experimental treatment, and a post observation. The variation employed in this study is that two different variables were measured, one during pretest (expectations) and the other during posttest (accomplishments). This differs from the original design which measures the same variable at two different times. In addition, a third measurement is made during the treatment (i.e., during the park visit). No control group is required for this design. A control group would have been difficult to establish during this "in situ" study. The prospect of measuring the expectancies and accomplishments of a matched control group that did not engage in a park visiting experience (the treatment) was not promising. Such a control group would have to experience no treatment, i.e., no park visit. It would have been impossible to access such a group in a park setting. In addition, since satisfaction is a diverse variable which is influenced by many factors (Champion 1975), whatever the control group experienced in lieu of a park visit undoubtedly influenced satisfaction too. Thus, the control group could be not "pure" (i.e., without treatment) but would have been contaminated by some other treatment.

Setting Selection

The study area is located in Idaho. Vast lava flows are interrupted by a line of dormant volcanoes and depressions that resemble craters. During the most recent eruption, approximately 2,000 years ago, lava floods incinerated all the vegetation in its path. Rocky, barren, and sterile, the lava fields present a harsh environment where only hardy plants can survive. Spatter cones, cinder cones, lava tubes,

ice caves, natural bridges, pahoehoe and aa lava flows, and tree molds comprise some of the main features of the area. It is managed by a federal agency. The site is approximately 90 miles from any large city. Only one paved entrance exists into the park. Ten miles of loop road with several parking areas winds through the more prominent features. A visitor center and a 52-site campground is located near the entrance. During the summer season, interpretive walks and programs are available.

This area was chosen as the research site because of the controlled, predictable pattern of visitor flow. There is only one entrance and one exit which facilitates the distribution of the questionnaires. The park is very suitable to observation of visitor activity because of the barren landscape, one-way road, and limited number of roads. The park is a lesser-used park and is not as subject to excessive crowding as other parks. The weather is fairly stable with sunny warm days, windy afternoons and cool nights. The researcher was previously employed by the park and was familiar with the terrain and management. In addition, it was possible for the researcher to be employed in the area during the summer that the data were collected.

Sampling Procedure

The purpose of sampling is to select a representative group from the population to serve as respondents (Tuckman 1972). Conclusions based on a representative sample are more likely to be generalizable to a population than a nonrepresentative sample. Because of the possibility of regular strong afternoon winds affecting visitor

satisfaction and the seeming transitory nature of most visits, a stratified systematic sampling technique was utilized. The visitors were stratified according to time of arrival into half-hour time blocks. The first group of visitors (arriving in one vehicle) to enter the visitor center after the beginning of a specified time block was chosen as the study group. This type of sampling was selected over the stratified random sample design during the pre-test because of the length of time required to obtain a study group. Only about half of the visitors who enter the park stop at the visitor center first (53% based on 119 groups during two 3-hour periods). Further difficulty stemmed from incohesive groups which fragmented (some to the bathroom, some to the soft drink machine, some to nearby overlook, and some into the visitor center) before a questionnaire could reach them. As a result, it frequently took 20 to 40 minutes to obtain a study group even though the first possible group after a pre-selected time was chosen. If a simple random sample had been attempted, the time requirement would have been worse which would have resulted in an insufficient sample. This factor had not been foreseen before reaching the field and suggests the value of pre-testing a design before final implementation.

Although there is no empirical data to verify that the sample was proportionate to the population (Blalock 1972), it is generally recognized by the park managers that visitation is heaviest during the late morning and early afternoon hours. This makes intuitive sense because of the distance visitors must travel to reach the park. Casual observation and communication with the entrance station personnel

confirmed this. Accordingly, the sample was larger during these times than others. If the sampling is proportionate, regular formulas can generally be used in computing statistics from the data (Loether & McTavish 1974). By using this method, time of day and regular weather effects should be distributed proportionately throughout the sample with minimal influence on the results.

Data Acquisition

Data were collected using two techniques: on-site questionnaires and unobtrusive observation. Each person eighteen years or older in a selected group was asked to fill out a questionnaire upon arrival at the visitor center. About one-half of the groups were observed throughout their visit. A written record was kept of their activities. Just before they left the park, they were asked to complete a second questionnaire. The questionnaires were then linked together and joined with the observational record to provide a file on each group.

Questionnaire Design

The items selected for use in the questionnaire were derived from the item pool of the Recreation Preference Scales (Driver 1977). The scales are being developed to identify and quantify the relative importance of different psychological outcomes that are desired and expected from recreation participation. They are based on the results of over 25 empirical studies which provided over 16,000 usable questionnaires. The benefits of using items that have already been tested and

demonstrated to have scale validity and reliability are well documented (Kerlinger 1973; Nunnally 1970; Smith 1975).

This study used a different approach from previous recreation satisfaction studies. By administering the questionnaires in a time and place "situated" setting, not at residences like most of the past studies (Graefe 1977; Greist 1968; Hendee et al. 1973; Roggenbuck 1975), expected outcomes are measured just when such expectations should be their strongest (i.e., at the beginning of the visit) and accomplishments are measured just when they should be most vivid (i.e., at the end of the visit). This should minimize the influence of respondent recall error, decay, and the effect of intervening cognitive effects such as cognitive dissonance (Edwards 1957:13-14). In addition, by separating the expectancy questions from the accomplishment questions, and administering them at two different times, the measurement interactive effects should be diminished. This is an alternative to previous studies that have included both on the same questionnaire. The questionnaires were anonymous but by requesting birthdates, the first questionnaire was linked to the second.

The pre-test questionnaires included 34 six-point Likert items constituting 11 scales. On the expectancy questionnaire, the responses ranged from "very unimportant" to "very important", while on the accomplishment questionnaire, the items were scaled from "never was able to" to "to the fullest extent" (see Appendix A). The six-point Likert scale has been the most frequently used scale when scoring these items (Driver 1977; Graefe 1977).

After the pre-test, the researcher decided that the questionnaire still needed shortening. Four questions were dropped and the Likert scale was shortened to a four-point scale. Visitors were not using all six choices. It appeared that trying to discriminate across the six options on all 34 questions was taking too much time. Thus, the final form of the first questionnaire contained 30 items to measure expectancies with a four-point Likert scale. The final form of the second questionnaire contained the same 30 items (plus one extra due to a printing error) in a rearranged order with a four-point Likert scale. The first two questions in each set were dummy items to key the respondent on how to answer the questions¹.

In addition to the 28 questions that operationalized discrepancy theory, several other questions were included. On the first questionnaire, frequency of park visiting and the number of times the park had been visited before were asked to test the first hypothesis. The visitors were asked how long they expected to stay to assist the researcher with the observation and to facilitate reminding the visitor to fill out the second questionnaire. The second questionnaire included a question designed to ascertain the respondent's overall satisfaction with his visit on a six-point scale.

¹The answers to these two questions were disregarded in the analysis per recommendation of Dr. Driver. He indicated that the responses to the first two questions are often inconsistent while the respondent is learning the style of the question.

Observation Techniques

Data on visitor activities were collected through observation. Though encouraged (Burch 1964), observation has been an underutilized technique in recreation research. Indeed, it is an underutilized technique in all the social sciences (Phillips 1971; Picou et al. 1978; Webb et al. 1966). Outdoor recreation behavior is a form of human behavior highly suited to observation (Cheek & Nyberg 1977; Nyberg & Wilson 1979). Park going is social behavior (Cheek & Burch 1976). Such behavior occurs outdoors where it is easily visible and is on public lands. As such, people expect to be seen by other people and an unobtrusive observer is no more reactive than the presence of other visitors. Observation has assisted in detecting activity typologies for recreation behavior (Burch 1965; Hendee et al. 1971).

An observational method can be defined as, "the selection, provocation, recording, and encoding of that set of behaviors and settings concerning organisms 'in situ' which is consistent with empirical aims" (Weick 1968:360). Selection, in this thesis, includes the specification of place, time, situation, and subject. Observations were made at the study park during the summer season of 1978. They began between 10:30 a.m. and 6:00 p.m. and continued until nightfall or until the group left the park. The situation under examination was the social and recreational interaction of the visitor with the park. This was necessarily limited to publicly observable events. This study was a natural history in which an area was observed while various groups moved through it. This distinguished it from an ethnography

in which the same group of people were studied as they moved from place to place (Nyberg 1978).

Participants in the study were selected small groups of visitors. Because of the time investment, only one-half of the visitors who completed questionnaires were observed. Since these observations were intended to be an unobtrusive examination of the interactions of person with place, no provocations occurred beyond the questionnaire. By intercepting the study group during the initial and terminal phases of their visit, they were encouraged to report information about their visit that was unobtainable through observation. Recording of observed actions was accomplished through a written record. A standardized system allowed both exact and strict record keeping. A two-part observation form (see Appendix B) was completed for each group. The top section allowed exact details of selected variables to be recorded for each group. The remaining portion allowed a strict chronicle in open form of the observed behaviors to be recorded. The free form design allowed flexibility and let the observed situation dictate the format rather than forcing the situation to conform to a preconceived format. Encoding involved the observer making judgments on the labeling of behavior involved. A list of possible recreational activities (see Appendix B) assisted encoding-observed behavior.

The observation of respondents in a naturalistic setting allowed valuable qualitative data to be recorded. There was no interference due to artificial classroom or laboratory settings (Phillips 1971). There was little opportunity for respondent recall errors or failure to conceptualize, categorize, and describe leisure activities. The

activities were recorded as they occurred. The questionnaires allowed a phenomenological, yet reactive, examination of a person's experience. Observations were non-reactive but necessitated the imputing of meaning into the behavior (Blumer 1969). The parsimonious approach of using observation coupled with questionnaires allowed each technique to complement the other. This approach is consistent with the empirical aims of this study.

Instrumentation

The reasons why people engage in leisure activities has been the subject of studies by Driver (1977). A pool of statements suggesting various reasons has been developed into a list of core items. Extensive testing and retesting of these items was necessary to formulate scales with high reliability and validity. In the last eight years, Driver has subjected his item pool to numerous cluster-multidimensional analyses. Items are retained in a scale only if they meet the statistical criteria of a correlation of at least .4 and an alpha of at least .6 for each and every cluster made. Throughout this process, many more items have been discarded than kept in the current item pool. Items and scales tapping similar themes have been aggregated into domains. Each domain contains items which have been found to be closely associated to each other and to some central theme of recreation experience preference. The domains can be thought of as dimensions of recreation preferences. This inventory of domains with their subordinate items was the source of statements employed by the two surveys used in the present study.

In formulating the scales for this thesis, there was a requirement of brevity. The questionnaires were to be filled out on site which constituted an interruption in the respondents vacation experience. The pre-test suggested that the length of the questionnaire was critical toward ensuring good response rate. This is especially true since two questionnaires are involved.

Of Driver's (1977) 19 domain preferences, 11 were selected as being most relevant to the study setting (see Table 1). Within each domain, core items were chosen which statistically proved to be the primary dimensional structures on which the scales were based. These items were the ones which tended to intercorrelate the highest within a scale across numerous studies (Driver 1977). Driver reports that with a high Cronbach alpha (at least .6) and a good correlation between items on a scale, there is little significant difference between two-item and five-item scales. Because of the limitation of brevity on the questionnaires, all the domains were represented by two or three items. Some domains were formed from three items in order to tap several sub-scales suggested by Driver's studies. For example, the domain Relationships with Nature was based on items from the three sub-scales, General Nature Experience, Scenery, and Learn About Nature. Domain scale values were computed by calculating the mean of item scores within each domain. The raw item scores were standardized to facilitate comparison of expectancy and accomplishment scales for congruency (see Data Analysis, p. 38). These scales will standardize visitor reports of what they expect to do while at the park and what they perceive they accomplished while there.

TABLE 1
Description of Items for Each Domain (Scale)

Scale 1: ACHIEVEMENT

Experiencing the excitement.
Having others know that you have been here.
Gaining a sense of self confidence.

Scale 2: INDEPENDENCE/AUTONOMY

Feeling your independence.
Being on your own.

Scale 3: FAMILY TOGETHERNESS

Doing something with your family.
Bringing your family closer together.

Scale 4: BEING WITH PEOPLE

Doing things with your companions.
Being with members of your own group.
Being with people having similar values.

Scale 5: MEETING-OBSERVING PEOPLE

Meeting new people.
Being with and observing other people using the area.
Observing other people in the area.

Scale 6: LEARNING-DISCOVERY

Developing your knowledge of things here.
Experiencing new and different things.
Exploring the area.

Scale 7: RELATIONSHIPS WITH NATURE

Being close to nature.
Viewing the scenery.
Learning more about nature.

Scale 8: PERSONAL VALUES

Thinking about your personal values.
Thinking about who you are.

TABLE 1
(Continued)

Scale 9: PHYSICAL REST

Relaxing physically.
Resting physically.

Scale 10: ESCAPE SOCIAL PRESSURE

Getting away from the demands of other people.
Releasing or reducing some built up tensions.
Giving your mind a rest.

Scale 11: ESCAPE PHYSICAL PRESSURE

Getting away from crowded situations for awhile.
Experiencing the peace and calm.

Data Analysis Procedures

This study utilizes statistical procedures to test the various hypotheses. In this section, a discussion of the procedures used to investigate the data is presented. The actual findings are reported in the following chapter, Results.

Hypothesis 1: Satisfaction is Not Related to Visitor Demographic Characteristics

This hypothesis was designed to clarify any pattern of satisfaction due to visitor characteristics before testing for other factors. The characteristics tested are: gender, lifecycle stage, group type, new and repeat visitors, and frequency of park going.

The data consist of a set of nominal characteristic categories and a set of ordinal satisfaction scores. The hypothesis is designed to determine if satisfaction scores vary across visitors with different characteristics. A Chi-square test for independence is the test of choice for these data. Chi-square requires only the nominal level of measurement. The null hypothesis tested by a Chi-square test is that the two variables in question are independent rather than interrelated (Loether & McTavish 1974:208). It does not measure the strength of a relationship (Loether & McTavish 1974:216). For nominal data (e.g., gender), Phi or Cramer's V are acceptable measures of association. With ordinal data (e.g., frequency of park visitation), Gamma indicates the degree of association. An alpha level of .05 was employed as the level of statistical significance throughout this thesis.

Hypothesis 2: Satisfaction is Not Related to the Congruence of Expectations and Accomplishments

This is essentially a test of discrepancy theory. The procedure followed will generally be the one developed by Peterson (1971) in computing "relative congruence." Visitor responses will be obtained to a series of statements which test visitor expectancies and accomplishments while visiting the park. The statements were combined to form scales according to Driver's (1977) item pool. Scale values will be standardized and tested for congruence between expectancies and accomplishments. These scores will allow some ordinal level conclusions to be drawn about the visitor². Strictly speaking, ordinal data cannot be added, subtracted, multiplied, or divided (Griest 1976: 124). However, some researchers contend that ordinal data can be treated as ratio data without serious error (Borgatta 1963; Labovitz 1964). In selecting statistical procedures, the fewer the violations of assumptions, the better. If there are statistical tests available

²Peterson (1971) uses Student's *t* to test the null hypothesis that the mean difference between expectations ("motives") and accomplishments ("performance") is zero. Student's *t* assumes that the data are at the ratio level of measurement. Actually, the scale data are ordinal because the amount that satisfaction increases for each increment is unknown. It probably varies from individual to individual. The position taken by Peterson (1971) and Graefe (1977) of using the *t*-test as a measure of how large the incongruity is between the two scales is extracting information from the data that is not really there. By computing the standardized scores, known standardized unit distances from the mean imply that the data can be used as an interval measure yet the intervals are unknown. Since these measures have an undetermined zero point, they cannot be used for ratio scale measurements (Smith 1975:143). Nevertheless, Peterson (1971) uses a ratio level test (*t*-test) on the data. The assumed level of information causes the test to assume false power which leads to conclusions based on broken assumptions.

which can test hypotheses at the ordinal level, they should be utilized. Such a test exists, the Sign test. The Sign test is a nonparametric test of independence for paired variables. The signs of the differences between paired observations are compared (between expectation and accomplishment scales, for example). If the two variables share a common distribution, the number of positive differences and negative differences should be roughly the same. In this case, it would mean that the two scales are congruent or that the level expected was close to the level accomplished. If the number of + and - differences is unbalanced, a level of significance can be computed for the rejection of congruency (Conover 1971:133; Nie & Hull 1977:30).

Sign test computations with two scales require that the item values be standardized. The standardized score is used to show the relative status of the raw mean score in the sample distribution. To understand the value of standardization, consider the case where one is given the raw (i.e., not standardized) mean score of "12" for a group of subjects. One would not know whether this is high, low, or close to the mean of the entire sample distribution. By converting raw scores to standardized scores, one creates a distribution where the mean is always 0 and the standard deviation is always 1 (Knopf 1972:66). This makes it possible to compare the two sets of scales for congruency.

Standardized scores for the expectancy and accomplishment items were calculated according to the following equation (Peterson 1971:38):

$$\text{standardized score} = \frac{X - \bar{X}}{\text{S.D.}}$$

where, X is the raw scale score;

$\bar{X}$ is the grand mean calculated over all 28 expectancy or all 28 accomplishment items;

S.D. is the total standard deviation calculated over all 28 expectancy or all 28 accomplishment items.

The scale value is computed by calculating the mean value of the items contributing to that scale. For example, if item one had a value of 3, item two a value of 4, and item three a value of 3, the scale value is 3.33. These are computed for the eleven expectation scales and the eleven accomplishment scales using the standardized item values. This gives the standardized scale score. If item two is a missing value (i.e., no response), then the scale value is calculated using just items one and three.

In the process of computing scale scores, scale mean scores, and standardized scale scores, addition, subtraction, and division were executed. These operations were necessary to summarize the data and to standardize the scales to make them comparable. However, during the hypothesis testing, the data are attributed only its ordinal character (which has been maintained throughout the above operations). Unlike previous studies (Peterson 1971), the data are not assumed to have ratio characteristics.

Hypothesis 3: For Any Individual (P) of Group (U), Satisfaction is Not Related to the Satisfaction of Other Individuals (Q....i) of Group (U)

This hypothesis explores whether members of a group report the same satisfaction level or if they vary in their satisfaction levels. The influence of social factors in job satisfaction is well established (Lawler 1973; Likert 1961; Walker & Guest 1952). The social aspects of leisure may be even more important (Cheek & Burch 1976). Results from testing this hypothesis may help illuminate the relative deprivation effect on satisfaction.

The Binomial test will be used to determine if the pattern of responses from individuals within a group differ significantly from a random response pattern. This test requires only nominal level data. It assumes that each group has a certain probability of a particular outcome. The case where all members of a group report the same satisfaction level is the outcome of interest here. This particular case will be called the stacked case (all responses stacked on one satisfaction level). All other combinations of group responses will be counted as unstacked cases. The test is made rather strict because only those cases where all individuals respond with the same level of satisfaction are counted as evidence against this hypothesis. Thus, if a group of four persons has three similar responses, it does not count as evidence that members of that group have similar responses, even though three of them did.

The probability level of obtaining a stacked response varies depending upon the number of people in the group. The formula for obtaining the possible outcomes is:

$$K^n$$

where, K is the number of possible outcomes of one trial and
n is the number of trials.

For the satisfaction question, there are six possible outcomes (ranging from Very Dissatisfied to Very Satisfied). In the groups which have 2 questionnaires returned, there are 36 possible outcomes. In the groups which have 3 questionnaires returned, there were 216 possible outcomes (6^3); for 4 questionnaires, there is 1,296 possible outcomes (6^4).

Before the Binomial test can be performed, the expected probability of obtaining a stacked response by chance must be computed. The formula is:

$$\text{Probability of Stacked Response} = \frac{\text{Number of stacked outcomes possible}}{\text{Number of possible outcomes}}$$

For groups of size 2, the probability of obtaining a stacked response by chance is .166; for groups of size 3, .027; and groups of 4, .0046.

The Binomial test can determine the probability of a certain outcome and the choice of a significance level allows the investigator to determine if the outcome is due to chance or is unlikely to be due to chance. In the words of this hypothesis, it is testing if the

observed frequency of stacked responses (all group members reporting the same satisfaction level) is due to chance or is so extreme as not likely to be the result of chance. For each group, the probability level is equal to the probability of getting a stacked response by chance.

The test statistic in the Binomial test is the number of stacked cases. The critical region can be determined using Binomial distribution tables and/or the large sample approximation formula:

$$t = n p \pm w_r \sqrt{n p (1 - p)}$$

where, n is the number of cases,

p is the probability of a stacked outcome by chance, and

w_r is the r^{th} quantile of the standard normal variable.

This allows a statistical probability computation to indicate if the responses could be a random pattern or if it is likely that some type of non-chance grouping is occurring.

Hypothesis 4: Satisfaction Does Not Vary with the Activities Being Pursued

In attempting to identify the variance in satisfaction, it is reasonable to investigate if satisfaction varies because of differences in activities. There is some evidence that certain jobs are more satisfying than others and that the prestige and status of certain jobs adds to their satisfaction (Champion 1975). This may be the case with leisure too. The long-held notion that leisure activities are specific to place, although increasingly refuted (Cheek et al.

1976), would imply that some activities might be more successfully accomplished in a specific setting, and hence, have higher satisfaction levels. For example, a slope with snow is required for skiing. Tinsley and Kass (1978) have presented evidence demonstrating that satisfaction is higher for some leisure activities than others.

Visitors were categorized according to activity participated in. Unobtrusive observation of visitor activities was the technique utilized to obtain these data. Observable recreational and social activities were recorded. Visitor activities were compared across satisfaction means of each activity group to detect significant differences using the Mann-Whitney test. This test can be used for comparison of differences in central tendency of two random samples of ordinal measurement scale data (Conover 1971; Nie and Hadlai 1977). This test combines both samples (participants and non-participants) into a single ordered sample and then assigns ranks to the values from smallest to largest, without regard to which sample each value came from. The test statistic U is the number of times a score from group one precedes a score from group two. If the sum is too small or too large, it is an indication that the values from that sample tend to be smaller or larger than the values from the other sample. Hence, the null hypothesis of no differences between populations may be rejected if the ranks associated with one sample tend to be larger than those of the other sample. Since the satisfaction levels are ordinal values, the numbers by themselves have no meaning except in ordinal comparison with other observations which is the same information the ranks contain.

Hypothesis 5: Activity Patterns Do Not Relate to Domains of Satisfaction

It is a basic premise of motivation researchers that different motivations or needs lead to different behavior (Freud 1964; Lewin 1935; Murray 1938). This has been investigated in numerous recreation studies also (Knopf 1972). Since discrepancy theory is based on an expectation and an accomplishment of some behavior, the congruency of these concepts for each facet of behavior can be used to indicate which domains are being satisfied among participants in an activity and which are not. There may be differences among people who participate in one activity or another in the type of satisfaction (domain) experienced.

The first step in testing this hypothesis is to determine the congruency or incongruency of each of the domains for each activity. This is accomplished in the same manner as it was for hypothesis 2. The item values are converted into scale values. The scale values are standardized so that they can be compared. The measure of congruence of expectancy standardized scale scores with accomplishment standardized scale scores is obtained using the Sign test. The null hypothesis tested is whether the mean of expectancy scores equals the mean of the accomplishment scores.

The second step in testing hypothesis 5 is to determine if these scale values differ significantly from those who did not participate in a particular activity. To test this, the Mann-Whitney U test is employed as a test of significant difference between activity scale values. A difference score was computed by subtracting standardized

expectancy scale values from standardized accomplishment scale values. Thus, for those activities that the Sign test reported being incongruent, there would be significantly more negative difference scores among underperformers and significantly more positive scores for overperformers than for congruent scales. This difference score is compared for differences in mean value of participants and non-participant in a particular activity. The product of employing these statistical procedures on the actual data are presented in the following chapter, Results.

CHAPTER V

RESULTS

The results of the data gathering procedures provide descriptive information about the variables and information to be tested by the hypothesis for relationships between the variables. Results are presented in four sections: 1) questionnaire response, 2) descriptive information on the visitor based on questionnaire data, 3) descriptive information on the visitor based on observation data, and 4) the results of hypothesis testing.

Questionnaire Response

In the course of this study, 215 questionnaires were distributed and 210 were returned. This is a return rate of 98%. The distribution of the second questionnaire was limited to only those groups who returned to the visitor center after their trip through the park. All respondents to the first questionnaire were asked for their cooperation in completing the second questionnaire at the end of the first survey (see Appendix A) and, in person, as they turned in the first questionnaire. An attempt was made to have a person at the entrance station remind each study group to return to the visitor center to complete the second questionnaire. The reminder was critical in securing cooperation in filling out the second questionnaire. During the pre-test, 7 out of 8 (88%) of the visitors receiving this reminder returned for the questionnaire; whereas, only 2 out of 7 (29%) returned without the reminder. During the actual data collection, 136

people completed the first questionnaire, 77 (57%) of these returned to fill out the second questionnaire. These 77 people were members of 38 groups, most of which were couples.

As previously mentioned, 215 questionnaires were distributed. Only five people who were handed a questionnaire refused to complete it. The questionnaires were distributed as the selected group entered the visitor center. Of the five visitors who refused, two were mature adult women who were content to let their husbands complete the questionnaire but who refused personal cooperation. The other two refusals of the first questionnaire were by an adult Oriental couple who apparently spoke little English. The sole overt refusal to complete a second questionnaire was by an adult male who returned the blank questionnaire and protested that he knew what the researcher was trying to do and he did not wish to complete the questions. The only apparent significant difference between the non-respondents and the respondents is that all the respondents needed to be fluent with the written English language.

Visitors who completed only one questionnaire (non-respondents) were statistically compared to visitors who completed both questionnaires (respondents) across four characteristics. No significant difference between the two groups was observed in gender, lifecycle stage, number of visits to the study park, or frequency of park visits in general (Tables 2, 3, 4, and 5).

A Binomial test was performed on the difference in sub-adults and first time visitors in the one questionnaire and both questionnaire groups because these cells had heavy loadings on the Chi-square

TABLE 2
Chi-Square Test of Gender by Response

Gender	Response		Row Total
	Non-respondents	Respondents	
Male	22.1% (30)	30.1% (41)	52% (71)
Female	21.3% (29)	26.5% (36)	48% (65)
Totals	43% (59)	57% (77)	100% (136)

Chi-square = .077. $p = .78$

TABLE 3
Chi-Square Test of Lifecycle Stage by Response

Lifecycle Stage	Response		Row Total
	Non-respondents	Respondents	
Young Adult 18-24	4.4% (6)	11.8% (16)	16% (22)
Adult 25-49	27.2% (37)	33.8% (46)	61% (83)
Mature Adult 50+	11.8% (16)	11.0% (15)	23% (31)
Totals	43% (59)	57% (77)	100% (136)

Chi-square = 3.28. $p = .20$

TABLE 4

Chi-Square Test of the Number of Visits to the Study
Park by Response

Number of Visits	Response				Row Total	
	Non-respondents		Respondents			
First Visit	36.0%	(49)	38.2%	(52)	74%	(101)
Second Visit	4.4%	(6)	10.3%	(14)	15%	(20)
Third or More Visit	3.0%	(4)	8.1%	(11)	11%	(15)
Totals	43%	(59)	57%	(77)	100%	(136)

Chi-square = 3.85. p = .16

TABLE 5

Chi-Square Test of Frequency of Park Visits by Response

Frequency of Park Visits	Response				Row Total	
	Non-respondents		Respondents			
0 Parks	11.3%	(15)	15.8%	(21)	27%	(36)
1-2 Parks	18.8%	(25)	23.3%	(31)	42%	(56)
3-5 Parks	10.5%	(14)	9.0%	(12)	20%	(26)
Over 5 Parks	3.0%	(4)	8.3%	(11)	11%	(15)
Totals	44%	(58)	56%	(75)	100%	(133)

Chi-square = 2.47. p = .49

statistic. At $\alpha = .06$, a significant difference was noted. Since this does not meet the $\alpha = .05$ criterion, the results are accepted as not indicating significant difference; however, they are reported because the value of the alpha level is so low. Thus, at an alpha level of .06, there is a greater tendency for sub-adults and repeat visitors to return and complete a second questionnaire when compared with those who did not return.

A majority of the questionnaires (70%) were returned completely filled out. This left 30% with some missing values. There are two possible approaches to treating these data. Those cases with missing values can be discarded entirely or the available data can be utilized while ignoring missing values. Each set of questionnaires resulted in 59 pieces of information. It is inefficient to discard all 59 pieces of data if only several are missing. Across the 77 cases, there are 113 missing values (2.5% of the possible 4,543 bits of data). In this study, all available data were utilized. The disadvantage of this approach is that it introduces the possibility of analyzing and comparing different samples of respondents if variables differ significantly in response patterns.

Questionnaire Data

One hundred and fifty-four questionnaires were collected from seventy-seven visitors who were members of thirty-eight separate groups. The distribution of respondents by sex was nearly equal (Table 6).

A question requesting birthdate was used to link the two questionnaires and to identify the respondent's lifecycle stage. Age

TABLE 6
Frequency of Questionnaire Respondents by Gender

Gender	Absolute Frequency	Relative Frequency
Male	41	53.2%
Female	36	46.8%
Total	77	100.0%

categories are those established by Cheek (1971:258). Birthdates revealed that 20% were subadults (18-24 years), 60% were adults (25-49 years), and 20% were mature adults (50+ years) (Table 7).

TABLE 7
Frequency of Questionnaire Respondents by
Lifecycle Stage

Lifecycle Stage	Absolute Frequency	Relative Frequency
Subadult (18-24 years)	16	20.8%
Adult (25-49 years)	46	59.7%
Mature Adult (50+ years)	15	19.5%
Total	77	100.0%

In response to the question: "How many parks did you visit last summer?", most people (41%) reported visiting just one or two. Almost a third (28%) reported visiting no parks the previous summer (Table 8).

TABLE 8
Frequency of Park Visitation

Number of Visits	Absolute Frequency	Relative Frequency	Cumulative Frequency
0	21	28%	28%
1-2	31	41%	69%
3-5	12	16%	85%
Over 5	11	15%	100%
Total	75	100%	

The number of new and repeat visitors was assessed by asking the respondents "How many times have you been to this park?" Almost 70% were first time visitors (Table 9).

TABLE 9
Frequency of Visits to the Study Park

Number of Visits	Absolute Frequency	Relative Frequency	Cumulative Frequency
First Visit	52	68%	68%
Second Visit	14	18%	86%
Third or Fourth Visit	9	12%	97%
Fifth or More Visit	2	3%	100%
Total	77	100%	

The reasons why respondents came to the park were determined by the twenty-eight items listed in the first questionnaire (Appendix A). These items contribute to eleven scales developed by Driver (1977). A measure of importance of each scale was determined by computing a scale mean, standard deviation, and standard scores (Table 10).

TABLE 10
Sample Means, Standard Deviations, Standard Scores and Number
of Missing Values for the Reasons for Coming to the Park

Expectancy	Mean	Standard Deviation	Standard Scores	Number of Missing Values
Relationship with Nature	3.753	.395	0.794	2
Learning-Discovery	3.665	.500	0.720	6
Escape Physical Pressure	3.428	.672	0.523	3
Physical Rest	3.046	.899	0.205	3
Family Togetherness	3.007	1.137	0.172	6
Escape Personal-Social Pressure	2.774	.968	-0.022	7
Being with People	2.711	.840	-0.075	7
Independence-Autonomy	2.375	.973	-0.354	6
Reflect on Personal Values	2.243	1.021	-0.464	8
Achievement	2.206	.693	-0.495	8
Meeting-Observing New People	1.577	.792	-1.020	15

Mean indicates the average overall importance of each reason as assigned by the respondents. The standard deviation provides a measure of how dispersed the responses are. The standard score indicates the position of each scale on a standard frequency distribution where the mean is zero. This makes it comparable with the other standard scores from the second questionnaire. The number of missing values indicates the number of items within each scale which were not answered. It can be used as an indirect measure of importance as respondents tended to answer more frequently those questions which they considered more important (notice the general trend toward increasing missing values with decreasing mean value in Tables 10 (p. 55) and 11.

Visitor anticipation of a Relationship with Nature and a Learning-Discovery experience was found to be high. There appears to be a strong desire to discover, explore, and learn about this unique natural area. The standard deviations for these two scales were the lowest among all the scales. This indicates generally high agreement among the respondents in rating these two scales so highly.

The ranking of the expectancy domains designates the priority that visitors assigned to anticipated experiences at this park. The desire to Escape Physical Pressure and to have a chance to Rest Physically were important. There was an intention to escape the crowds, experience the peace and calm, and rest among the respondents. The response rate was relatively high for these motives which adds further evidence of their importance.

Family Togetherness, Escaping Personal-Social Pressure, and Being with People were ranked as moderately important reasons why people came to the area. There was some expectation of a chance to slow down, release tension, escape demands, and be with the family/social group. These expectations are not as limited to a park setting as the higher ranked ones which may be instrumental in reducing their importance in relation to this park. Perhaps, the fact that all of the respondents have spent hours, if not days, together in their vehicle reduced their desire for sociability. The Family Togetherness scale exhibited the highest standard deviation score indicating a wider range of responses on these items than the others. This indicates a fair amount of ambiguity in response to this scale.

Independence-Autonomy, Reflecting on Personal Values, Achievement and Meeting and Observing New People were the least important of the eleven reasons for coming to the area. There was relatively little ambition to be on their own, to think about who they are, to develop self-confidence, let others know they were there, or to interact with new people. The low ranking of the desire to be on their own or self-reflective is substantiated by the low rate of use of the wilderness section of the park. Although group observation revealed a few casual conversations with members outside the group, no conversations lasting beyond a minute or two were witnessed. The Reflecting on Personal Values scale also had a relatively high standard deviation.

The perceived accomplishments of the respondents are reported in Table 11. The statistics reported for the accomplishment scales

are the same as for the expectancy scales: the mean, standard deviation, standard score, and number of missing values.

TABLE 11

Sample Means, Standard Deviations, Standard Scores and Number of Missing Values for Accomplishments While at the Park

Accomplishments	Mean	Standard Deviation	Standard Scores	Number of Missing Values
Relationship with Nature	3.734	.331	0.634	2
Learning-Discovery	3.623	.367	0.518	4
Escape Physical Pressure	3.383	.693	0.266	1
Escape Personal-Social Pressure	3.262	.633	0.139	9
Family Togetherness	3.132	.993	0.002	11
Being with People	3.095	.747	-0.370	15
Independence-Autonomy	2.959	.793	-0.179	11
Physical Rest	2.868	.814	-0.275	5
Achievement	2.800	.663	-0.346	14
Meeting-Observing New People	2.588	.744	-0.570	10
Reflect on Personal Values	2.425	.892	-0.741	9

Relationships with Nature and Learning-Discovery proved to be the two scales that visitors perceived they achieved the most. The low standard deviations indicate a high degree of agreement on these

scales. The visitors reported that they were able to Escape Physical Pressure and Personal-Social Pressure fairly well.

Family Togetherness, Being with People, and feeling Independent and Autonomous were achieved moderately well. The perception of being able to Rest Physically, Achieve, Meet and Observe New People and Reflect on Personal Values was the least of the 11 scales. Yet, the scores for these four scales imply that the visitors were still able to perform these experiences between "a little" and "not very much."

Table 11 (p. 58) presents the order of the relative degree that visitors perceive they can "do" these scale items. It gives a summary of the types of experiences that people perceive they are receiving irregardless of the type of experiences they expected. These accomplishment scores will be related to the expectancy scores through the congruency model to test how well these accomplishments fulfill expected opportunities in the hypothesis testing section of this chapter.

An overall measure of satisfaction was obtained on the second questionnaire. The response range was from very dissatisfied to very satisfied along a six point scale (Table 12).

The visitors to this park are a well-satisfied group. This pattern of high satisfaction has proven to be a consistent pattern in recreation surveys. Among the very dissatisfied respondents, there was no apparent reason. They did tend to feel that they accomplished Family Togetherness and Being with People significantly less than the total sample did. They also reported a higher Physical Rest score which implies that this group may have been less active.

TABLE 12
Overall Satisfaction Ratings

Rating	Frequency	Relative Frequency	Cumulative Frequency
Very Satisfied	53	70%	70%
Satisfied	17	22%	92%
Mildly Satisfied	3	4%	96%
Mildly Dissatisfied	0	0	96%
Dissatisfied	0	0	96%
Very Dissatisfied	3	4%	100%
Total	76	100%	

Observation Data

Unobtrusive observation was used to study the actions of twenty-three of the thirty-eight groups which completed questionnaires. The twenty-three groups accounted for forty-seven sets of questionnaires. Thus, for the observed groups, both self report questionnaire and observation data are available. Approximately 90 hours of observation was devoted to these groups. Selected characteristics of the observed groups, which should represent a sample cross-section of visitor groups, are presented in Table 13. All thirty-eight of the groups were classified into social groups based on observation (Table 14).

Couples represented over half of the visitors who were sampled. It is significant to note that only one person came to the park alone

TABLE 13
Selected Characteristics of Observed Groups

Group Type	N Adults	N Children	Duration of Stay (hours:minutes)	Visit
Couple	2	0	2:10	first
Nuclear Family	2	1	2:40	first
Single	1	0	1:00	first
Couple	2	0	:50	first
Nuclear Family	2	1	3:50	first
Couple	2	0	15:40	first
Couple	2	0	2:00	first
Peers	3	0	2:40	second/third
Nuclear Family	2	1	1:30	first
Nuclear Family	2	1	17:10	first
Couple	2	0	4:10	first
Couple	2	0	2:05	second/third
Extended Family	3	3	5:45	second/third
Couple	2	0	5:30	second/third
Nuclear Family	2	3	4:15	first
Nuclear Family	2	2	3:35	first
Nuclear Family	2	2	2:50	first
Nuclear Family	2	2	3:00	first
Couple	2	0	20:45	first
Couple	2	0	3:05	first
Couple	2	0	1:45	first
Couple	2	0	3:00	first
Couple	2	0	28:30	second/third

(and even this person was accompanied by his dog). This seems to reinforce the notion that recreation behavior is social behavior.

TABLE 14
Frequency of Social Group Types

Group Type	Frequency	Relative Frequency	Cumulative Frequency
Couples	40	51.9%	51.9%
Nuclear Family	15	19.5%	71.4%
Extended Family	7	9.1%	80.5%
Peers	6	7.8%	88.3%
Multiple Family	5	6.5%	94.8%
Partial Family	3	3.9%	98.7%
Single Person	1	1.3%	100.0%
Total	77	100.0%	

A primary purpose of visitor observation was to observe the number and type of activities that visitors participated in. Table 15 is a listing of those activities which were observed and the number of groups witnessed engaging in the activity. It is apparent that the dominant activity at the study park is sightseeing. Sites vary somewhat but the activity is the same. The high proportion of visitors viewing exhibits is to some extent an artifact of the study. The only groups selected for the study were those who stopped at the visitor center upon entering the park. Everyone who stopped at the visitor center viewed the exhibits. It would be incorrect to conclude that virtually 100% of the visitors who enter the park viewed the exhibits, based on these data.

TABLE 15
Activity Participation by Groups

Activity	Frequency (groups)	Relative Frequency
View Exhibits	23	100%
Sightsee from Car	23	100%
Walk Nature Trail	16	70%
Sightsee Caves	16	70%
Sightsee Big Cones	14	61%
Sightsee Small Cones	12	52%
Photography	7	30%
Buy Postcards/Books	6	26%
Picnic	6	26%
Sightsee Big Craters	5	22%
Camp Overnight	3	13%
Attend Campfire Program	3	13%
Sightsee Tree Molds	2	9%
Walk Dog	2	9%
Sightsee North Crater Overlook	1	4%
Backpack	1	4%
Hike in Wilderness Area	1	4%

The mean length of stay of all the day groups was two hours and thirty-three minutes. The average length of stay for the camping groups was eighteen hours.

Hypothesis Testing

H_1 : Satisfaction is Not Related to Visitor Demographic Characteristics (Accepted)

Respondent levels of satisfaction were measured by the overall satisfaction question on the second questionnaire. Gender and Group Type were determined by observation. The variables, Lifecycle Stage, New and Repeat Visitors, and Frequency of Park Visitation, were measured on the first questionnaire.

Gender is the first characteristic considered. Do males and females report different levels of satisfaction with their park visit (Table 16)³?

TABLE 16
Chi-Square Test of Gender by Satisfaction

Gender	Satisfaction				Row Total
	VD	MS	S	VS	
Male	2.6% (2)	2.6% (2)	11.8% (9)	35.6% (27)	53% (40)
Female	1.3% (1)	1.3% (1)	10.5% (8)	34.3% (26)	47% (36)
Totals	4% (3)	4% (3)	22% (17)	70% (53)	100% (76)

Chi-square = 0.039. $p = .844$ $\Phi = .05$ VD=Very Dissatisfied
MS=Mildly Satisfied; S=Satisfied; VS=Very Satisfied

³The low number of respondents in the very dissatisfied to mildly satisfied categories (6), results in a violation of Cochran's rule (Conover 1971:152). The rule states that if more than 20% of the cells have observed values less than 5, the Chi-square approximation may be poor. Cell integration is recommended to conform with the rule. Without cell integration in Table 16, 50% of the cells would have had less than 5 entries. Consequently, cell integration of the very dissatisfied through satisfied categories was performed in calculating the test statistic in Tables 16, 17, 18, 19, 20, 21, and 22.

As Table 16 (p. 64) shows, there is no significant difference in reported levels of satisfaction between males and females. The low Phi value indicates little association between leisure satisfaction and gender.

The next characteristic to consider is the effect of lifecycle stage on the degree of satisfaction with a park visit (Table 17).

TABLE 17
Chi-Square Test of Lifecycle Stage by Satisfaction

Lifecycle Stage	Satisfaction				Row Total
	VD	MS	S	VS	
Subadult 18-24	(0)	1.3% (1)	6.6% (5)	13.2% (10)	21% (16)
Adult 25-49	2.6% (2)	2.6% (2)	11.8% (9)	43.4% (33)	61% (46)
Mature Adult 50+	1.3% (1)	(0)	3.9% (3)	13.2% (10)	18% (14)
Totals	4% (3)	4% (3)	20% (14)	72% (53)	100% (76)

Chi-square = 0.503. $p = .778$ Gamma = .125
VD=Very Dissatisfied; MS=Mildly Satisfied; S=Satisfied; VS=Very Satisfied

Lifecycle stage has little influence on the degree of satisfaction reported. Between 60 to 70% of the visitors report high satisfaction, irregardless of what their lifecycle stage was. The other responses were equally dispersed with no concentration evident. A very low gamma score signifies little association between the variables. The test

statistics must be interpreted with caution because the guideline of no expected frequency being less than 5 (Loether & McTavish 1974: 217) is violated. However, the results are presented to allow examination of the data and discreet conclusions.

No significant bivariate relationship was observed between satisfaction and gender or lifecycle stage. Perhaps a multivariate examination of these three variables will reveal a relationship. Unfortunately, the N values for the cells are too low to meet either minimal cell criterion. However, the tables are presented to allow inspection of the data.

In the first case (Table 18), the distribution of all individuals who reported being very satisfied across gender and lifecycle is presented.

TABLE 18
Chi-Square Test of Gender by Lifecycle Stage of
All Very Satisfied Respondents

Lifecycle Stage	Gender		Row Total
	Male	Female	
Subadult 18-24	7.5% (4)	11.3% (6)	19% (10)
Adult 25-49	30.2% (16)	32.1% (17)	62% (33)
Mature Adult 50+	13.2% (7)	5.7% (3)	19% (10)
Totals	51% (27)	49% (26)	100% (53)

Chi-square = 2.01. p = .276 Gamma = .171

In the second case, the distribution of all other individual satisfaction levels across gender and lifecycle is presented (Table 19).

TABLE 19
Chi-Square Test of Gender by Lifecycle Stage of All
Very Dissatisfied Through Satisfied Respondents

Lifecycle Stage	Gender				Row Total
	Male		Female		
Subadult 18-24	13.0%	(3)	13.0%	(3)	26% (6)
Adult 25-49	39.2%	(9)	17.5%	(4)	57% (13)
Mature Adult 50+	4.3%	(1)	13.0%	(3)	17% (4)
Totals	56%	(13)	44%	(10)	100% (23)

Chi-square = 2.58. $p = .280$ Gamma = .171

The distribution of scores indicates no significant multivariate relationship between these variables.

Since leisure is generally social in nature, it is possible that the type of group one is in might influence satisfaction levels. In order to test this, cells on both the satisfaction scale and the group scale required combination or elimination to meet the restrictions of Cochran's rule (Table 20)⁴.

⁴Peers, single persons, and partial family groups contained only 10 people. These groups were not included in the Chi-square test due to insufficient cases in their cells. The very satisfied score formed one cell and the remaining range of satisfaction scores were grouped into the other row of cells. Even so, the guidelines were violated in two cells so the results are suspect.

TABLE 20
Chi-Square Test of Group Type by Satisfaction

Group Type	Satisfaction				Row Total
	VD	MS	S	VS	
Couple	1.5% (1)	3.0% (2)	16.4% (11)	38.8% (26)	60% (40)
Nuclear Family	1.5% (1)	1.5% (1)	1.5% (1)	17.9% (12)	22% (15)
Extended/ Multiple Family	1.5% (1)	(0)	6.0% (4)	10.4% (7)	18% (12)
Totals	4.5% (3)	4.5% (3)	24% (16)	67% (45)	100% (67)

Chi-square = 1.65. $p = .730$ Cramer's $V = .157$
 VD = Very Dissatisfied; MS = Mildly Satisfied; S = Satisfied; VS = Very Satisfied

The results indicate that the level of satisfaction does not significantly vary with the type of group. There is little evidence of significant association between the variables. The number of persons in the more atypical groups was insufficient to allow a more rigid test of this hypothesis.

Does the degree of satisfaction vary with the frequency of park visitation? Respondents reported the degree of park visitation they participated in the previous summer (Table 21). The cells for 3 to 5 parks and the more than 5 parks were combined to meet minimal cell requirements.

TABLE 21
Chi-Square Test of Frequency of Park
Visitation by Satisfaction

Frequency of Park Visits	Satisfaction				Row Total
	VD	MS	S	VS	
0 Parks	1.4% (1)	4.0% (3)	4.0% (3)	18.9% (14)	28% (21)
1-2 Parks	2.7% (2)	(0)	6.8% (5)	32.4% (24)	42% (31)
≥ 3 Parks	(0)	(0)	10.8% (8)	18.9% (14)	30% (22)
Totals	4% (3)	4% (3)	22% (16)	70% (52)	100% (74)

Chi-square = 1.35. p = .509 Gamma = -0.05
 VD = Very Dissatisfied; MS = Mildly Satisfied; S = Satisfied; VS = Very Satisfied

The test statistic denotes that the observed distribution of cases is not significant nor is there any association between the variables.

A final characteristic to be considered under this hypothesis is the number of past visits to this park. Only two visitors reported visiting this park four or more times. To help meet the specifications of Cochran's rule, these were grouped with those who visited the park two or three times. Since two cells still have expected frequencies less than 5, the test statistic may be flawed and must be interpreted with care (Table 22). The results show that the data do not support a conclusion of any significant relationship or association between the two variables.

All five variables (gender, age, group type, frequency of park visiting, visits to study park) failed to indicate any strong

TABLE 22
Chi-Square Test of Number of Visits to Study
Park by Satisfaction

Number of Visits	Satisfaction				Row Total
	VD	MS	S	VS	
0	1.3% (1)	3.9% (3)	11.8% (9)	51.3% (39)	68% (52)
1	2.5% (2)	(0)	5.3% (4)	9.2% (7)	17% (13)
>2	(0)	(0)	5.3% (4)	9.2% (7)	15% (11)
Totals	4% (3)	4% (3)	22% (17)	70% (53)	100% (76)

Chi-square = 2.18. $p = .335$ Gamma = .187
 VD = Very Dissatisfied; MS = Mildly Satisfied; S = Satisfied; VS = Very Satisfied

relationship with satisfaction. Thus, hypothesis one cannot be rejected on the basis of the information gathered during this study.

H₂: Satisfaction is Not Related to the Congruence of Expectations and Accomplishments (Accepted)

The level of satisfaction was measured by the overall satisfaction question on the second questionnaire. Expectancy and accomplishment were measured by the 28 items on the first and second questionnaires. The measure of congruence of expectancy standardized scale scores with accomplishment standardized scale scores is obtained using the Sign test. Table 23 summarizes the results of this test.

Mean scores are the standardized mean values for each scale. The difference column indicates the number of times the sign of the

TABLE 23

Relative Congruence Between Standardized Expectancy and Accomplishment Scores
for Eleven Domains

Domain	n	Mean*	Differences		2-Tailed Probability	Sign
			-	+		
Relationships with Nature	77	.794	59	18	.000	-
Learning-Discovery	76	.634	64	12	.000	-
Escape Physical Pressure	76	.518	51	25	.004	-
Escape Personal-Social Pressure	74	.266	34	40	.561	0
Family Togetherness	71	.139	55	16	.000	-
Being with People	74	.002	39	35	.727	0
Independence-Autonomy	74	-.075	32	42	.295	0
Physical Rest	75	-.037	56	19	.000	-
Achievement	75	-.179	31	44	.166	0
Meeting-Observing New People	73	-.205	18	55	.000	+
Reflect on Personal Values	72	-.275	48	24	.007	-
		-.495				
		-.346				
		-1.020				
		-.570				
		-.464				
		-.741				

*For each domain, the first entry indicates the standardized expectancy rating and the second entry indicates the standardized accomplishment rating.

difference score (which results from subtracting one score from another) was negative and how many times it had a positive value. If the two variables have approximately the same mean, the number of positive differences should be roughly the same. The two-tailed probability indicates the level of statistical significance of the probability that the difference in signs is not the result of chance. By convention, using the .05 alpha level of significance determines the lower limit for rejecting the hypothesis that the means are equal. The sign column indicates if the domain is congruent (0), underperformed (-), or overperformed (+)⁵.

The results indicate that the visitors were able to Escape Personal-Social Pressure, Be with People, Feel Independent and Autonomous, and gain a sense of Achievement about as much as they expected to. Significant numbers of visitors reported experiencing a Relationship with Nature, Learn and Discover, Escape Physical Pressure, Be Together with the Family, Rest Physically, and Reflect on Personal Values less than they expected to. They also perceived that they were able to Meet and Observe New People more than they expected to.

In order to determine the relationship of these congruencies to the level of satisfaction, congruency tests (Sign test) were performed for each level of satisfaction. That is, the Sign test of scores was performed for those cases which reported being very dissatisfied, mildly satisfied, satisfied, and very satisfied. If discrepancy theory

⁵Peterson (1971) employed the word underperformance to denote cases where accomplishments were less than expectations. Overperformance is the label used for those cases where accomplishments exceed expectations.

is correct, more congruent scales should be evident among the very satisfied visitors when compared to the slightly satisfied visitors. Table 24 presents the results of these tests. Table 25 displays the results of the combined mildly satisfied and satisfied scores.

One problem becomes quickly apparent, the lack of diversity among satisfaction scores. Because there are so few people who were dissatisfied or even slightly satisfied, there are not enough cases to demonstrate significant incongruity in the domains. For example, since the n was only 3 for two of the satisfaction levels, even when the most extreme result occurred (i.e., 3+ or 3-), the two-tailed probability was still .25, too high to reject. So the fact that these satisfaction levels show total congruity for all domains is possibly an artifact of the n levels rather than an empirical conclusion. In an attempt to rectify this situation, the Sign test was repeated on the combined cases from the mildly satisfied and satisfied category (Table 25), to obtain a slightly higher n . Combining these has at least some face validity and increases the n to a point where there is at least a mathematical chance to attain the rejection region.

In determining if congruency was higher for those who reported higher satisfaction (as predicted by discrepancy theory), the case from the combined mildly satisfied-satisfied group (Table 25) and the very satisfied group (Table 24) was compared. In the mildly satisfied-satisfied group, there were four significantly incongruent domains: Relationships with Nature, Learning-Discovery, Family Togetherness, and Physical Rest. The remaining domains were not shown to be incongruent. In the very satisfied category, there were six incongruent

TABLE 24

Relative Congruence Between Standardized Expectancy and Accomplishment Scores for
Eleven Domains and Four Levels of Satisfaction

Domain	Very Dissatisfied					Mildly Satisfied				
	Differences		2-Tailed Prob.		Sign	Differences		2-Tailed Prob.		Sign
	n	-	+	n		-	+	n	-	
Relationships with Nature	3	2	1	3	0	3	0	3	0	0
Learning-Discovery	3	3	0	3	0	3	0	3	0	0
Escape Physical Pressure	3	2	1	3	0	2	1	3	1	0
Escape Personal-Social Pressure	3	1	2	3	0	2	1	3	1	0
Family Togetherness	3	3	0	2	0	2	0	2	0	0
Being with People	3	3	0	3	0	2	1	3	1	0
Independence-Autonomy	3	1	2	2	0	2	0	2	0	0
Physical Rest	3	3	0	3	0	3	0	3	0	0
Achievement	3	1	2	3	0	2	1	3	1	0
Meeting-Observing New People	3	0	3	3	0	2	1	3	1	0
Reflect on Personal Values	3	3	0	3	0	2	1	3	1	0

TABLE 24
(Continued)

Domain	Satisfied					Very Satisfied				
	Differences		2-Tailed		Sign	Differences		2-Tailed		Sign
	n	-	+	Prob.		n	-	+	Prob.	
Relationships with Nature	17	14	3	.013	-	53	39	14	.001	-
Learning-Discovery	17	12	5	.143	0	52	45	7	.000	-
Escape Physical Pressure	16	10	6	.454	0	53	36	17	.013	-
Escape Personal-Social Pressure	15	9	6	.607	0	52	22	30	.332	0
Family Togetherness	15	11	4	.118	0	50	38	12	.000	-
Being with People	16	9	7	.804	0	51	24	27	.779	0
Independence-Autonomy	16	9	7	.804	0	52	20	32	.127	0
Physical Rest	16	12	4	.077	0	52	37	15	.004	-
Achievement	16	8	8	1.196	0	52	19	33	.071	0
Meeting-Observing New People	15	4	11	.118	0	51	11	40	.000	+
Reflect on Personal Values	15	10	5	.302	0	50	32	18	.066	0

TABLE 25
Relative Congruence Between Standardized Expectancy and Accomplishment Scores for
Eleven Domains and the Combined Lesser Satisfaction Scores

Domain	Combined Mildly Satisfied and Satisfied Scores				
	n	Differences		2-Tailed Probability	Sign
		-	+		
Relationships with Nature	20	17	3	.003	-
Learning-Discovery	20	15	5	.041	-
Escape Physical Pressure	19	12	7	.359	0
Escape Personal-Social Pressure	18	11	7	.481	0
Family Togetherness	17	13	4	.049	-
Being with People	19	11	8	.648	0
Independence-Autonomy	18	11	7	.481	0
Physical Rest	19	15	4	.019	-
Achievement	19	10	9	1.000	0
Meeting-Observing New People	18	6	12	.238	0
Reflect on Personal Values	18	12	6	.238	0

domains: Relationships with Nature, Learning-Discovery, Family Togetherness, Physical Rest, Escaping Physical Pressure, and Meeting-Observing New People. In all of the domains, except Meeting-Observing New People, less was accomplished than what was expected, i.e., underperformance. For the Meeting-Observing New People domain, significantly more people accomplished this more than they expected.

On the surface, the data seem to show that the incongruencies increase as satisfaction increases. But is the difference significant? The Chi-square test for differences in probabilities was employed to the null hypothesis that the proportion of incongruities is equal at both satisfaction levels. Table 26 reports the results.

TABLE 26
Chi-Square Test of Domains by Satisfaction

Domains	Satisfaction				Row Total	
	VD-S		VS			
Incongruent Domains	18.2%	(4)	27.3%	(6)	45%	(10)
Congruent Domains	31.8%	(7)	22.7%	(5)	55%	(12)
Totals	50%	(11)	50%	(11)	100%	(22)

Chi-square = .733. p = .790 Phi = .183
VD-S = Very Dissatisfied-Satisfied; VS = Very Satisfied

The Chi-square test statistic is smaller than that required to reject the null hypothesis. Thus, the difference in the number of incongruent and congruent scales is well within what could be expected

by chance. The data are not sufficient to reject the hypothesis that satisfaction is not related to the congruence of expectation and accomplishments.

Kendall's tau provides an alternative method of examining the data for congruity. It is experimental as this procedure was not encountered in the literature. Expectancy scores can be tested for correlation with accomplishment scores and a measure of significance computed. The results of such a treatment are presented in Table 27. The correlation coefficient for each level of satisfaction and each domain is presented. Those coefficients flagged with an asterisk were found to be statistically significant. Those values which are higher than what would be expected by chance alone imply a higher degree of congruency between expectations and accomplishments. In the very satisfied category, 10 domains are congruent; in the satisfied category, 4 domains are congruent; and among the less satisfied, only 2 domains are congruent. Yet, this may be another artifact due to decreasing N values as satisfaction decreases. With lower N values, it becomes more difficult to demonstrate congruency. Because of this doubt, the evidence does not warrant the rejection of hypothesis two. The method seems to show promise and should be employed in future investigations.

TABLE 27
Kendall's Rank Order Correlation Coefficient on Satisfaction Levels
and Domains of Satisfaction

Domains	Very Satisfied	Satisfied	Mildly Satisfied- Very Dissatisfied
Relationships With Nature	.220	.339	-.289
Learning-Discovery	.298*	.471*	.641
Escape Physical Pressure	.290*	-.043	.251
Escape Personal-Social Pressure	.449*	.490*	.154
Family Togetherness	.613*	.533*	.926*
Being with People	.299*	-.026	.596
Independence-Autonomy	.383*	.340	-.667
Physical Rest	.349*	.329	.704
Achievement	.380*	.308	-.067
Meeting-Observing New People	.287*	-.349	.447
Reflect on Personal Values	.525*	.421*	.923*
N	52	16	5
Number of Significant Values (*)	10	4	2

H_3 : For Any Individual (P) of Group (U), Satisfaction is Not Related to the Satisfaction of Other Individuals (Q....i) of Group (U) (Rejected)

The Binomial test is used to compare the number of times all the individuals of one group list the same satisfaction level with the probability of that happening randomly (Table 28).

TABLE 28
Binomial Test Results of the Probability of
Similar Responses Due to Chance

Group Size	n Groups	Stacked Outcome Probability	Observed Stacked	Probability
2	24	.166	15.63	< .0001
3	4	.027	2.50	< .0001
4	2	.005	1.50	< .0001

The results in Table 28 demonstrate that the probability of obtaining stacked results at the frequency they were observed is far greater than that expected by chance alone. Independent of group size, 58% of the respondents indicated the same satisfaction level as all of their fellow group members. Thus, satisfaction responses are more likely to agree with other group members than could reasonably be expected by chance. Hypothesis three is rejected.

H₄: Satisfaction Does Not Vary with the Activities Being Pursued (Rejected)

The activity data have one characteristic which is most striking--its consistency. There is one overall activity into which almost all observed behavior fits--sightseeing. The sightseeing varies somewhat in its location and its intensity but it is still sightseeing. There is very little variation in the type of activities participated in at this park. There were a few campers and picnickers but one suspects a rather utilitarian motive for these activities. There was only one backpacking-hiking group. Very little active or intensive study of the area or its resources was witnessed. Campers stayed for only one night. The dominant visitor activity is casual sightseeing by driving from feature to feature, stopping to walk around a few, and then moving on. Table 29 is a listing of the activities that each group participated in.

Since there was little variation in activities, just as there was little variation in satisfaction level, the effect of one on the other becomes difficult to measure. One possible approach is to compare the mean satisfaction levels of those visitors who participated in a certain activity with those who did not. Since most visitors engaged in their activity in several locations, there is some chance that there will be some contamination from these other types of activity. It is likely that a cancelling out will occur to help eliminate the contaminating influence and show the effect of one type of activity. By comparing across activities, there should be at

TABLE 29
Activity List for Each Group

Group Number	Activities		
1	Sightsee View Exhibits Buy Postcards	NC Nature Trail IC Sightsee Sightsee from Car	Photography Cave Sightsee
2	View Exhibits Cave Sightsee Photography	NC Nature Trail Sightsee from Car SC Sightsee	IC Sightsee Buy Postcards
3	Walk Dog Rest at VC	View Exhibits	Sightsee from Car
4	View Exhibits	Sightsee from Car	
5	View Exhibits Cave Sightsee	DO Nature Trail Sightsee from Car	IC Sightsee
6	Camping Sightsee from Car	Campfire Program	View Exhibits
7	View Exhibits	IC Sightsee	Sightsee from Car
8	View Exhibits Cave Sightsee	SC Sightsee Sightsee from Car	BC Sightsee
9	View Exhibits	SC Sightsee	Sightsee from Car
10	View Exhibits Cave Sightsee DO Nature Trail Sightsee from Car	Walk Dogs Campfire Program SC Sightsee	IC Sightsee NC Nature Trail Camping
11	View Exhibits Photography IC Sightsee Sightsee from Car	DO Nature Trail Buy Slides BC Sightsee	SC Sightsee NC Nature Trail TM Sightsee
12	View Exhibits NC Nature Trail	IC Sightsee Cave Sightsee	Sightsee from Car
13	View Exhibits Sightsee from Car BC Sightsee	DO Nature Trail NC Nature Trail Cave Sightsee	TM Sightsee IC Sightsee

TABLE 29
(Continued)

Group Number	Activities		
14	View Exhibits Sightsee from Car Cave Sightsee	DO Nature Trail DO Picnic in Car	BC Sightsee SC Sightsee
15	View Exhibits Sightsee from Car Cave Sightsee	NC Nature Trail VC Picnic Lawn	SC Sightsee IC Sightsee
16	Buy Postcards Picnic Cave Sightsee	NC Nature Trail View Exhibits Sightsee from Car	IC Sightsee DO Nature Trail
17	View Exhibits Sightsee from Car Cave Sightsee	Photography Picnic	DO Nature Trail NC Nature Trail
18	View Exhibits Cave Sightsee SC Sightsee	Photography NC Nature Trail Sightsee from Car	IC Sightsee NC Sightsee BC Sightsee
19	Buy Postcards IC Sightsee Photography Camp	Picnic Cave Sightsee DO Nature Trail Campfire Program	NC Nature Trail View Exhibits SC Sightsee Sightsee from Car
20	View Exhibits Sightsee from Car Cave Sightsee	NC Nature Trail Picnic	IC Sightsee DO Nature Trail
21	SC Sightsee View Exhibits	Cave Sightsee	Sightsee from Car
22	View Exhibits Buy Postcards Photography	IC Sightsee NC Nature Trail Sightsee from Car	Cave Sightsee SC Sightsee
23	View Exhibits Sightsee from Car	NC Nature Trail Backpacking	SC Sightsee Wilderness Camping

NC = North Crater; IC = Big Cone; BC = Big Craters; SC = Small Cones; TM = Tree Molds; VC = Visitor Center

least an indication of which activities might contribute more to satisfaction. Table 30 presents the results.

The satisfaction mean is the mean satisfaction level of all people who participated in that activity. The standard deviation is the standard deviation of the satisfaction scores for participants in that activity. The mean rank of participants is the average rank of the participant satisfaction scores when ordered with the nonparticipants. Similarly, with the nonparticipant mean rank. The two-tailed probability column lists the probability of obtaining the observed difference in rank by chance alone.

There are two activities whose participants differ significantly from nonparticipants in satisfaction. One of these, Physical Rest, is based on the response of one person, so there is insufficient evidence to expect a reliable conclusion. The second activity, Photography, is based on the response of 14 people who were observed photographing in the park. They reported a significantly higher satisfaction level than nonphotographers. At an alpha level of .10, Walking a Nature Trail or Sightseeing at the Small Cones also seemed to result in increased satisfaction level.

In addition to testing individual activities, a Mann-Whitney test was performed on the number of activities a visitor participates in. The satisfaction level of those visitors who participated in less than four activities was compared with those who participated in four or more. Similarly, those who participated in four to seven activities was compared with those who performed eight or more activities. Finally, the number of stops on the loop road were compared (Table 30).

TABLE 30
Mann-Whitney Test of Satisfaction Levels Across Activities

Activity	n	Satisfaction Mean	S.D.	Mean Rank Participants	Mean Rank Nonparticipant	2-Tailed Prob.
View Exhibits Sightsee from Car	47	5.6	.90	47.0	0	.000
Campfire Program Camp Overnight	5	5.6	.55	22.0	24	.644
Cave Sightsee	34	5.6	.92	24.6	22.5	.554
Big Crater Sightsee	12	5.7	.45	25.1	23.6	.674
Big Cone Sightsee	29	5.5	1.02	24.1	23.9	.944
Small Cone Sightsee	26	5.8	.40	26.4	21.1	.093
Walk Nature Trail	33	5.6	.92	25.7	20.0	.097
Photography	14	5.9	.26	29.0	21.9	.039
Picnic	12	5.4	1.40	24.5	23.8	.864
Rest	1	4.0	0	3.0	24.5	.048
Walk Dog	3	5.0	1.0	14.17	24.7	.101
Buy Postcards or Books	12	5.5	1.4	26.3	23.2	.401

TABLE 30

(Continued)

Activity	n	Satisfaction Mean	S.D.	Mean Rank Participants	Mean Rank Nonparticipant	2-Tailed Prob.
Tree Molds Sightsee	5	5.8	1.4	26.2	23.7	.628
North Crater Sightsee	2	6.0	0	30.5	23.7	.382
Wilderness Backpack	2	6.0	0	30.5	23.7	.382
Activities < 4	10	5.4	.84	20.7	24.9	.274
Activities 4 to 7	20	5.8	.40	24.8	23.4	.651
Activities > 8	17	5.5	1.2	25.0	23.5	.641
0 to 1 Stops	9	5.1	.99	18.9	25.2	.117
2 to 3 Stops	15	5.6	.48	13.70	10.5	.198
4 or More Stops	23	5.8	.33	17.7	13.4	.145

There is no significant increase in satisfaction as the number of activities increases. There is a hint of increased satisfaction as the number of stops increases along the loop. However, it is not significant. Since one activity (Photography) did result in significantly higher satisfaction levels, hypothesis four is rejected.

H₅: Activity Patterns Do Not Relate to Domains of Satisfaction
(Rejected)

When this hypothesis was initially put forward, it was based on a belief that certain activity patterns or typologies would emerge from the observation of visitor behavior. It was thought that visitor types such as passive sightseers, active sightseers, visitors relaxing, active visitors, or personal interpretive participants versus non-personal interpretive participants, etc., would emerge. As the data from previous hypotheses demonstrate, there is very little variation in activities in the sample chosen for this study. However, statistical tests will be performed to verify this.

The congruency or incongruency of each domain for the observed activities was computed using the Sign test (Table 31). Only those activities which had twelve or more participants were included in this analysis. In Table 31, the numerical values are the two-tailed probabilities of obtaining scale incongruity by chance. Those values above .05 are interpreted as indicating congruity between expectations and accomplishments for that domain and activity. Those values equal to or below .05 indicate a high probability that the scales are incongruent. Those marked with a minus sign (-) indicate scales where

TABLE 31
Congruency of Standardized Expectancy and Accomplishment
Scores by Activity

Domain	Exhibits							
	Car Sightsee	Photog.	Cave Sightsee	Big Cone Sightsee	Small Cone Sightsee	Nature Trail	Big Craters Sightsee	Buy
Achievement	0 .302	0 .18	0 .230	0 .458	0 .556	0 .082	0 .146	0 .774
Independence-Autonomy	0 .233	0 .18	0 .164	0 .571	+ .031	0 .216	0 .065	0 .146
Family Togetherness	- .002	- .002	- .010	- .001	0 .108	- .003	0 .388	- .006
Being with People	0 1.000	0 .791	0 .728	0 .850	0 .845	0 .860	0 .549	0 .774
Meeting-Observing New People	+ .001	+ .057	+ .000	- .038	+ .011	+ .008	0 .227	+ .039
Learning-Discovery	- .000	- .013	- .000	- .001	- .003	- .000	- .039	- .039
Relationships with Nature	- .001	0 .180	- .026	- .009	- .001	- .037	0 .146	- .039
Reflect on Personal Values	0 .175	0 .791	0 .082	0 .186	0 .845	- .052	0 .549	0 1.226
Physical Rest	- .005	- .013	- .004	- .009	0 .078	- .005	0 .388	- .039

TABLE 31
(Continued)

Domain	Exhibits					Small Cone Sightsee	Nature Trail	Big Craters Sightsee	Buy
	Car Sightsee	Photog.	Cave Sightsee	Big Cone Sightsee					
Escape Personal-Social Pressure	0 .658	0 1.209	0 1.000	0 .571	0 .845	0 .860	0 1.000	0 .774	0 .774
Escape Physical Pressure	- .009	- .013	- .010	- .003	- .011	- .005	0 .146	- .006	- .006
* * * * *									
Domain	Picnic	Activity			0-1 Stops	2-3 Stops	4 Stops		
		≤ 4	5-8	> 8					
Achievement	0 .774	0 .749	0 .648	0 .143	0 1.00	0 1.00	0 .143		
Independence-Autonomy	0 .388	0 1.00	0 1.00	0 .077	0 .453	0 1.00	0 .077		
Family Togetherness	- .006	- .000	0 .096	- .049	- .031	0 .267	- .013		
Being with People	0 .774	0 .522	0 1.00	0 .804	0 1.00	0 .581	0 .454		
Meeting-Observing New People	+ .006	+ .006	+ .019	0 .077	0 .727	+ .022	0 .210		

TABLE 31
(Continued)

Domain	Picnic	Activity ≤ 4	Activity 5-8	Activity > 8	0-1 Stops	2-3 Stops	4 Stops
Learning-Discovery	.006	.000	.001	.049	.070	.022	.002
Relationships with Nature	.146	.000	.648	.013	.070	1.00	.049
Reflect on Personal Values	.006	.049	.064	.804	1.00	.581	.210
Physical Rest	.006	.010	.004	.143	1.00	.092	.049
Escape Personal-Social Pressure	1.226	.337	.359	.210	.727	.267	.804
Escape Physical Pressure	.146	.268	.359	.002	.727	.581	.013

significant numbers of people reported accomplishing less than they expected. Those marked with a plus sign (+) indicate scales in which accomplishment was greater than expectations.

The second step is to determine if scale congruency/incongruency differs significantly from those who did not participate in a particular activity. For example, in Table 31 (p. 88), it is evident that the scale Independence-Autonomy is congruent for all activities, except Small Cone Sightseeing where a significant percentage of visitors indicated that accomplishment was greater than expectations. But is it significantly greater compared to those who did not visit the Small Cones?

The Mann-Whitney U test results for significant differences between domain scale values across activities are reported in Table 32. Only those domains and activities which were found to have scale differences from other activities through the Sign test (Table 31, p. 88) were tested for significant difference. The left top figure is the mean difference score for the ranks of those who did not participate in the activity listed along the abscissa axis. The figure on the right top is the mean difference score for the ranks of those who did participate in the activity. The bottom figure is the two-tailed probability of obtaining this difference by chance.

The only statistically significant finding is that Picnickers report a significantly lower score on the Reflect on Personal Values domain than Non-Picnickers. All other combinations of activities and domains were not shown to be statistically significant in value between

TABLE 32

Mann-Whitney Test for Significant Differences Between Participants and Nonparticipants
of Selected Activities

Domain	Photography	Big Cone Sightsee	Small Cones Sightsee	Nature Trail	Big Craters Sightsee	Picnic
Independence-Autonomy	21.1 .184					
Family Togetherness			20.8 .153		23.6 .750	25.1
Meeting-Observing New People		27.1 .216			23.9 .961	24.2
Learning-Discovery						22.6 .244
Relationships with Nature	22.5 .247				23.6 .710	25.3
Reflect on Personal Values				29.0 .103		27.3 .005
Physical Rest			23.2 .708		23.6 .723	25.2
Escape Physical Pressure					24.3 .797	23.1 .912

TABLE 32

(Continued)

Domain	Activity ≤ 4	Activity 5-8	Activity > 8	0-1 Stop	2-3 Stops	> 4 Stops
Independence-Autonomy						
Family Togetherness		24.3 23.7 .880			22.7 26.7 .347	24.6 23.4 .757
Meeting-Observing New People			23.8 26.5 .352	23.8 24.9 .818		
Learning-Discovery		23.9 24.2 .948		24.6 21.3 .514	24.7 22.5 .597	
Relationships with Nature		26.7 21.9 .225		17.4 25.5 .105		
Reflect on Personal Values	28.9 22.7 .202					
Physical Rest			23.9 24.2 .956	22.3 31.1 .083	25.7 20.4 .222	
Escape Physical Pressure	24.9 20.6 .374	22.0 26.7 .251		24.7 21.0 .463	22.6 26.9 .312	

Upper left number = Mean rank score for nonparticipants

Upper right number = Mean rank score for participants

Lower number = Probability of obtaining the observed difference by chance

participants and nonparticipants. Since one activity resulted in a significantly lower domain score, hypothesis five is rejected.

CHAPTER VI

CONCLUSIONS

A primary purpose of this thesis is to investigate the relationship of various factors to leisure satisfaction. To accomplish this, several hypotheses drawn from the theoretical literature were tested. A summary of the findings, discussion, and implications are presented in this chapter.

Summary of the Findings

The first hypothesis investigated the possibility of selected visitor demographic characteristics influencing levels of satisfaction. No evidence was found to support the idea that gender, group type, age, number of past visits, or frequency of park visitation affects levels of satisfaction. These levels were consistently high across all visitor types.

Similarly, the test of hypothesis two failed to show that levels of satisfaction are related to the congruency of expressed expectations and accomplishments. This hypothesis was drawn from discrepancy theory which maintains that satisfaction is associated with such congruency. The heavily skewed distribution of satisfaction responses toward the high end limited the statistical flexibility for testing this theory. The reasons rated highest for coming to the park (and their mean values from Table 10, p. 55) were: 1) to experience a Relationship with Nature (3.75), 2) Learn and Discover (3.67), 3) Escape Physical Pressure (3.43), 4) Physical Rest (3.0), and 5) Family Togetherness

(3.0). After visiting the park, visitors perceived that they were most able to (from Table 11, p. 58): 1) experience a Relationship with Nature (3.73), 2) Learn and Discover (3.62), 3) Escape Physical Pressure (3.26), 4) Escape Personal-Social Pressure (3.26), and 5) Family Togetherness (3.13). However, significant numbers of visitors reported that they accomplished less than they expected on all of the domains except Escaping Personal-Social Pressure. Visitors indicated that Achievement, Meeting-Observing New People, and Reflecting on Personal Values were the least expected or accomplished domains.

The third hypothesis addressed the issue of individual satisfaction levels in groups. The evidence was quite strong in demonstrating that people report the same satisfaction level as their cohorts. The cause behind this finding is unclear. It may be due to a naturally high level of satisfaction in leisure activities, the similarity of experiences a group encounters, the influence of the group on the individual, or other factors. However, the empirical record of this study confirms that people within groups report similar satisfaction levels more often than what would be expected by chance.

Hypothesis four stated that satisfaction does not vary with the activities being pursued. This was tested for 24 activity classifications and only one, photography, resulted in a significantly different satisfaction score. This single exception was sufficient to technically reject the hypothesis. However, it is important to note that 23 out of 24 tests of this hypothesis did not result in rejection. Thus, most of the evidence is on the side of accepting this hypothesis. At the alpha level set for this study, rejection of the hypothesis would occur 1 out

of 20 times due to chance alone. This raises the possibility that the single exception to accepting this hypothesis may be a spurious result. Alternatively, it may indicate that the activity "photography" is a different phenomena than the other activities. Perhaps photography is categorically distinct from the other recreational activities tested in this hypothesis.

A similar situation resulted in the rejection of the fifth hypothesis. In 14 out of 15 tests, activity patterns did not relate to domains of satisfaction. The single exception was that significant numbers of Picnickers reported a lower score on the Reflect on Personal Values domain than Nonpicnickers. This finding caused the technical rejection of the hypothesis. Once again, it must be pointed out that the majority of tests supported accepting the hypothesis. A sole exception resulted in rejection. This exception may be spurious or it may be indicative of Picnicking fulfilling a different role than the other types of activities. In either case, the bulk of the evidence supports the acceptance of this hypothesis (Table 33).

Discussion

Satisfaction is a commonly used concept to describe a certain affective state. It has been employed as an indicator (Brewer & Gillespie 1967; LaPage 1968; Reid et al. 1961), as a goal of needs (Tinsley & Kass 1978; Wagar 1966), and as a measure of fulfilled expectations (Graefe 1977; Lawler 1973; Peterson 1971). In most studies, a specific model of satisfaction is adopted without a thorough understanding of the various elements which may influence

TABLE 33
Final Status of Hypotheses

Hypothesis	Status
H ₁ Satisfaction is not related to visitor demographic characteristics	Accepted
H ₂ Satisfaction is not related to the congruence of expectations and accomplishments	Accepted
H ₃ For any individual (P) of group (U), satisfaction is not related to the satisfactions of other individuals (Q....i) of group (U)	Rejected
H ₄ Satisfaction does not vary with the activities being pursued	Accepted for 23 activities Rejected for 1 activity
H ₅ Activity patterns do not relate to domains of satisfaction	Accepted for 14 activities Rejected for 1 activity

satisfaction, i.e., intervening variables. This thesis is an exploration of the effect of several intervening variables on satisfaction levels.

Hypothesis One

Since measures of satisfactions were reported by individuals, it was hypothesized that one possible influence on satisfaction levels was characteristics of the individual. Identifying the demographic variabilities of people is a basic form of empirical information. Isolating the influence of elemental variables on satisfaction should simplify higher level analysis. Group type, gender, and lifecycle variables do have an effect on leisure activities (Cheek & Burch

1976). In addition, several studies have concluded that elemental variables affect satisfaction levels (Fournet et al. 1966; Vincent 1975). Since discrepancy theory employs expectation as a basic tenet and the reality of expectations may vary with how familiar visitors are with park areas, the number of parks visited as well as the number of past visits to the study park were included as potentially important elemental variables. However, the data from this study show no significant variation in satisfaction attributable to these variables.

Expectations

This finding may be the result of the role that expectations play in satisfaction. If satisfaction levels are affected by expectations (as predicted by discrepancy theory), the knowledge of such elemental variables would temper expectations. For example, awareness that one is a 40 year old male accompanied by elderly parents structures certain limitations on the park visiting situation. Anticipating this situation allows adjustments in what one expects to accomplish in a park. Similarly, if a visitor knows he only has two hours to spend in a park, his expectations are geared to this limitation. What the outside observer may consider as a limitation that will lead to dissatisfaction is accepted as a natural structural limitation by the individual.

It is possible that restrictions due to these structural variables are expected and accomplishments in line with these expectations result in satisfaction. The important point is that actions caused by structural variables be expected. If unexpected results occur, then dissatisfaction may arise. Civil rights have advanced to the point

where reactions initiated by such basic variables as gender, age and group type are fairly predictable and accepted. Because of this, they interfere little in achieving satisfaction.

If this explanation is correct, it adds another dimension to the sources of dissatisfaction proposed by Reid et al. (1961). Beyond those sources which are under the control of management or are not under the control of management are those sources of dissatisfaction which are inherent in the structural variables associated with each person. In this study, these variables did not cause dissatisfaction because they stimulated their expected response. However, theoretically they could cause dissatisfaction if unexpected reactions occurred.

Hypothesis Two

The test of the second hypothesis failed to support discrepancy theory. A basic reality is that there was little variation in satisfaction levels. Over 90% of the visitors reported either satisfaction or high satisfaction (Table 12, p. 60). Two possible sources of bias that might inflate satisfaction scores (LaPage 1964) are a tendency to report what they feel are the "proper" answers (Edwards 1959) and the tendency to respond favorably because of a vested interest in supporting park areas, especially among repeat visitors.

A second indication that discrepancy theory is not supported by these data is detected in Table 27 (p. 79). Even when 70% of the respondents reported being very satisfied with their visit, 6 out of 11 domains were incongruent for this group. There is no lack of data to cast doubt on this result. Yet, without more convincing data on

the lesser satisfied categories to compare it to, no firm conclusion can be reached. It is somewhat paradoxical that significant numbers of visitors who reported high satisfaction would also indicate incongruity on 55% of the available domains. Either the incongruent domains are not contributing very heavily to dissatisfaction or discrepancy theory is not an adequate theory for explaining satisfaction.

The source of the scales (Driver 1977) diminishes the likelihood of the first alternative. The domains used in this study have been demonstrated as important factors to leisure experiences in many studies. The second alternative (that discrepancy theory is not a valid explanation for satisfaction) also runs counter to previous studies (see Literature Review).

Recall Testing Bias

In most past studies (Graefe 1977; Peterson 1971; Roggenbuck 1975), the "one-shot case study" design (Campbell & Stanley 1963:6) was employed. Both elements (expectation and accomplishment) were measured in a single questionnaire, at a single time. Since the entire issue in discrepancy theory is the similarity of responses on these two scales, the testing bias of respondent recall of answers to the expectancy questions while completing the accomplishment items introduces a possible serious threat to internal validity. The question is, in those previous studies which found high congruency associated with high satisfaction, how much of the congruency was due to testing bias inherent in asking two sets of the same items in the same questionnaire?

In this thesis, a variation of the "one-group pretest-posttest" design (Campbell & Stanley 1963:7) was employed to separate the items and decrease the respondent recall testing bias. The chances of visitors remembering their responses to questions completed two hours ago is much less than remembering those completed several minutes before. The observed consequence of this improvement in design is a decrease in congruity. This is what would be expected by a diminutive recall testing bias and this study suggests that previously reported high congruency findings might be the result of design artifact.

Integral Concepts

An alternative explanation for the failure to support discrepancy theory is that operationalization of the contributing concepts may have been incorrect. There is widespread agreement that satisfaction is the result of some comparison between a perception of the environment and a set of aspirations (Andrews & Withey 1976:16). But there is widespread disagreement on the specific components and measurement techniques to apply (Lawler 1973). Rather than expectations, perhaps the appropriate unit is what people want to receive or what they feel they should receive (Lawler 1973:67). People do respond differently to these items (Wanous & Lawler 1972). The concept of performance may be superior to accomplishment. Accomplishment implies an individual achievement while performance connotes a social achievement level. In light of the evidence which rejected the third hypothesis (i.e., satisfaction scores tend to be the same within groups) and the social

nature of leisure (Cheek & Burch 1976), a more social orientation may be called for.

Hypothesis Three

The rejection of the third hypothesis supports the social nature of leisure. More importantly, it suggests a social nature of satisfaction. Satisfaction levels tended to be the same in groups. This aspect of satisfaction is rarely reported. Discrepancy theory does not account for group influences on satisfaction levels, yet leisure commonly occurs in groups.

The equity theory approach (Adams 1963, 1965) to satisfaction places greater importance on social comparisons in arriving at satisfaction levels. The equity of what one receives relative to what others receive may be more pertinent to leisure experiences. The Lawler-Porter model (1967) of satisfaction offers another approach. It suggests that individual expectations are not as crucial to satisfaction as performance. A good performance will result in intrinsic and extrinsic rewards. These rewards will be examined by the individual to determine if they are equitable. Based on the reward level and the perceived equitability, a satisfaction level will be established. Good performance includes an awareness of structural variables and how to negotiate them. This model operates independent of such concepts as motives, wants, and expectancies. Because of the social milieu associated with leisure, a theory of leisure satisfaction may need to include more social constructs than is found in discrepancy theory.

Hypothesis Four

The ubiquitous nature of satisfaction persisted across all activities. Consistently high satisfaction levels were reported for the various activity classifications used in this thesis. Only photographers reported a significantly different satisfaction level. Since 23 activity types were relatively consistent in satisfaction level, the hypothesis is generally accepted. But what of the difference encountered with photographers? Rather than doubting the hypothesis, it may be more fruitful to examine why photographers are different in an attempt to explain their different satisfaction level.

The primary interaction the majority of visitors had with the park was visual. The scenery is rather unique and could be described as startling, different, amazing, and/or beautiful. Apparently, the majority of photographers were quite pleased with the pictorial prize they captured. Photographers have multiple opportunities to exhibit their performance (photographs or slides) in other social settings and reap the rewards. This may be the source of their higher satisfaction level. In addition, many of the photographers took pictures of group members at the park and may derive additional satisfaction from possessing pictorial evidence of the group's visit to the study park, i.e., it may increase status.

The observational record determined that photographers generally participated in two more activities and averaged one more stop than nonphotographers. They were represented by both sexes, sub-adults and adults, a range of equipment, several groups types, and they were all first-time visitors.

Photography has a specific goal, i.e., to get that picture. It also requires advance planning. One must possess the camera, film, and certain skills in order to reach the goal. This combination of traits implies that photography may be distinct from the general freedom and enjoyment basis of most leisure activities and may need to be treated differently.

Hypothesis Five

The final hypothesis tested the variation in domain satisfaction across activities. The results can be interpreted in various ways. It may be that sightseeing was the only dominant activity participated in by the sample and that it overshadowed other activities. Since everyone participated in sightseeing, it satisfied similar domains for all the respondents.

The single exception which resulted in rejecting the hypothesis was the case of Picnickers reporting a significantly lower score on the Reflect on Personal Values domain than Nonpicnickers. Observation records indicate that the picnicking groups tended to stay longer and were slightly more active than the nonpicnicking groups. One of the picnicking groups stayed overnight and the other five stayed an average of 1 1/2 hours longer. They averaged one more stop than the Non-picnickers. Perhaps the more active pattern results in less opportunity to Reflect on Personal Values.

These results can be interpreted as discounting need theory. The level of domain satisfaction was found to be nearly equal among sight-seers, photographers, those who participated in few activities and many

activities, and those who made few stops and many stops. According to the need theorists (Knopf 1972; Schaffer 1953), people in these activity groups are likely to have different needs met by these activities. Yet, the data in this thesis demonstrate that the reported domain values (for 11 different domains) are not significantly different among participants and nonparticipants in these activities. This refutes the idea of differing needs precipitating different activities (Knopf 1972:42).

Reasons for Visiting Parks

The pattern of expectancy and accomplishment domains (Table 10, p. 55 and Table 11, p. 58) may offer some insight into the reasons why people attend parks. The relatively high rankings of a Relationship with Nature, Learning-Discovery, Escape Physical Pressure, and Family Togetherness reaffirm the findings of earlier studies. A study of outdoor recreation by West and Merriam (1970) found that it promoted family solidarity. Studies of campers (Clark et al. 1971; Etzkorn 1965; Lime & Cushwa 1969) lent support to "motivations" analogous to the highly scored domains of this study, such as Temporary Escape, Experiencing Nature, Affiliation, Family Growth, and Tranquility. The ORRRC Study Report 3 (1962) on wilderness concluded that Temporary Escape from the Crowds, Experiencing Nature, Exercise and Affiliation were important "motivations". The lower ranking of Reflect on Personal Values, Achievement and Meeting-Observing New People conflicts only with Emerson's (1968) finding that mountain climbers score high in

Achievement. The domain ranking in this thesis could be interpreted as reasons why sightseers visit parks.

Theoretical Implications

The literature review explored the prevailing theories of satisfaction. Most of the research dealing with satisfaction stemmed from interest in job satisfaction. All of the leisure satisfaction studies reviewed were either atheoretical or based on one of the occupational satisfaction theories. Discrepancy theory was employed by this thesis because of its success in previous studies. Yet, an examination of the data suggests that it may be inadequate as a valid explanation of leisure satisfaction.

Issues

All of the hypotheses raised issues which cast doubt on the appropriateness of current satisfaction theories explaining leisure satisfaction. The first hypothesis investigated the effect of characteristics which do influence work satisfaction: age, sex, social environment (Fournet et al. 1966; Robinson & Connors 1963) on leisure satisfaction. No evidence was found that these characteristics influence leisure satisfaction.

The second hypothesis attempted to verify the usefulness of discrepancy theory in predicting leisure satisfaction. The data did not support the theory.

The third hypothesis suggests that satisfaction levels may be mediated by social groups. Discrepancy theory, need theory, and two factor theory do not acknowledge the influence of social situations. Equity theory (Adams 1963, 1965) does incorporate the effect of reference groups.

Hypothesis four demonstrates that satisfaction is consistently high across the various activities. This is a regular finding throughout the leisure satisfaction literature (Cheek & Burch 1976; Graefe 1977; LaPage 1968; Roggenbuck 1975; Shanks 1978). This contrasts with evidence that job satisfaction does vary across different jobs (Champion 1975; Whyte 1969).

The fifth hypothesis argues against various types of satisfaction fulfilling various needs (Graefe 1977; Knopf 1972; Schaffer 1953). There was no significant variation in domain satisfaction levels across activities. This finding is tempered by the fact that all respondents did participate in sightseeing which was the only dominant activity. Yet, there are other arguments against "need" satisfaction (Berger & Luckman 1966; Blum & McHugh 1971; White 1959). Roggenbuck (1975) concluded that motives mattered little in determining satisfaction.

Elaboration

The issues raised focus on one point: the difference between work and leisure. The crux of the problem is whether satisfaction theories developed to explain job satisfaction are applicable to leisure satisfaction.

To begin with, work is essentially the antithesis of leisure (Durant 1953; Murphy 1974). This alone does not deny the possibility of a uniform satisfaction theory which is relevant to work and leisure but it does reveal that such a theory must cover a lot of ground. The evidence presented in this thesis alludes to the fact that current satisfaction theories are not sufficiently broad to encompass leisure.

Several fundamental differences should be noted between leisure and job satisfactions. Most job satisfaction theories are based on the degree of fit between individual aspirations and a perception of the environment (Andrews & Withey 1976; Mumford 1970). This basic model may not apply in leisure because leisure does not "have to" fit any preconceived expectations. First, there may not be any preconceived expectations because leisure is spontaneous (Cheek & Burch 1976). Second, since leisure connotes a sense of individual freedom and is largely self-contained (Cheek & Burch 1976), expectations are fluid and can be adjusted or changed to improve the fit, at will. Cognitive dissonance theory (Festinger 1957) details how this change in expectations can occur. The "goodness of fit" model may have more validity in "recreation" situations as they are routinized leisure patterns (Cheek & Burch 1976) which may elicit preconceived expectations based on past experience.

Job satisfaction is based on many factors (Robinson & Connors 1963) but some of the more important among them are pay, status, productivity, and power (Champion 1975). These same elements have virtually no meaning within leisure. None of them are generally recognized as significant reasons for why people engage in leisure (Knopf 1972).

Variability exists in job satisfactions and various theories have evolved to explain this variation. Very little diversity has been observed in leisure satisfaction levels so the idea of using theories based on observed variations in other fields is somewhat peculiar. Indeed, the constancy of high leisure satisfaction is one of the most important empirical facts that a theory of leisure satisfaction would have to account for.

Reflections on the Stability of High Leisure Satisfaction

It is a consistent finding in leisure satisfaction studies that most respondents (usually at least 90%) report satisfaction with their experience. The data in this thesis demonstrate that this high level of satisfaction does not vary with individual characteristics, individual expectations or accomplishments, and, for the most part, with places or activities. Regardless of the particular situation people find themselves in, they report high satisfaction. There is a fundamental reality here; leisure time is associated with a sensation of satisfaction.

In negotiating everyday reality, people must accept certain facts as given. There is nothing they can do to change them. The time of day, one's age, whether it is night or day, male or female, the necessary of nutrition, or the fact that the study park is located in Idaho; all are examples of structures that form the reality of the environment. People have little choice but to accept these structural variables as given. So, there is little quarrel with them, they are not the source of most dissatisfactions. They exist, for better or for

worse. In general, people negotiate around them with little thought. Alternatively, there is an entire range of discretionary variables which an individual can exercise some flexibility on (within some societies more than others). What time of day to eat, what type of clothes to wear, possibly which occupation to choose, and what to do with leisure time. Leisure time is often conceptualized as being "discretionary" time, "unstructured" time, or simply "free" time. Although rarely true in the absolute sense, relatively speaking, leisure time is "freer" time.

Jeremy Bentham and John Stuart Mill initiated a philosophy of utilitarianism based on hedonism. Pleasure, they said, was the sole motivating force that drove men into all of their activities. The pursuit of pleasure and avoidance of pain govern us in all our thoughts and actions. If one accepts this Epicurean outlook and assumes that satisfaction indicates a state of pleasure, it might be reasonable to argue that this state is largely achieved during one's leisure time. Existence and subsistence chores (sleeping, eating, working, etc.) fulfill basic pleasures but it is during leisure time that a period of relative freedom allows individual discretion (within structural and/or social limitations) in choosing activities that will quench the general thirst for satisfaction. Thus, it would not be surprising to find large numbers of people reporting satisfaction with their leisure time or activities. They have, relatively freely, chosen these activities because of their utility in providing pleasure or satisfaction. Since man is a social animal, these activities are often social

activities. To believe otherwise would mean that man does not generally seek a better existence for himself and/or social group.

The point of this discussion is two-fold: that structural variables (demographic, socio-economic, life-situations, etc.) are not problematic in leisure situations; and secondly, that satisfaction is a natural response to the leisure experience. The first premise implies that satisfaction should be high across a wide diversity of people, places, activities, and situations. Leisure time allows the relative freedom to compensate or avoid structural variables which would lead to dissatisfaction. As long as one is aware of the structural variables of an experience and accepts them (so they do not impinge on one's sense of "freedom" to do what one wants to do), they should have no bearing on satisfaction levels.

The second premise holds a truth that may even be more profound. Individuals are generally more free to move towards enjoyment during leisure time. Perhaps, it is during leisure that one has the "optimal" chance (within one's particular situation) to achieve higher satisfaction, whatever direction that might be. If seeking pleasure is basic to man, and leisure time is that physiologically and socially ordained optimal opportunity to achieve pleasure, then it is almost automatic that behavior during leisure time will take the form of pleasure-seeking behavior that will result in satisfaction.

As such, satisfaction is the goal of leisure (and all other activities, according to Bentham). It is during the freedom of leisure time that one most successfully achieves this goal. An experience that does not carry a person closer to pleasure must have at least one (and

perhaps many) restricting variable that prevents pleasure. These restraining conditions negate the perception of freedom that accompanies leisure, and ultimately, the entire perception of the activity as a leisure experience. That is, if an experience is not satisfying in nature, then it is not likely to be perceived as a leisure experience. If it is not satisfying, it does not possess the qualities of leisure. It is possible that satisfaction is the entelechy of leisure. Thus, asking someone if he is satisfied with his leisure activities may be the equivalent of asking if he is satisfied with satisfaction!

Conclusion

A natural consequence of these discussions is the conclusion that the concept of satisfaction is of questionable value in leisure situations. Leisure means enjoyment (Cheek & Burch 1976) and enjoyment is satisfying. Satisfaction is an indicator that leisure is occurring. Leisure is satisfaction; satisfaction is leisure.

This tautology has some similarity to the classical definition of leisure (de Grazia 1962). Perhaps a continuum exists between work and leisure with the underlying scale running from dissatisfaction to satisfaction. When work satisfaction elevates beyond a certain point, it transmutes into leisure.

While the preceding discourse is rather speculative and is based on certain assumptions about the human condition, it does fit the empirical results of this thesis and other leisure satisfaction studies. Granted, it is a rather large jump from the limited empirical fruits of these studies to the concepts introduced in this discussion.

Managerial Implications

The general perception of the park is of a rather interesting natural area to drive through and see but not one that requires much time. Very few people take the time to study anything about the park other than the surface geological features. Few people perceive it as an area to visit for any length of time to study the resources or just enjoy. Whether this is problematic or not depends on the goals of the managers.

Almost 70% of the visitors are at the park for the first time. This should justify signs, maps, and programs designed to orient new visitors. Sightseeing by car, walking one of the nature trails, seeing the cave, Big Cone, or Small Cones are the most popular activities. Approximately half of the visitors were couples and almost all were members of some type of social group. Activities and tours should allow for participation of these groups, rather than just for individuals.

Many visitors expressed a desire to learn and discover their relationship with nature, escape pressure, and be with the family. Most reported that they did not accomplish as much as they expected to. More interpretive contact might assist visitors to actualize their desired learning-discovery of nature. The observation data indicate the the cave area, Big Cone, Small Cones, or one of the two nature trails are the locations that the majority of visitors visit. Interpretive contact might be maximized by stationing personnel at these locations. There is very little visitation in the wilderness area.

Because of the transient nature of most visits, a schedule of frequent short walks with an interpreter is likely to reach more people than a few longer walks. In addition, initiation of some form of interpretation designed for auto tours would assist many more visitors in hearing the park story. Sequenced radio transmitters or auto cassette tape tours would reach a large percentage of the visitors who touch the park only through their automobiles. The isolated location would tolerate the use of radio transmitters and the single entrance/exit point would facilitate the use of borrowed or rented tapes.

Research Implications

This study demonstrated the feasibility of using pre- and post questionnaires to study the various components of satisfaction. Combined with observations, the technique employed in this study is methodologically stronger than single questionnaire designs. The time investment is greater but the strengths of the parsimonious approach cancels out some of the inherent weaknesses of using only a single technique to gather data.

The actual mechanism of satisfaction is still obscure. The various theories should be tested in greater detail. Observations of high reports of satisfaction in leisure situations can be accepted as an empirical regularity. The question that remains is why?

Suggestions for Further Research

In future studies which employ discrepancy theory as a theoretical orientation, the lessons of this thesis suggest that close attention

be given to achieving a wider range of satisfaction responses. Perhaps, a park that is known to have a low reported satisfaction rate could be singled out as a study area. Alternatively, a disproportionate sample could be taken which includes all reports of dissatisfaction or low satisfaction while accepting only a percentage of the high satisfaction respondents. An entire study might be based on the investigation of dissatisfied visitors who are identified through complaint forms or letters.

There seems to be little reason to investigate visitor characteristics in satisfaction studies. A park which has a greater diversity of activities is superior when investigating leisure satisfaction. Undoubtedly, the mechanics of data collection will become more complex when a wider variety of activities is included. Investigations to explain why satisfaction scores are clustered among group members should be valuable in explaining how satisfaction operates. There is not enough data on solo participant satisfaction levels to determine if it differs from group participants. An exploration of how people who are dissatisfied perceive their experience may illustrate new relevant variables. There has been too little attention directed towards dissatisfaction in leisure settings.

Satisfaction has been predominantly conceived as an individual characteristic. Some of the evidence in this thesis implies that it may have a more social origin. Performance of activities occurs in social groups and satisfaction responses cluster in groups. Explorations of how satisfaction operates within social groups may open a new dimension of satisfaction research that is more applicable to

leisure situations. The role of reference groups and relative deprivation in leisure satisfaction should be determined.

Finally, an exploration of some of the questions raised in the theoretical implications section should be undertaken. Are leisure and satisfaction equivalent terms? Is it possible to be dissatisfied with an experience that is perceived as leisure? Does leisure satisfaction hold to the "goodness of fit" model that other satisfactions do? What are alternative indicators to measure the effectiveness of leisure? The answer to these questions may be essential to the formulation of a theory of leisure satisfaction.

Perhaps, this study may hold some truth that will support theory development on leisure satisfaction. Such was the first objective of this thesis.

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APPENDIX A

QUESTIONNAIRES

Pre-visit Questionnaire

Post Visit Questionnaire

1. How many parks did you visit last summer?

0 ☐

3-5 ☐

1-2 ☐

over 5 ☐

2. How many times have you been to this park?

first time ☐

2 or 3 times ☐

once before ☐

4 or more ☐

3. How long do you expect to stay? _____

4. Which other National Park Service Areas do you plan to visit on this trip?

Came from: _____

Going to: _____

5. When is your birthday? _____

Month

Day

Year

Below are listed some of the reasons why people visit parks. We would like your most candid opinion of how closely each of the stated reasons approaches your personal reasons for coming to this park?

	Very Unimportant	Slightly Unimportant	Slightly Important	Very Important
1 Needing a place to camp overnight.	☐	☐	☐	☐
2 It was a place to see on the way to Yellowstone.	☐	☐	☐	☐
3 Meeting new people.	☐	☐	☐	☐
4 Thinking about your personal values.	☐	☐	☐	☐
5 Developing your knowledge of things here.	☐	☐	☐	☐
6 Being with and observing other people using the area.	☐	☐	☐	☐
7 Doing things with your companions.	☐	☐	☐	☐
8 Being close to nature.	☐	☐	☐	☐
9 Getting away from crowded situations for awhile.	☐	☐	☐	☐
10 Relaxing physically.	☐	☐	☐	☐
11 Viewing the scenery.	☐	☐	☐	☐

	Very Unimportant	Slightly Unimportant	Slightly Important	Very Important
12 Doing something with your family.	☐	☐	☐	☐
13 Getting away from the demands of other people.	☐	☐	☐	☐
14 Experiencing the excitement.	☐	☐	☐	☐
15 Having others know that you have been there.	☐	☐	☐	☐
16 Feeling your independence.	☐	☐	☐	☐
17 Being with members of your own group.	☐	☐	☐	☐
18 Experiencing the peace and calm.	☐	☐	☐	☐
19 Experiencing new and different things.	☐	☐	☐	☐
20 Releasing or reducing some built up tensions.	☐	☐	☐	☐
21 Bringing your family closer together.	☐	☐	☐	☐
22 Being with people having similar values.	☐	☐	☐	☐
23 Being on your own.	☐	☐	☐	☐
24 Gaining a sense of self confidence.	☐	☐	☐	☐
25 Giving your mind a rest.	☐	☐	☐	☐
26 Learning more about nature.	☐	☐	☐	☐
27 Observing other people in the area.	☐	☐	☐	☐
28 Resting physically.	☐	☐	☐	☐
29 Exploring the area.	☐	☐	☐	☐
30 Thinking about who you are.	☐	☐	☐	☐

Are there any important reasons for your visit that I left out?

Thank you for your time and enjoy your visit. On your way out of the park would you mind filling out another questionnaire? I would very much like to know about the quality of your visit. Here's thanking you in advance.

Many thanks for taking the additional time to complete this questionnaire.

1. When is your birthday? _____
Month Day Year

Month

Day

Year

(this question is repeated to tie this questionnaire in with the previous one you filled out)

2. In general, how satisfied are you with your overall visit to this park?

- ☐ Very Dissatisfied ☐ Mildly Satisfied
- ☐ Dissatisfied ☐ Satisfied
- ☐ Mildly Dissatisfied ☐ Very Satisfied

Below is a list of possible benefits of a park visit. Please indicate to what degree you were able to accomplish the following.

During this visit, I was able to:

- 1 camp overnight
- 2 see this park on the way to or from
yellowstone Park
- 3 meet new people
- 4 experience peace and calm
- 5 be close to nature
- 6 be on my own
- 7 get away from the demands of other
people

Never was able to
Not very much
A little
To the full extent

[illegible]

During this visit, I was able to:

	Never was able to	Not very much	A little	To the full extent
8 gain a sense of self confidence	☐	☐	☐	☐
9 view the scenery	☐	☐	☐	☐
10 give my mind a rest	☐	☐	☐	☐
11 have others know that I have been here	☐	☐	☐	☐
12 bring the family closer together	☐	☐	☐	☐
13 develop my knowledge of things here	☐	☐	☐	☐
14 explore the area	☐	☐	☐	☐
15 observe other people using the area	☐	☐	☐	☐
16 think about who I am	☐	☐	☐	☐
17 rest physically	☐	☐	☐	☐
18 be with people having similar values	☐	☐	☐	☐
19 do things with my companions	☐	☐	☐	☐
20 learn more about nature	☐	☐	☐	☐
21 think about my personal values	☐	☐	☐	☐
22 release or reduce some buildup tensions	☐	☐	☐	☐
23 experience excitement	☐	☐	☐	☐
24 be with members of my own group	☐	☐	☐	☐
25 get away from crowded situations for awhile	☐	☐	☐	☐
26 experience new and different things	☐	☐	☐	☐
27 share your knowledge with others	☐	☐	☐	☐
28 relax physically	☐	☐	☐	☐
29 be with and observe other people using the area	☐	☐	☐	☐
30 feel my independence	☐	☐	☐	☐
31 do something with the family	☐	☐	☐	☐

APPENDIX B

OBSERVATION MATERIALS

Activity List

Observation Form

Possible Activity Categories

Astronomy

Backpacking

Bird Watching

Camping

Campfire Program

Cave Exploration

Conducted Walks

Cycling

Driving for Pleasure

Flower Identification

Hiking

Geology

Nature Trails

Nature Study

Outdoor Cooking

Outdoor Games

Photography

Picnicking

Resting

Sightseeing

Tree Identification

Walking for Pleasure

Walking Dog

Visitor Center

Observation Form

Group Number _____

Group Size _____ Questionnaires _____

Vehicles _____

Group Type _____

State _____

Gender/Lifecycle _____

Time in _____

Time out _____

Total

Location/Time	Activity	Dynamics/Comments

VITA

Stephen Murray Holland

Personal Information: Born in Manhattan, Kansas, January 22, 1950, first son of James and Anita Holland.

Education: Graduated from Bishop McNamara High School, Forestville, Maryland, in 1968; received the Associate of Arts degree from Prince George's Community College, Largo, Maryland, 1971; received Bachelor of Science degree from the University of Maryland, College Park, with a major in Psychology; received a second Bachelor of Science degree from the University of Maryland, College Park, with a major in Conservation and Resource Management; enrolled in the Master's program in Recreation and Resources Development, Texas A&M University in September 1976; completed degree requirements for the Master of Science in May 1979.

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