PERSONALITY ENHANCEMENT AND THE SUMMER CAMP EXPERIENCE

THESIS

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By

G. Brian Kurtz, B.S.
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The study was undertaken to discover if the summer camp experience enhanced personality traits of participants in the camp program. The study was implemented at Greene Family Camp in Bruceville, Texas, during the summer of 1985. Utilized were analyses of variance and two types of factor analyses: principal-components analysis with varimax rotation and principal axis factoring with oblique rotation of factor matrices elicited. Five personality areas were analyzed--sociability, independence, achievement, environmental awareness, and spirituality. Spirituality emerged so strongly that it was removed from further analyses. Remaining personality areas emerged, but groupings of variables, especially those relating to achievement and independence, suggest an inherent commonality among the complex facets of personality. Based on these findings, the researcher recommends further investigation and careful replication.

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CHAPTER I

INTRODUCTION

The personality of a young child is an ever-changing, ever-ingesting bundle of needs, expectations, and experiences. The child is constantly being exposed to new situations, problems, and relationships to decipher, understand, and integrate into his perceptual sphere. Huxley (1953, pp. 162-163) described life as a "struggle" and added:

> Fulfillment seems to describe better than any other single work the positive side of human development and human evolution--the realization of inherent capacities by the individual and of new possibilities by the race; the satisfaction of needs, spiritual as well as material; the emergence of new qualities of experience to be enjoyed; the building of personalities.

Indeed, fulfillment of the various needs which come to be perceived by the individual is of paramount importance in the development of self-perceived abilities and the potential for personal growth. Meeting a variety of needs--physiological, security, belonging, self-esteem--are essential to the psychological and physical growth of the individual (Maslow, 1938). According to Maslow, meeting these needs may lead toward actualization, or that realization of one's potentialities. Coleman (1960, pp. 125-126) said that,

> . . . actualization, essentially, is growth--physical, intellectual, emotional, spiritual . . . actualization strivings tend to improve the system or its situation by making it more attractive, more capable, more useful, or otherwise of greater real or apparent worth. Both kinds of strivings are typical of human beings in a reasonably favorable environment.

Some are coming to believe that the summer camp, long a part of childhood memories, may be just such a "favorable environment" for personality growth and enhancement. A few authors (Bavley, 1972, p. 18; Raymond, 1967, p. 18; Coolbaugh, 1972, p. 12) have demonstrated the effectiveness with which the camp structure and environment facilitate the emergence of qualities inherent in a healthy self-concept. Chase (1968, p. 21) has also pointed out similar values inherent in the camp's controlled setting, pointing out the satisfaction of the needs of achievement and self-confidence, as well as the value of the camp's democratic method of organization. Spiritual needs may also be met by the summer camp (Webb & Webb, 1953, pp. 61-63) in that one may come to experience the wonders of Creation on a very concrete level. This sort of hands-on learning can be a good source of reinforcement for a child seeking a concept of religiosity which can be felt, seen, smelled, and heard.

Environmental appreciation and awareness are also important personality-enhancing agents in the overall camp

experience (Ford, 1981, pp. 10-11; Penn, 1964 pp. 19-20). There are many analogies which, when taken out of nature and applied to one's life, may be useful to one's self-perception and ability to cope with life's troubled times. It is important for a child to come to perceive himself as part of a larger system of interrelated units of energy, each working toward survival on earth amid hardship as well as companionship.

Statement of the Problem

The problem to be investigated by this study was to determine if one's personality is enhanced by the overall camp experience.

Definition of Terms

The following definitions were deemed important to the understanding of the study:

1. Personality enhancement--refers to the growth of the individual in terms of one's development in each of the following areas inherent in the overall camp experience:

    a. Sociability/cooperation--getting along with others and working together for the good of those involved in a particular group;

    b. Self-reliance/independence--one's ability to do something for oneself without being dependent on another's opinion or support;

c. Spirituality/religiosity--one's belief in some Supreme Being or Ultimate Force which is responsible for our existence;

d. Environmental awareness/appreciation--an understanding of the balance of nature, and of one's place in preserving it, as well as an attitude of enjoyment and/or tranquility when out in natural surroundings;

e. Achievement--a sense of worth or betterment one perceives upon completion of a given task or assignment.

2. Outdoor Education--a means of curriculum enrichment through experiences in and for the outdoors (Julian Smith, 1970, p. 5).

3. Recreation--leisure-time involvement that helps to enrich one's personality by balancing work, study, and self-maintenance activities with other kinds of creative experience and self-expression.

4. Personality--the quality or state of being of a person; the complex of characteristics that distinguishes an individual (Webster, 1970).

5. Self--the union of elements (as body, emotions, thoughts, sensations) that constitute the individuality and identity of a person (Webster, 1970).

6. Competencies--those abilities necessary for effective adjustment and the achievement of life goals (Coleman, 1960, p. 14):

a. Physical competencies--the practice of good physical hygiene and the use of medical resources to keep the body functioning as efficiently as possible;

b. Intellectual competencies--the achievement not only of broad knowledge and understanding, but even more important, a high degree of competency in learning, problem solving, and decision-making;

c. Emotional competencies--the ability to cope with the fears and anxieties of modern life and to meet life with the enthusiasm and sense of wonder that our emotional apparatus makes possible;

d. Social competencies--the ability to deal effectively with other people and build satisfying interpersonal relationships.

7. The overall camp experience--the sum of the daily events, activities, emotional experiences, and interpersonal/intergroup relationships which affect the child's life at summer camp.

Delimitations of the Study

The following items were considered to be the delimitations of the study.

1. The study dealt only with the pair of month-long sessions at the Green Family Camp in Bruceville, Texas. The dates of these sessions were June 16 to July 12, and July 14 to August 9, 1985.

2. Campers involved in the study were only those in the "regular camp" age groups: ages 8- to 14-years-old. The "Kibbutz" group, whose members were 14- and 15-years-

old, was not studied, as this program was vastly different both structurally and programmatically from the "regular camp" group's regimen.

3. This study dealt with no other sessions and with no other camper populations other than those mentioned above.

Limitations of the Study

Limitations of the study were:

1. Possible lack of staff participation with regard to the survey instrument's administration.

2. Possible lack of adequate time, amid the camp's busy schedule of events, to administer the survey instrument.

3. Potential lack of total understanding of the instrument on the part of the young respondents, with regard to the intended meaning of each instrument segment, and potential lack of understanding of the Likert-scale format.

4. Potential lack of maturity to accurately self-assess as directed in the instrument, or answer honestly if able to self-assess on a mature level.

5. Lack of ability on the researcher's part to apply field observations to the quantitatively-oriented data collected; to do so is impossible in quantitative methods,

as qualitative observations are inherently impossible to objectively quantify.

6. Potential non-response may prevent results obtained from accurately reflecting the feelings of the entire sample population.

Collection of Data

1. Instrument design--

The data collected came from results of a two-part instrument designed specifically for this study by the researcher. The first part was a 30-statement, Likert-scale-type section, asking each respondent to self-assess potential changes in him/herself during the camp session with reference to each of the 30 statements. Each statement was followed by a zero-to-five scale, with values increasing to denote the degree of perceived change in the statement-area. Children responded by circling the appropriate value for each statement-response. Zero was labeled "no difference," "1" denoted a "small difference," "3" denoted a "medium change," and "5" denoted a "big change."

It was hoped that the statements, upon application to a multivariate, rotational factor analysis, would cluster as follows:

Sociability/cooperation--

--I make friends more easily now (1)
--Working with others seems easier now (7)
--Helping others seems more important now (12)
--I had fun with people (17)
--I get along better with others now than before (22)
--Giving makes me as happy as getting something now (27)

Self-reliance/independence--
--I am more relaxed when I am alone now (5)
--I am less nervous at night now (10)
--I think I understand myself better now (15)
--I have more self-confidence now than before (20)
--I conquered some old fears this summer (25)

Achievement--
--I developed new skills (3)
--I feel stronger physically (4)
--I learned new things this summer (9)
--I feel healthier now (14)
--I do some things better now than before (19)
--I did things I never thought I could do (24)

Environmental awareness/appreciation--

--I enjoy being outdoors more now (2)
--I have more respect for Nature now (8)
--I learned more about Nature this summer (13)
--I hear more things when I'm outdoors now (18)
--I see more things outdoors now (23)
--I feel more of a need to protect the environment now (28)
--I am less scared of insects now (29)

Spirituality/religiosity--

--I understand more about religion now (6)
--I believe more strongly in God now (11)
--I enjoy worship services more now than before (16)
--I believe more in some sort of afterlife now (21)
--I believe more strongly in Judaism now (26)
--I think about God more often now (30)

After responding to this first section of the instrument, children next were asked to answer questions

regarding their previous camp experience, previous outdoor camping experience, the size of their age group, and gender (a copy of the instrument is in the Appendix).

2. Sample Population--

The sample population was those children at the Greene Family Camp during each of the two regular camp sessions. There were approximately 300 children from which the sample was taken, with a full census attempted. There were few, if any, children attending both of the month-long sessions, and these children were not permitted to respond to the survey instrument two times.

3. Method of Administration--

The survey was administered in the campers' respective cabins by their cabin's regularly-assigned staff members. The respondents were given an adequate amount of time to complete and return the instrument, about 48 hours. The survey was administered from Monday afternoon until Wednesday afternoon during the last week of each four-week session. All staff members were briefed as to the instrument's content, purpose, and administration procedures. Also, all staff were given the general meaning and intent of each statement-item in the instrument, as well as each question asked of the respondents.

4. Method of Analysis--

The results of the survey were coded by response value and were processed by summing the values denoted, determining the means of these values, and allocating variance of each. Factors were then extracted using principal-components factor analysis with varimax rotation of factors extracted. This factor analysis procedure was followed with a confirmation analysis of sorts, principal-axis factoring with oblique rotation.

The researcher chose these types of calculations because they reduce larger sets of data into smaller sets of items. It was hoped that once results from one set of calculations were obtained, they could be checked against the results of the second set of calculations. The second set of procedures--principal-axis factoring with oblique rotation--was chosen because it is thought to be a more discriminating selection method of pattern-seeking. If response-factor areas were discovered using the more structured principal-components/varimax analysis, with its predetermined method of factor selection, they could be checked with the more discriminating principal-axis/oblique analysis.

In this chapter the researcher reviewed the preparations necessary to implement the study. Research

design, sample population, method of survey administration and method of data analysis were all mentioned. Chapter II will review the literature from which the researcher chose important information to begin thought processes leading to this study.

CHAPTER II

REVIEW OF LITERATURE

There have been few studies of a "hard," statistical nature done on the personality-enhancing aspects of the camp experience, but those which have been done are very demonstrative of the camp's potential for facilitating growth and personal enrichment. This chapter will examine these studies, followed by an overview of the factors contributing to personality development in general.

Camp as a personality-enhancing experience is a broad concept which involves numerous facets of an individual's mind, as well as influential external factors. Bavley (1972, p. 18) cited a two-year study in Boston which showed that the summer camp experience leads to

> . . . dramatic improvement in personal effectiveness, intellectual and socially responsible activities, self-image, feeling of leadership, potential, concern for others, cooperativeness, and willingness to participate, feeling of personal worth, respect for others, and ability to communicate.

Raymond (1967, p. 18) also noted studies which pioneered understanding of children's self-concepts (Becker, 1960; Davidson, 1966; Stack, 1960). All of these researchers reported marked positive impact of school-camping experiences on middle-class children's self-concepts. Coolbaugh (1972, p. 12) reported a study whose results

"consistently demonstrated marked positive effects of camp upon the campers and how they felt about themselves." Scores taken in this study showed children younger than 13 seemed to be more influenced than those in their teenage years. Raymond (1967) studied campers in Ohio and found that his research consistently demonstrated that there were

> . . . marked positive effects of camp upon the campers and how they felt about themselves. It was found that a selectively controlled camp environment has characteristics for catalyzing possible self-concept change. . . .

He also stated that

> . . . there was a very significant difference found related to self-concept level. Individual children who initially had the lowest self-concepts were influenced much more by the camping experience than either middle- or high-self-concept children.

Chase (1968, p. 21) also noted the values of camps' controlled settings, saying camps provide "a relaxed atmosphere for learning," and added that camps help satisfy a child's need for achievement, and help bring up the child's confidence level.

Personality is a very complex matter, and one must examine carefully the process of personality development and what factors enhance personality growth on a general level before examining specific personality aspects in terms of the overall camp experience. The first such factor is the environment in which personality enhancement

takes place. Coleman (1960, p. 54) points out that the role played by the sociocultural environment is crucial to personality:

> The individual's basic personality structure is affected not only by the larger social group but also by the various subgroups to which he belongs. . . . Each subgroup tends to foster certain values, beliefs, and approved behavior patterns. . . .

The findings of Bavley (1972, p. 18), Coolbaugh (1972, p. 12), Chase (1968, p. 21), Raymond (1967, p. 18), and Penn (1964, pp. 19-21) all point to the value of a proper environment often provided by the summer camp in lending a hand in personality growth and development.

The role of culture is difficult to overestimate. Coleman quotes Margaret Mead (1953, pp. 377-378), who said

> . . . the functioning of every part of the human body is moulded by the culture within which the individual has been reared. . . . Culture is seen . . . as a principal element in the development of the individual. . . .

The culture which molds the young, developing mind is a product of the forces exerted upon it by individuals comprising the society in question. Social interaction is thus a prime concern with regard to the nature of any sociocultural phenomenon.

When examining the individual in relation to the culture which surrounds him, one finds Maslow's (1943, p. 370-396) hierarchy of needs to be an integral part of the

examination. Maslow's needs-hierarchy is based upon feedback from others surrounding the individual, each step of which must be met as one encounters life. According to Maslow's so-called "hierarchy," one must first satisfy physiological needs like hunger and thirst before attending to needs related to security and safety. After these needs have been met, social needs must also be met. These needs include: feelings of belonging, association with a particular group, and acceptance by the group chosen by the individual. After this, the next step in the ladder is the set of needs associated with ego-enhancement and self-esteem--recognition, status, and the like. Only after these progressive needs are met may the individual hope to attain a level of "self-actualization" characterized by spontaneity, creativity, and self-realization. The camp experience lends itself to stimulation of such creativity in children. Penn (1964, pp. 19-21) has stated how the camp community lends itself directly to one's feelings of security and social acceptance, stating,

> There are many program levels on which this community consciousness can be developed. On a bunk level there are opportunities to contribute towards the community health, cleanliness, orderliness, joint interest and cooperative activities. Concern for his bunk mates and personal and activity interrelationships with his bunk mates offers not only possibilities for personal enrichment, and growth, but also allows feelings of group security, group interdependence and group

> growth. On a camp-wide level there are camper-counselor and camper-staff conferences where the "common well" of the community become the total concern of each individual.

An important point here is that much of Maslow's hierarchy of needs theory is based upon self-perceptions. A person must feel nourished, secure, accepted, and worthwhile before self-actualizing activity may take place. The frame of reference from which the individual progresses or digresses is of prime concern when considering personality development and enhancement. Coleman (1960, pp. 119-122) stated frame of reference as one of five ingredients inherent in meeting one's psychological needs:

1. Frame of reference;
2. Feelings of adequacy and security;
3. Feelings of belonging and approval;
4. Feelings of self-esteem and self-worth;
5. Feelings of love and relatedness.

The above criteria bare a striking resemblance to Maslow's list. The camp environment, with its emphasis on group interaction and cooperative task-orientation, is a positive setting for development of such feelings.

Koller and Ritchie (1978, p. 38) also note Maslow's hierarchy as an important starting point from which to study one's personality development, and continue, noting Mangus' (1948, pp. 200-201) elements of good mental-emotional health:

1. Growing control over one's own actions;
2. Reasonable aggression when necessary, but free from a need to dominate others;
3. Reasonable compliance to the wishes of others, but without compliance simply to escape criticism;
4. Ability to spend time alone for purposes of self-improvement but not from fear of contacts with others;
5. A strong sense of personal security, but without smug complacency;
6. No lack of emotional conflicts, but mastery of effective techniques to resolve conflicts constructively;
7. Self-respect and self-confidence without egotistical arrogance;
8. High levels of maturity in terms of others, inner emotions, thought processes, and moral codes.

As one reviews this list, one may begin to understand how the camp setting may be facilitative to such characteristics. As one interacts with others and comes into contact with a variety of socially- and task-oriented problem situations, one may learn to deal effectively with them, learning to control one's actions and taking responsibility for them. Compliance to group wishes is necessary at camp, and everyone has the opportunity to provide input into the daily-activity process. The ability to resolve conflicts, both social and intrapersonal, is developed through living amid such problems which arise, and seeking the help of a qualified bunk counselor or staff member trained to expect and assist in such situations. Self-respect and self-confidence are developed amid the acceptance of others for who they are, and in the

stimulating environment that camp provides in which youngsters test new ideas, new skills, and new self-perceptions.

Koller and Ritchie (1978, p. 201) noted the National Association for Mental Health's guidelines for good mental health (1968), highlighting as the main ingredients

1. Feeling comfortable about one's self;
2. Feeling right about others;
3. Being able to meet life's demands.

Indeed, one must learn these things, and camp is an excellent place to test such areas. Daily interaction with others on a variety of levels; daily encounters with different problems to be solved; these are the stuff from which the overall camp experience is made. It is from these experiences that the child's frame of reference and self-perceptions may be strengthened or altered and reoriented toward a more healthy, productive, and functional state of mind.

Coleman (1960, p. 105) described what he terms "key influences in development," and among these, along with "common results if favorable," are the following factors:

Opportunity and Stimulation	Curiosity; eagerness to learn and to expand horizon.
Structuring and Discipline	Clear values and ethical concepts; strong inner controls; confidence in ability to meet and handle situations.

Guidance and Assistance	Adequate competencies; integrated values; reliable frame of reference; ability to meet developmental tasks.
Success and Recognition	Self-confidence; ability to make best use of learning potential; desire to further achievement; ability to tolerate failure and use it constructively.
Frustration and Trauma	Success in handling moderate stress increases self-confidence and ability to tolerate and handle frustrations.

Many authors have stated that a good camp provides such influences, and that children benefit from such exposure so prevalent in the camp atmosphere. Among these authors are Webb (1953, pp. 14-99) and Penn (1964, pp. 19-21), who describe many of the healthy influences provided by the camp setting.

This study was designed to investigate if the following aspects of personality may be enhanced by the overall camp experience:

1. Sociability/cooperation;
2. Self-reliance/independence;
3. Achievement;
4. Environmental awareness and appreciation;
5. Spirituality/religiosity.

Sociability has been noted by Penn (1964, p. 19) Baker (1939, cited in Webb, 1953, pp. 251-254; Webb, 1971, p. 26) to be a factor enhanced by camp life. All support the

notion of community living as influential in the development of feelings of sociability and recognition of the need to cooperate for optimum results and maximization of personal and group potential.

Self-reliance as an enhanceable personality facet is supported by Webb (1953, p. 14) and Chase (1968, p. 21). Indeed, the testing of personal attributes in the relaxed, non-critical atmosphere characterized by these authors would give children a chance to try new things and develop new potentialities without fearing dangers inherent in more pressure-oriented surroundings. Making one's bed every morning, cleaning up one's bunk with cohorts, and taking care of one's other daily affairs can be a meaningful experience for a youngster who might otherwise be unable to do frequently such things in suburban America. The conventional grade-oriented classroom--whose standards are set by external authority, and whose regulations are derived not by the students themselves, but by educational administrators often far removed from the educational process--seems weak when compared to the camp system of self-government and self-regulation.

Achievement was another factor considered in this study, and there are authors who support the notion that achievement feelings may be stimulated by the overall camp

experience. Webb (1953) and Chase (1968, p. 21) are among these authors who see the camp as a place where new skills are learned, new potentialities realized, and satisfaction gained from such experience.

Environmental awareness and appreciation make up another facet of personality which may be enhanced by camp life. Webb (1953), Vivian (1953, cited in Webb, 1971, pp. 255-256), Johnston (1937, cited in Webb, 1971, pp. 260-261), and Penn (1964, p. 19) all point to this potential; inherent in the overall camp experience. Camp is often set in beautiful surroundings where natural phenomena may be experienced first-hand, not just out of a classroom text in biology or science class. The closed geographical system within which camps operate also points out litter problems if any develop, and campers found responsible for such actions must face the consequences deemed appropriate by their staff and peers. At camp, one may sit by the lake and watch the laying of perch eggs in the shallows, or simply witness the naturally-occurring coloring of a sunset bringing a beautiful end to a busy day. Such experiences are quite conducive to the development of a child's awareness and appreciation of nature and the environment.

Spiritual values are also enhanced by the camp experience, according to many writers. Jensen (1973, p.

22) and Hazzard (1952), Hamilton (1932), Bowman (1955), Baker (1939), and Johnston (1937) [the latter five cited in Webb, 1971] have all noted the spiritually-beneficial aspects of the camp setting. These writers have noted the close ties between nature's beauty and order with the metaphysical, and have told how much easier it can be to feel closer to a Supreme Being or Force when one worships among the trees, birds, crickets, and squirrels around the chapel site. Albert Einstein, in his The World As I See It, also noted the relationship between science and nature. Einstein believed that science and religion both gain momentum from an inherent quest to explain and wonder at the unexplainable. Such a desire to learn and appreciate the workings of nature is contained within child and scientist alike, and the vastness of what we know from scientific study has shown how orderly and harmonious the universe is. This harmony is often seen as established by a Supreme Being or Force, and the development of such inner feelings may be enhanced by the camp experience.

This chapter, devoted to examining past research and relating this to the researcher's hypothesis, has presented the opinions of several writers regarding the potential benefits inherent in the overall camp experience. Several points have been made relative to the researcher's proposed

personality aspects which may be enhanced at the summer camp. In Chapter III, the researcher will present the different methods implemented and types of data analysis utilized to obtain information leading to support of the hypothesis that personality aspects may be enhanced at camp.

CHAPTER III

METHODOLOGY

The purpose of this chapter is to present the methods and procedures used in developing the survey instrument and obtaining data for the study. The following sections are included in this presentation:

A. Population and Sample Selection

B. Research Design

C. Development and Description of Survey Instrument

D. Methods of Data Collection

E. Methods and Procedures of Data Analysis

Population and Sample Selection

The sample population for this study was the campers attending the first and second sessions at the Green Family Camp in Bruceville, Texas. This population was selected because the population seemed ideal in terms of its religious and sociocultural homogeneity. Many of the campers were from such metropolitan areas as Houston, Dallas, Austin, and Oklahoma City. The balance came from smaller towns and cities throughout Texas and Oklahoma. Most of the campers had been to Greene Family Camp before, and some had previous learning experiences centered around outdoor living skills.

Data Collection

It was determined by the researcher that a questionnaire, administered to the entire camp population, would be the best method to gather data for the study. In this manner, a complete set of responses could be collected; one which accurately reflected the diversity of opinions which might exist. Use of a self-reported instrument for data collection also guaranteed the respondents' anonmyity. Respondents could answer the questionnaire honestly, free of peer pressure or other external influences.

Development and Description of the Survey Instrument

The first step in developing an adequate survey instrument was to examine previous research done on similar populations utilizing similar data collection methods. Several survey instruments were reviewed by the researcher, with particular attention paid to sentence structures and the content of survey items. Statements were then developed by the researcher in relation to the categorizations outlined in Chapter II. As achievement, sociability, independence, and environmental awareness were consistently mentioned by other authors as emerging factors

in their data sets, these categories were deemed essential for answering the research problem.

Because the Greene Family Camp is an institution sponsored in part by the Union of American Hebrew Congregations--part of the Reform-Jewish movement--spirituality was added as a category to be studied, and statements were developed to elicit related responses. Addition of this category for study might prove useful to the administration of Greene Family Camp as well as to the Reform movement in general.

The instrument design is shown in the Appendix. An introductory statement was developed to assure respondents of the anonymity of their stated opinions, and to ensure serious consideration on their part in completing the survey. Thirty statements were then selected; each followed by a 0-to-5 Likert scale so that respondents might judge their answers in terms of a continuum meaningful to them. The focus was such that campers were asked to describe their self-perceived changes over the course of the camp session relative to the statements listed in the instrument. Statements were designed to fit into one of the five categories described in Chapter I (see Table 1).

Table 1

Instrument-Items

Sociability/cooperation--
--I make friends more easily now.
--Working with others seems easier now.
--Helping others seems more important now.
--I had fun with people.
--I get along better with others now than before.
--Giving makes me happier than getting something now.

Self-reliance/independence--
--I am more relaxed when I am alone now.
--I am less nervous at night now.
--I think I understand myself better now.
--I have more self-confidence now than before.
--I conquered some old fears this summer.

Achievement--
--I developed new skills.
--I feel stronger physically.
--I learned new things this summer.
--I feel healthier now.
--I do some things better now than before.
--I did things I never thought I could do.

Environmental awareness/appreciation--
--I enjoy being outdoors more now.
--I have more respect for Nature now.
--I learned more about Nature this summer.
--I hear more things when I'm outdoors now.
--I see more things outdoors now.
--I feel more of a need to protect the environment now.
--I am less scared of insects now.

Spirituality/religiosity
--I understand more about religion now.
--I believe more strongly in God now.
--I enjoy worship services more now than before.
--I believe more in some sort of afterlife now.
--I believe more strongly in Judaism now.
--I think about God more often now.

Following the 30 statements comprising the first segment of the instrument, five other groups of questions were asked of the respondents. These included requests for information regarding each respondent's previous camp attendance, previous outdoor camping experience, size of the respondent's hometown, age group, and gender.

Because of the process by which the instrument was developed, there are some noteworthy limitations inherent in this study. First, due to lack of a pretest-postest design, the results are only for the population surveyed. Its validity is only of face value. Second, the reliability of the instrument is untested since this was the first time it has been administered.

Methods of Data Collection

The survey was administered during the last week of each of the camp's two respective sessions. The survey was administered by each child's respective cabin counselor, with instruments completed at each child's cabin during two one-hour rest periods during two of the last days at camp. All surveys were administered and collected during the same two-day period each session. By implementing the survey in this manner, results obtained would reflect attitudes taken at the same time relative to each respondent's time at

camp. Having been exposed to the same amount of programmatic content during the same time frame, results might be considered more consistent in terms of attitudinal influence on each respondent. By having each child's regular counselor administering the survey, it was believed that the atmosphere would ideally be more comfortable than having a camp figurehead or other less familiar person carry out the job.

Methods and Procedures of Data Analysis

Data gathered were analyzed first by taking frequency counts, mean and standard deviation values for the 30 first-segment statement-responses. After this was completed, frequency counts were taken for those questions comprising the second survey segment. Once these figures were calculated, cross tabulations were developed using the second-segment responses as independent variables and the thirty first-segment responses as dependent variables. This was implemented to discover what effect, if any, factors such as hometown size, previous camp attendance, previous camping experience, age, and gender had on first-segment statistics.

Factor analyses were next initiated using principal-components extraction coupled with varimax rotational patterning. Similar analyses were then made using

principal-axis factor extraction coupled with oblique rotation. These methods were chosen because, ideally, results could be double-checked with both systems of analysis. Such factor analyses are often utilized to collapse a large data set into smaller, more meaningful patterns of responses. Principal-components analysis, principal-axis factoring, varimax rotation and oblique rotation are all accepted methods of calculating such relationships among variables in a data set, and have been found to work well in the combinations outlined above. However, the latter method--principal-axis factoring with oblique rotation--is known to yield results which may be potentially more genuine, as oblique rotation follows no predetermined pattern of factor-formulation. If results from each of these two processes elicited similar results, information gathered might be considered to be more valid within the context of the instrument used and population studied. The findings of the aforementioned calculations are examined and discussed in detail in Chapter IV.

CHAPTER IV

DATA ANALYSIS AND FINDINGS

This chapter presents the results of data analysis and explanations of these results. The analysis will be examined in sections reviewing procedures utilized and findings elicited from data collected. The first section will cover initial tabulations of raw data; frequencies, means, and standard deviation values for each instrument item, and the number of valid cases for each. The second section will review cross-tabulations of responses from each of the instrument's two major segments. Second-segment demographic questions were used as independent variables; the first segment's 30 variables were analyzed as dependent upon them.

The third section of this chapter examines factor analyses implemented and findings obtained. Factor analyses were implemented on an open arrangement without predetermined factor structure. The researcher then applied five-, four-, three-, and two-factor arrangements to similar statistical patterning. The next step in the analysis of data was to remove the spirituality factor, which was so dominant as to potentially obliterate other findings.

This chapter's fourth section will review these other analyses, which were implemented using predetermined four-, three-, and two-factor arrangements, respectively. Procedures used and findings obtained are discussed relative to the removal of the spirituality factor, and relative also to correlations which were made more clear in the absence of this factor.

Frequencies, Means, and Standard Deviations of Responses

Data analysis began with calculation of frequencies, means, and standard deviation values for the instrument's second-segment, demographics-oriented responses. Table 2 shows the findings obtained. Included were numbers of responses for respective questions. It should be noted that, of 230 instruments returned, eight were rejected by the researcher. Some were too messy to read accurately, and others contained responses which were obviously patterned at the whim of the respective child. The researcher deemed these instruments invalid, and they were omitted from the analyses undertaken.

As can be seen in the table, almost 90% of the children responding had previous summer camp experience. Very few children were first-timers to the camp environment. It is worthwhile to note, however, the lack

Table 2

Demographic Characteristics of Sample Population

Item	n	Response Percentages		Mean	SD
Previous camp attendance	221	(1) Yes.....	87.8%	1.122	.328
		(2) No.....	12.2%		
If yes, how many times	220	(1) Once.....	12.3%	2.936	1.825
		(2) Twice.....	15.0%		
		(3) Three.....	16.4%		
		(4) Four.....	13.6%		
		(5) Five or more.....	8.6%		
Ever camped outdoors?	221	Yes	83.3%	1.167	.374
		No	16.7%		
If yes, how many times?	220	(1) < 3.....	54.5%	1.641	.784
		(2) 4-7.....	27.3%		
		(3) > 7.....	17.7%		
How big is your hometown?	206	(1) < 50,000.....	10.7%	3.286	1.027
		(2) 50,000-100,000.....	10.2%		
		(3) 100,000-500,000.....	18.9%		
		(4) >500,000.....	60.2%		
What unit are you in?	222	(1) Niviim (8-9)...	21.6%	2.189	.767
		(2) Kohanim (10-12)	37.8%		
		(3) Melachim (13-14)	40.5%		
I am a (gender)	222	(1) Male.....	41.4%	1.586	.494
		(2) Female.....	58.6%		

of actual outdoor camping experience reported by the sample population. The table shows that over half of the respondents had been camping less than three times. Almost 17% had no previous outdoor camping experience.

Hometown size may have played a significant part in campers' lack of exposure to rustic existence. Over 60% of the young respondents had come to camp from major metropolitan areas of over 500,000 people. Little more than 20% of the children lived in towns as large as 100,000 people. Over 79% of the campers responding to the survey this summer were from cities which were greater than 100,000 in population.

With regard to age level of the respondents, 40% were in the oldest camp age group (ages 13 and 14). Over 37% of the sample population were from the middle age group (ages 10-to-12). Over 21% were 8 and 9-year-olds. It should also be noted that a majority of the campers were females; almost 60% of those responding to the survey.

The next tabulations made were frequencies, means, and standard deviation values for the instrument's thirty statement-variables. Table 3 shows the findings obtained. Statements are separated according to the proposed five-factor arrangement selected a priori by the researcher. Included are mean scores for respective personality

Table 3

Mean and Standard Deviation Values for Instrument-Item Responses

Statement/Variable--Sociability/Cooperation	n	Mean	SD
1. I make friends more easily now.	222	2.39	1.506
7. Working with others seems easier now.	222	2.52	1.548
12. Helping others seems easier now.	218	2.29	1.695
17. I had fun with people.	219	2.10	1.839
22. I get along better with others now than before.	221	2.39	1.521
27. Giving makes me happier than getting now.	221	2.15	1.712
Mean and Standard Deviation for Factor:		2.31	1.964
Statement/Variable--Environmental Awareness			
2. I enjoy being outdoors more now.	222	2.21	1.425
8. I have more respect for Nature now.	219	2.07	1.558
13. I learned more about Nature this summer.	219	2.00	1.493
18. I hear more things when I'm outdoors now.	216	2.15	1.593
23. I see more things outdoors now.	217	2.08	1.745
28. I feel more need to protect the environment now.	218	2.27	1.641
29. I am less scared of insects now.	221	1.70	1.421
Mean and Standard Deviation for Factor:		2.07	1.515
Statement/Variable--Achievement			
3. I developed new skills	221	2.58	1.584
4. I feel stronger physically	220	2.33	1.524
9. I learned new things this summer.	220	2.73	1.769
14. I feel healthier now.	220	2.20	1.500
19. I do some things better now than before.	216	2.62	1.580
24. I did things I never thought I could do.	218	2.18	1.533
Mean and Standard Deviation for Factor:		2.44	1.581

Table 3 (continued)

Statement/Variable--Independence/Self-Reliance			
5. I am more relaxed when I am alone now.	221	1.84	1.424
10. I am less nervous at night now.	220	1.63	1.330
15. I think I understand myself better now.	220	2.03	1.511
20. I have more self-confidence now than before.	214	2.50	1.649
25. I conquered some old fears this summer.	221	1.96	1.470
Mean and Standard Deviation for Factor:		1.99	1.476
Statement/Variable--Spirituality/Religiosity			
6. I understand more about religion now.	222	2.44	1.638
11. I believe more strongly in God now.	219	2.09	1.580
16. I enjoy worship services more now than before.	220	2.05	1.578
21. I believe more in some sort of afterlife now.	216	1.90	1.404
26. I believe more strongly in Judaism now.	219	2.16	1.552
30. I think about God more often now.	219	2.07	1.700
Mean and Standard Deviation for Factor:		2.12	1.575

categories as well as per-response standard deviation values within each factor area.

As can be seen in Table 3, statements from the achievement group yielded the highest mean scores in the survey, followed by sociability-related items. Environmental, spiritual, and independence variables, respectively, showed slightly lower means when grouped together.

With regard to variance within each category, the standard deviation scores of the sociability variables averaged 1.964 within the group. The other four factors showed mean-average standard deviations of between 1.476 and 1.581.

Cross-Tabulations of Data from Both Instrument Segments

Cross-tabulations were implemented to determine what effect, if any, the demographics responses--hometown size, age, gender, previous camp attendance, and previous camping experience--had on the responses to statements comprising the instrument's five personality factor areas. Demographics questions were used as independent variables; the 30 opening statements as dependent variables. Results from this calculation yielded no significant indication that demographic factors in any way influenced responses to

the statements in the instrument's first segment. The researcher decided that the second-section response-items be deleted from further analyses in the study; factor extraction and rotation of factor matrices.

Initial Factor Analyses

This section first examines the initial factor extractions elicited by the University's SPSS-X statistical package in conjunction with the school's M.U.S.I.C. programming facility. In an effort to eliminate any statistical bias regarding the analyses performed, the first factor analysis was implemented without predetermination of personality factor-allocations. Data were processed and answers gathered were free of subjective allotment to proposed areas.

Initial factor analysis was performed on responses to the thirty statement-variables using principal-components analysis coupled with varimax rotation of factors extracted. Table 4 shows the results of this series of calculations.

Included in Table 4 are variable numbers, respective eigenvalues, percentages of variance, and the tabulation of cumulative percentages of variance for the thirty items. Using a criterion that eigenvalues for each factor selected equal 1.0 or greater, principal-components analysis

Table 4

Respective Eigenvalues, Percentages of Variance, and Cumulative Percentages for Instrument Items

Variable	Eigenvalue	Percentage of Variance	Cumulative Percentage
1	5.87885	19.6	19.6
2	1.88931	6.3	25.9
3	1.62147	5.4	31.3
4	1.53389	5.1	36.4
5	1.42656	4.8	41.2
6	1.31041	4.4	45.5
7	1.16317	3.9	49.4
8	1.11547	3.7	53.1
9	1.08920	3.6	56.8
10	1.00681	3.4	60.1
11	.96289	3.2	63.3
12	.92036	3.1	66.4
13	.89730	3.0	69.4
14	.80867	2.7	72.1
15	.77660	2.6	74.7
16	.73611	2.5	77.1
17	.69652	2.3	79.4
18	.66462	2.2	81.7
19	.62628	2.1	83.7
20	.57814	1.9	85.7
21	.56369	1.9	87.6
22	.55286	1.8	89.4
23	.50992	1.7	91.1
24	.48290	1.6	92.7
25	.43837	1.5	94.2
26	.41356	1.4	95.5
27	.37341	1.2	96.8
28	.35233	1.2	98.0
29	.32165	1.1	99.0
30	.28869	1.0	100.0

produced ten factors. These accounted for 60.1% of the total sample variance, with the first of these accumulating almost one-third of this measure. Factors 2 through 6 each accounted for 4% or more of the sample variance, and totaled almost 30% of the data variance among them. Though principal-components analysis yielded 10 factors, varimax rotation failed to converge in SPSS-X's predetermined 25 iterations. It was then decided that further compression of the data set might yield more tangible results. It was arbitrarily decided that a factor must account for 4% or greater of the variance for further inclusion in the study. With this criteria, six factors were identified for further study.

The six factors selected, shown in Table 4, were then analyzed using two processes. The first of these was principal-components analysis to extract the factors, coupled with varimax rotation of factors extracted. The second step was one of confirmation, utilizing a principal-axis factor extraction coupled with oblique rotation of factors extracted. These two processes proved equally unsuccessful in isolating cohesive factor structures along the lines proposed by the researcher. Neither varimax rotation of principal-components-extracted factors nor oblique rotation of principal-axis-extracted factors

yielded results which might bring meaning to the findings. It was at this point that the researcher decided the two-edged analysis be continued with five-, four-, three-, and, if necessary, two-factor arrangements of data sets. Data would be analyzed using this progressive compression of factor structures until more meaningful findings were gathered. Also, by checking the results of principal-axis/oblique rotation, information obtained might be considered more valid within the study itself.

Five-factor arrangement of the data set yielded results which were jumbled with respect to the researcher's five predetermined areas of personality which were to be studied. A four-factor analysis was performed next. Principal-components analysis extracted four factors which were dominated by the first set of factor loadings. Table 5 presents these factors.

As seen in Table 5, the first factor contained a variety of all variables, with factors 2, 3, and 4, respectively, each containing only a few variables with moderate correlation among them. The table includes communality and eigenvalues, as well as respective percentages of total sample variance for each factor extracted. When varimax rotation of the variables was performed, a more cohesive factor structure was obtained.

Table 5

Results of Four-Factor Principal-Components Analysis

Variable/Statement	Factors 1	2	3	4
1. I make friends more easily now.	.45	-.26	-.28	-.16
2. I enjoy being outdoors more now.	.46	.05	.19	-.44
3. I developed new skills .	.41	.22	.08	.52
4. I feel stronger physically.	.27	.15	.26	-.52
5. I am more relaxed when I am alone now.	.38	.18	.14	.02
6. I understand more about religion now.	.44	-.39	.37	-.04
7. Working with others seems easier now.	.48	-.06	-.41	-.22
8. I have more respect for Nature now.	.53	.00	-.19	-.30
9. I learned new things this summer.	.32	.50	-.10	.28
10. I am less nervous at night now.	.43	.26	-.02	.06
11. I believe more strongly in God now.	.54	-.36	-.10	-.05
12. Helping others seems more important now.	.56	.28	.27	-.10
13. I learned more about Nature this summer.	.42	.20	-.37	.17
14. I feel healthier now.	.55	-.04	-.04	-.25
15. I think I understand myself better now.	.39	-.09	.17	.34
16. I enjoy worship services more now than before.	.40	-.29	.27	.10
17. I had fun with people.	.11	.48	.26	-.05
18. I hear more things when I'm outdoors now.	.47	-.01	-.16	-.03
19. I do some things better now than before.	.50	.34	.19	.10
20. I have more self-confidence now than before.	.54	-.02	.18	.25
21. I believe more in some sort of afterlife now.	.44	-.40	.02	.23
22. I get along better with others now than before.	.41	.29	-.25	.01
23. I see more things outdoors now.	.43	.05	.20	-.03
24. I did things I never thought I could do.	.35	.42	-.11	-.23
25. O conquered some old fears this summer.	.47	-.05	-.18	-.12
26. I believe more strongly in Judaism now.	.48	-.20	.37	-.14
27. Giving makes me happier than getting now.	.43	-.08	-.51	.09
28. I feel more need to protect the environment now.	.49	-.25	-.15	.09
29. I am less scared of insects now.	.24	-.12	.03	.19
30. I think about God more often now.	.59	-.10	.09	.23
Respective Eigenvalues of Factors:	5.88	1.89	1.62	1.53
Respective Communalities for Factors:	.372	.440	.498	.434
Respective Percentages of Variance:	19.6	6.3	5.4	5.1

Table 6

Results of Four-Factor Varimax Rotation of Factors Extracted

Statement/Variable	Factors 1	2	3	4
1. I make friends more easily now.	.56	.19	-.08	.12
2. I enjoy being outdoors more now.	.22	.11	.09	.61
3. I developed new skills.	.01	.39	.56	-.18
4. I feel stronger physically.	.05	-.06	.06	.65
5. I am more relaxed when I am alone now.	.07	.19	.32	.22
6. I understand more about religion now.	.06	.60	-.12	.33
7. Working with others seems easier now.	.65	.03	.07	.14
8. I have more respect for Nature now.	.52	.08	.13	.33
9. I learned new things this summer.	.10	.01	.65	-.08
10. I am less nervous at night now.	.20	.12	.43	.14
11. I believe more strongly in God now.	.47	.43	-.07	.15
12. Helping others seems more important now.	.09	.24	.45	.45
13. I learned more about Nature this summer.	.45	.05	.40	-.14
14. I feel healthier now.	.41	.20	.12	.37
15. I think I understand myself better now.	.04	.50	.23	-.05
16. I enjoy worship services more now than before.	.06	.54	-.02	.17
17. I had fun with people.	-.21	-.11	.43	.26
18. I hear more things when I'm outdoors now.	.40	.19	.19	.12
19. I do some things better now than before.	.06	.23	.55	.25
20. I have more self-confidence now than before.	.12	.51	.32	.10
21. I believe more in some sort of afterlife now.	.26	.58	-.04	-.05
22. I get along better with others now than before.	.37	-.02	.42	.05
23. I see more things outdoors now.	.10	.29	.23	.28
24. I did things I never thought I could do.	.26	-.18	.41	.30
25. I conquered some old fears this summer.	.44	.16	.12	.18
26. I believe more strongly in Judaism now.	.08	.47	.01	.45
27. Giving makes me happier than getting now.	.63	.10	.15	-.17
28. I feel more need to protect the environment now.	.42	.39	.04	.01
29. I am less scared of insects now.	.10	.30	.08	-.06
30. I think about God more often now.	.24	.53	.27	.07

The results are shown in Table 6. Findings delineated in the table represent selected loadings of ± .45 or greater, and were obtained in nine iterations of varimax.

Factor 1 is comprised of three sociability items, two from environmental awareness, and one spirituality-related item. Factor 2 is more consistent, with five spirituality statements and two relating to independence/self-reliance. Factor 3 contained three achievement variables and one sociability item in its loading structure. Factor 4 was comprised of a mixture of statements from the environmental, achievement, sociability, and spirituality areas.

The rotated factor matrix had yielded loadings whose ± .45 or greater values seemed valid in and of themselves, yet lacked sufficient cohesiveness within the factor structure proposed by the researcher. It was deemed necessary by the researcher to implement analysis of data using principal-axis factoring with oblique rotation. When principal-axis factoring was applied to the four-factor arrangement, clusters approximating those from the principal-components analysis emerged. These converged in seven iterations of principal-axis pattern-seeking. However, when oblique rotation was implemented on factors extracted, no convergence of factors occurred. Thus, the

findings of the four-factor analysis delineated by principal-components/varimax calculations were unconfirmed.

Three-factor analyses were next attempted, and this time principal-components analysis extracted factors which, though they mixed, did provide more meaningful results when varimax rotation was completed. Table 7 shows the findings obtained from these calculations.

As seen in the table, Factor 1 is comprised of six spirituality items--the full complement of such variables from the instrument. Also included was statement 20, relating to one's self-confidence. Factor 2 contained four items related to sociability, four from environmental awareness, one from the spirituality area, and one independence-related item.

Factor loadings for the third grouping included four achievement items, one statement relating to independence, and two sociability variables. All items selected for factor structures loaded at $\pm$ .40 or higher, and converged in 10 iterations. Eigenvalues, as well as respective communalities and percentages of variance for each factor are noted in the table.

One important aspect of the data presented here was that Factor I accounted for some 19.6% of the total sample variance; some three times more than either of the

Table 7

Results of Varimax Rotation of Factors Extracted from Principal-Components Analysis

Variable/Statement	Factors 1	2	3
1. I make friends more easily now.	.27	.52	-.06
2. I enjoy being outdoors more now.	.36	.12	.32
3. I developed new skills.	.18	.15	.41
4. I feel stronger physically.	-.22	-.07	.33
5. I am more relaxed when I am alone now.	.22	.09	.37
6. I understand more about religion now.	.70	.01	.00
7. Working with others seems easier now.	.11	.62	.09
8. I have more respect for Nature now.	.22	.46	.22
9. I learned new things this summer.	-.13	.21	.55
10. I am less nervous at night now.	.11	.23	.43
11. I believe more strongly in God now.	.48	.44	-.04
12. Helping others seems more important now.	.34	.08	.58
13. I learned more about Nature this summer.	-.06	.52	.28
14. I feel healthier now.	.34	.36	.24
15. I think I understand myself better now.	.38	.11	.17
16. I enjoy worship services more now than before.	.56	.06	.03
17. I had fun with people.	-.06	-.20	.52
18. I hear more things when I'm outdoors now.	.21	.41	.19
19. I do some things better now than before.	.22	.11	.59
20. I have more self-confidence now than before.	.45	.18	.30
21. I believe more in some sort of afterlife now.	.50	.29	-.09
22. I get along better with others now than before.	-.05	.40	.39
23. I see more things outdoors now.	.35	.09	.31
24. I did things I never thought I could do.	-.08	.24	.49
25. I conquered some old fears this summer.	.22	.42	.15
26. I believe more strongly in Judaism now.	.61	.02	.17
27. Giving makes me happier than getting now.	.02	.67	.03
28. I feel more need to protect the environment now.	.36	.44	.01
29. I am less scared of insects now.	.24	.13	.03
30. I think about God more often now.	.47	.29	.25
Respective Eigenvalues for Factors:	5.88	1.89	1.62
Communalities for Each Factor:	.346	.247	.225
Respective percentages of variance:	19.6	6.3	5.4

remaining two factor groupings. This factor also contained the most cohesive loadings with regard to the researcher's proposed categorization scheme. Factor 2, though somewhat mixed, was still well-represented by the sociability and environmental variables. Factor 3 was dominated by achievement items, though some from independence and sociability had clustered with them. The researcher decided that, after observing these groupings, principal-axis factoring with oblique rotation should be implemented to confirm these results.

Results of principal-axis factoring were clouded, with a host of personality areas represented in the first factor's loadings. Factors 2 and 3 garnered only one variable each, showing very weak correlations throughout. No apparent congruence within factor structures was observed, but oblique rotation had not yet been implemented.

Table 8 examines reported factor structures after oblique rotation of principal-axis-extracted factors. Converging in 16 iterations, the loadings selected for each factor, $\pm$ .35 or greater, appeared almost as clear as those elicited by principal-components/varimax analysis.

As can been seen in the table, Factor 1 is comprised of the same six spirituality items, as well as the

Table 8

Results of Oblique Rotation of Factors Extracted
Through Principal-Axis Factoring

Variable/Statement	Factor 1	Factor 2	Factor 3
1. I make friends more easily now.	.18	-.13	-.44
2. I enjoy being outdoors more now.	.29	.20	-.08
3. I developed new skills.	.15	.31	-.09
4. I feel stronger physically.	.18	.22	.05
5. I am more relaxed when I am alone now.	.18	.26	-.05
6. I understand more about religion now.	.67	-.09	.10
7. Working with others seems easier now.	.02	-.01	-.55
8. I have more respect for Nature now.	.15	.10	-.38
9. I learned new things this summer.	-.13	.45	-.17
10. I am less nervous at night now.	.08	.31	-.19
11. I believe more strongly in God now.	.40	-.15	-.35
12. Helping others seems more important now.	.30	.47	.00
13. I learned more about Nature this summer.	-.09	.19	-.44
14. I feel healthier now.	.26	.12	-.28
15. I think I understand myself better now.	.31	.10	-.05
16. I enjoy worship services more now than before.	.47	-.03	.00
17. I had fun with people.	-.03	.42	.15
18. I hear more things when I'm outdoors now.	.16	.10	-.31
19. I do things better now than before.	.19	.48	-.04
20. I have more self-confidence now than before.	.38	.21	-.08
21. I believe more in some sort of afterlife now.	.42	-.15	-.19
22. I get along better with others now than before.	-.08	.28	-.34
23. I see more things outdoors now.	.28	.20	-.05
24. I did things I never thought I could do.	-.09	.37	-.22
25. I conquered some old fears this summer.	.17	.06	-.33
26. I believe more strongly in Judaism now.	.55	.08	-.60
27. Giving makes me happier than getting now.	-.05	-.05	-.06
28. I feel more need to protect the environment now.	.30	-.07	-.32
29. I am less scared of insects now.	.19	.00	-.08
30. I think about God more often now.	.47	.14	-.17
Respective Eigenvalues for Factors:	5.14	1.15	.90
Communality Values for Factors:	.262	.192	.180
Respective Percentage of Variance:	17.1	3.8	3.0

identical independence/self-reliance statement. All six of the spirituality-oriented loadings were .40 or higher in correlation with one another. Factor 2 was comprised of three variables relating to achievement; similar to the second factor reported after varimax rotation of factors extracted through principal-components analysis. Also appearing in this cluster of loadings were two sociability items. Factor 3 contained three sociability-oriented statements, two from the environmental awareness category, and one from the spiritual statements on the instrument.

Eigenvalues for the three factors were once again overshadowed by the 5.14 measure shown for the first factor. Significantly lower degrees of variance are shown by the second and the third factors presented in the table. Communality values for the three factors are similarly represented, with the first factor's communality a bit higher than the others. Still, some relationships were demonstrated in the factor structures, with spirituality appearing distinctly in the first factor, achievement/ sociability items in the second, and sociability and environmental items in the third grouping.

Though three-factor analyses yielded some meaningful results, the researcher determined that a two-factor analysis, further consolidating the data set, might bring

other useful information. This analysis, however, provided a very cloudy series of factor groupings of those demonstrated by statistical evidence observed to that point. It was determined that, as the spirituality-related items had so dominated the findings gathered, these variables should be removed from the data set. Further analysis on the remaining variables might thus be relieved from such statistical bias. Four-, three-, and two-factor analyses would next be completed on remaining variables. Further evidence might then demonstrate the existence of the other proposed personality factors. The findings of principal-components analysis from this four-factor perspective are reported in Table 9.

Analyses Undertaken Without Spirituality-Oriented Items

Table 9 shows that, once again, principal-components extractions yielded a first factor comprised of a mixture of the four remaining statement-categories. Factor loadings for the second group of variables displayed a strong correlation among sociability items. Only one other variable--one statement from the achievement category--was of a loading value high enough to be included in this factor grouping. Factor 3 was less clear, with one item from environmental awareness and two items from the

Table 9

Results of Four-Factor Principal-Components Analysis
(Spirituality-related Items Removed)

Variable/Statement	Factor 1	2	3	4
1. I make friends more easily now.	.41	-.45	-.07	-.29
2. I enjoy being outdoors more now.	.47	.02	-.50	-.06
3. I developed new skills.	.44	.31	.49	-.05
4. I feel stronger physically.	.27	.21	-.63	.04
5. I am more relaxed when I am alone now.	.39	.19	.02	-.48
7. Working with others seems easier now.	.51	-.37	-.07	.05
8. I have more respect for Nature now.	.55	-.16	-.21	.11
9. I learned new things this summer.	.41	.33	.28	.01
10. I am less nervous at night now.	.43	.12	.08	.06
12. Helping others seems more important now.	.59	.35	-.17	-.04
13. I learned more about Nature this summer.	.46	-.12	.22	.37
14. I feel healthier now.	.54	-.13	-.29	-.27
15. I think I understand myself better now.	.38	.10	.31	-.36
17. I had fun with people.	.18	.54	-.08	.42
18. I hear more when I'm outdoors now.	.49	-.18	.08	-.21
19. I do some things better now than before.	.55	.35	.07	.07
20. I have more self-confidence now than before.	.47	.05	.13	-.31
22. I get along better with others now than before.	.46	-.01	.01	-.22
23. I see more things outdoors now.	.40	.09	-.00	.08
24. I did things I never thought I could do.	.44	.10	-.13	.16
25. I conquered some old fears this summer.	.48	-.22	-.02	.19
27. Giving makes me happier than getting something now.	.43	-.46	.23	.16
28. I feel more of a need to protect the environment now.	.44	-.28	.12	.25
29. I am less scared of insects now.	.21	-.05	.19	.49
Eigenvalues for respective factors:	4.74	1.64	1.43	1.37
Communalities of respective factors:	.457	.473	.528	.514
Percentage of variance for each factor:	19.8	6.8	6.0	5.7%

achievement group represented. Factor 4 was divided among environmental, sociability, and independence variables. Variables shown in Table 9 factor-clusters represent a selection criteria of $\pm$ .35 or greater. Once again, eigenvalues, communalities, and respective percentages of sample variance are listed for each factor.

One interesting note in Table 9 was that, once spirituality variables were removed, first-factor dominance was reduced relative to the other factors. Accumulated variance garnered by the first factor, for example, dropped relative to other factors. Communalities were also higher, and more consistent throughout. This might be due to the proliferation of influence spirituality items had on sample population responses. With this influence now removed, a more congruent set of factor loadings seemed now to emerge.

Varimax rotation was implemented on these factors, and more information was gained upon examination of their structures. The rotated factor matrix, converging in nine iterations is shown in Table 10.

As can be seen in Table 10, Factor 1 is split by achievement and independence items, with two sociability statements added to the loadings. Factor 2 displayed a marked congruence among environmental variables, with two sociability and one independence item represented as well.

Table 10

Results of Varimax Rotation of Factors Extracted from Principal-Components Analysis (Spirituality-related Items Removed)

Variable/Statement	Factor 1	2	3	4
1. I make friends more easily now.	.09	.20	.18	.61
2. I enjoy being outdoors more now.	.08	.05	.66	.16
3. I developed new skills.	.68	.21	-.10	-.10
4. I feel stronger physically.	-.05	.10	.70	-.09
5. I am more relaxed when I'm alone now.	.52	-.19	.21	.27
7. Working with others seems easier now.	.07	.44	.27	.36
8. I have more respect for Nature now.	.11	.38	.44	.18
9. I learned new things this summer.	.55	.16	.05	-.15
10. I am less nervous at night now.	.34	.24	.19	-.02
12. Helping others seems more important now.	.48	.09	.52	-.07
13. I learned more about Nature this summer.	.19	.60	.06	-.04
14. I feel healthier now.	.14	.25	.50	.25
15. I think I understand myself better now.	.57	.00	-.05	.24
17. I had fun with people.	.19	.12	.28	-.61
18. I hear more things when I'm outdoors now.	.32	.22	.15	.38
19. I do some things better now than before.	.52	.21	.30	-.17
20. I have more self-confidence now than before.	.49	.06	.14	.27
22. I get along better with other now than before.	.37	.11	.22	.26
23. I see more things outdoors now.	.26	.23	.24	-.02
24. I did things I never thought I could do.	.20	.26	.37	-.07
25. I conquered some old fears this summer.	.11	.47	.24	.16
27. Giving makes me happier than getting now.	.08	.60	-.04	.33
28. I feel more need to protect environment now.	.09	.56	.10	.15
29. I am less scared of insects now.	.02	.52	-.03	-.23

Factor 3 was divided among three achievement-related statements, two relating to environmental awareness, and one from the sociability/cooperation group. Factor 4, though distinguished by its sociability items, was represented by only three of these, with a variable concerning the environment emerging as well.

As one examines Table 10, a link appears to exist between achievement and independence variables emerging in the first factor. Factor 2 seemed to contain a logical grouping of environmentally-related statements. Still, other statements had fallen into these factor structures during varimax rotation. The researcher decided to attempt confirmation of these results through principal-axis factoring and oblique rotation of factors extracted. Table 11 shows the results of the first of these calculations.

As can be seen in Table 11, principal-axis factoring yielded, in ten iterations, four factors which were clouded somewhat by a familiar, inconsistent first factor. The second factor contained three sociability items, with no other statements falling into this factor structure. Factor 3 contained one environmental and two achievement variables, respectively; again, with no other loadings emerging within the factor. The fourth factor was void of any loadings exceeding $\pm$ .35.

Table 11

Results of Four-Factor Principal-Axis Factoring

Variable/Statement	Factor 1	2	3	4
1. I make friends more easily now.	.38	-.35	-.04	-.22
2. I enjoy being outdoors more now.	.44	-.01	-.41	-.05
3. I developed new skills.	.42	.29	.41	-.07
4. I feel stronger physically.	.25	.15	-.40	.01
5. I am more relaxed when I'm alone now.	.36	.13	.02	-.31
7. Working with others seems easier now.	.48	-.28	-.04	.04
8. I have more respect for Nature now.	.51	-.12	-.14	.10
9. I learned new things this summer.	.37	.23	.16	.04
10. I am less nervous at night now.	.38	.06	.04	.04
12. Helping others seems more important now.	.57	.31	-.16	-.05
13. I learned more about Nature this summer.	.42	-.10	.16	.31
14. I feel healthier now.	.50	-.11	-.20	-.01
15. I think I understand myself better now.	.35	.08	.17	-.27
17. I had fun with people.	.17	.40	-.08	.32
18. I hear more things when I'm outdoors now.	.44	-.13	.06	-.13
19. I do some things better now than before.	.52	.27	.05	.05
20. I have more self-confidence now than before.	.43	.04	.08	-.22
22. I get along better with others now than before.	.41	-.02	.02	-.08
23. I see more things outdoors now.	.36	.04	-.01	.06
24. I did things I never thought I could do.	.39	.05	-.07	.09
25. I conquered some old fears this summer.	.44	-.15	.02	.11
27. Giving makes me happier than getting now.	.40	-.37	.19	.14
28. I feel more need to protect the environment now.	.40	-.18	.08	.12
29. I am less scared of insects now.	.19	-.02	.11	.22
Eigenvalues of respective factors:	4.03	.96	.75	.61
Communality of respective factors:	.315	.360	.436	.243
Respective percentages of variance:	16.8	4.0	3.1	2.6

When oblique rotation of factors was completed, however, results showed a similar pattern to that of the previous four-factor calculations. Table 12 shows the findings obtained. The table shows Factor 1 contains three variables pertaining to environmental awareness, two concerning sociability, and one independence item. Factor 2 was more consistent, with two sociability statements, yet no other variables loaded at the $\pm$ .35 level required for factor selection. Factor 3 yielded a mixture of two nature-related items, one from achievement and one sociability variable. Factor 4 was comprised of three achievement- and three independence-related variables, respectively, and one from the sociability category.

When one compares the rotated factor matrices elicited by the two processes utilized, marked similarities are observed. Factor 1 in the principal-components/varimax analysis is quite similar in makeup to Factor 4 in the principal-axis/oblique rotation results. Both are comprised of statements 3, 5, 9, 12, 15, 19, and 20, and both have strong representation from the achievement and independence groups selected by the researcher before analysis was initiated.

Another similar pair is Factor 3 in Table 10 and Factor 3 in Table 12. Both factor structures included

Table 12

Results of Oblique Rotation of Factors Extracted from Principal-Axis Factoring

Variable/Statement	Factor 1	2	3	4
1. I make friends more easily now.	.22	-.41	-.14	-.14
2. I enjoy being outdoors more now.	.06	-.06	-.57	-.01
3. I developed new skills.	.09	.20	.25	-.63
4. I feel stronger physically.	-.09	.10	-.52	.04
5. I am more relaxed when I'm alone now.	-.14	-.09	-.12	-.48
7. Working with others seems easier now.	.42	-.20	-.17	-.03
8. I have more respect for Nature now.	.35	-.04	-.31	-.02
9. I learned new things this summer.	.11	.21	.01	-.36
10. I am less nervous at night now.	.19	.07	-.10	-.21
12. Helping others seems more important now.	.00	.20	-.40	-.37
13. I learned more about Nature this summer.	.55	.12	.03	-.01
14. I feel healthier now.	.24	-.10	-.36	-.08
15. I think I understand myself better now.	-.03	-.09	.05	-.50
17. I had fun with people.	.04	.50	-.18	-.01
18. I hear more things when I'm outdoors now.	.22	-.18	-.07	-.27
19. I do some things better now than before.	.13	.24	-.15	-.38
20. I have more self-confidence now than before.	.04	-.10	-.07	-.43
22. I get along better with others now than before.	.16	-.06	-.12	-.26
23. I see more things outdoors now.	.18	.07	-.13	-.14
24. I did things I never thought I could do.	.21	.09	-.21	-.10
25. I conquered some old fears this summer.	.39	-.04	-.11	-.05
27. Giving makes me happier than getting now.	.59	-.19	.11	.00
28. I feel more need to protect the environment now.	.42	-.05	-.04	-.05
29. I am less scared of insects now.	.30	.13	.05	.02

variables 2, 4, 12, and 14 in their selected loadings. Factor 3 in Table 10 included variables 8 and 24, one nature item and one achievement statement.

Factor 2 in Table 10 bears some resemblance to Factor 1 in Table 12, with six common variables between them. Included in these are statements 7, 8, 13, 25, 27, and 28. This group links areas of sociability and environmental awareness, as well as portions of achievement and independence areas.

There was even some similarity between Factor 4 in Table 10 and Factor 2 in Table 12. Both included sociability items 1 and 17. Findings of principal-components' varimax calculations had, to some degree, confirmed results from principal-axis/oblique rotation analysis. It was determined that results from four-factor analysis were potentially good indicators of proposed factor structures, but three-factor analysis should still be initiated. Table 13 shows the results of the three-factor principal-components analysis after the spirituality variables had been removed from the data set.

As can be seen in Table 13, Factor 1 showed the same conglomeration of statements as previously calculations had shown. Factor 2, however, yielded very strong correlations among sociability items, with five of the instrument's six

Table 13

Results of Three-Factor Principal-Components Analysis
(Spirituality-related Items Removed)

Variable/Statement	Factor 1	Factor 2	Factor 3
1. I make friends more easily now.	.41	-.45	-.07
2. I enjoy being outdoors more now.	.47	.02	-.50
3. I developed new skills.	.44	.31	.49
4. I feel stronger physically.	.27	.21	-.63
5. I am more relaxed when I am alone now.	.39	.19	.02
7. Working with others seems easier now.	.51	-.37	-.07
8. I have more respect for Nature now.	.55	-.16	-.21
9. I learned new things this summer.	.41	.33	.28
10. I am less nervous at night now.	.43	.12	.08
12. Helping others seems more important now.	.59	.35	-.17
13. I learned more about Nature this summer.	.46	-.12	.22
14. I feel healthier now.	.54	-.13	-.29
15. I think I understand myself better now.	.38	.11	.31
17. I had fun with people.	.18	.54	-.08
18. I hear more things when I'm outdoors now.	.49	-.18	.08
19. I do some things better now than before.	.55	.35	.07
20. I have more self-confidence now than before.	.47	.05	.13
22. I get along better with others now than before.	.47	-.01	.01
23. I see more things outdoors now.	.40	.09	-.00
24. I did things I never thought I could do.	.44	.10	-.13
25. I conquered some old fears this summer.	.48	-.22	-.02
27. Giving makes me happier than getting now.	.43	-.46	.23
28. I feel more need to protect the environment now.	.44	-.28	.12
29. I am less scared of insects now.	.21	-.05	.19
Eigenvalues of respective factors:	4.74	1.64	1.43
Communality within respective factors:	.375	.469	.526
Respective percentages of variance:	19.8	6.8	6.0

such items represented in this factor's loadings. Included was one achievement variable. Factor 3 was comprised of two achievement statements, and one item from environmental awareness. Table 13 also shows eigenvalues, communalities, and respective percentages of sample variance contained in the factors extracted. Factors selected were of loading values at a level of $\pm$ .35 or greater. From these factors, a rotated factor matrix was achieved using varimax rotation. Table 14 shows the findings from this calculation.

It is apparent in Table 14 that a persistent conglomeration of variables comprised the first factor, thought the factor was dominated by four environmental and three sociability variables. One achievement and one independence item, respectively, also yielded loadings sufficient to emerge in the factor structure; that is, $\pm$ .35 or greater. Factor 2 showed a correlation among sociability items, with two such statements emerging. However, items from the achievement and independence areas dominated the factor's loadings. Factor 3 contained two environmental items, three from achievement and one sociability variable. Sociability had once again been spread among the three factors. Still, environmental awareness had emerged to some extent in Factor 1.

Table 14

Results of Varimax Rotation or Factors Extracted
Through Principal-Components Analysis
(Spirituality-related Items Removed)

Variable/Statement	Factors 1	2	3
1. I make friends more easily now.	.59	-.05	.15
2. I enjoy being outdoors more now.	.20	.04	.65
3. I developed new skills.	.09	.71	-.11
4. I feel stronger physically.	-.08	-.04	.71
5. I am more relaxed when I am alone now.	.09	.36	.23
7. Working with others seems easier now.	.59	.07	.22
8. I have more respect for Nature now.	.43	.14	.40
9. I learned new things this summer.	.03	.59	.05
10. I am less nervous at night now.	.18	.38	.17
12. Helping others seems more important now.	.07	.48	.52
13. I learned more about Nature this summer.	.40	.33	.01
14. I feel healthier now.	.39	.11	.48
15. I think I understand myself better now.	.19	.46	-.05
17. I had fun with people.	-.32	.38	.29
18. I hear more things when I'm outdoors now.	.45	.24	.13
19. I do some things better now than before.	.08	.58	.30
20. I have more self-confidence now than before.	.26	.39	.13
22. I get along better with others now than before.	.29	.29	.22
23. I see more things outdoors now.	.17	.30	.22
24. I did things I never thought I could do.	.17	.26	.35
25. I conquered some old fears this summer.	.46	.16	.20
27. Giving makes me happier than getting now.	.65	.12	-.10
28. I feel more of a need to protect the environment.	.51	.17	.05
29. I am less scared of insects now.	.20	.20	-.07

Achievement and independence areas had emerged, it appeared, in Factor 2. Factor 3 accounted for a combination of the other two factors, with the powerful environmental and achievement items emerging. Statements comprising each factor emerged after five varimax iterations.

Having observed the statement-response groupings in this analysis, the researcher implemented principal-axis factoring in an attempt to confirm these results. Factor loadings yielded by this calculation are shown in Table 15.

As can be observed in Table 15, factors elicited by the rotated factor matrix reflect slightly lower loading values--$\pm$ .30 or greater--and were yielded in 11 iterations of principal-axis patterning. As seen in this table, Factor 1 again was comprised of a mixture of variables. Factor 2 was dominated by five items from the sociability/cooperation group, though loadings were almost exclusively in the .30 to .35 range. Factor 3 was once again represented by one item from the area of environmental awareness, and two more from achievement--numbers 2, 3, and 4, respectively.

Oblique rotation was next administered upon the factors extracted. Factors resulting from this calculation are shown in Table 16. The findings in this table are

Table 15

Results of Three-Factor Principal-Axis Factoring
(Spirituality-related Items Removed)

Variable/Statement	Factors 1	2	3
1. I make friends more easily now.	.37	-.32	-.02
2. I enjoy being outdoors more now.	.44	-.02	-.42
3. I developed new skills.	.42	.32	.41
4. I feel stronger physically.	.25	.13	-.40
5. I am more relaxed when I am alone now.	.35	.13	.01
7. Working with others seems easier now.	.48	-.29	-.02
8. I have more respect for Nature now.	.51	-.13	-.13
9. I learned new things this summer.	.37	.23	.15
10. I am less nervous at night now.	.38	.06	.04
12. Helping others seems more important now.	.57	.30	-.18
13. I learned more about Nature this summer.	.41	-.10	.15
14. I feel healthier now.	.51	-.12	-.19
15. I think I understand myself better now.	.34	.09	.15
17. I had fun with people.	.16	.34	-.08
18. I hear more things when I'm outdoors now.	.44	-.13	.08
19. I do some things better now than before.	.52	.28	.05
20. I have more self-confidence now than before.	.43	.05	.07
22. I get along better with others now than before.	.42	-.02	.03
23. I see more things outdoors now.	.36	.04	-.01
24. I did things I never thought I could do.	.39	.05	-.07
25. I conquered some old fears this summer.	.44	-.16	.03
27. Giving makes me happier than getting now.	.40	-.37	.21
28. I feel more need to protect the environment now.	.40	-.17	.09
29. I am less scared of insects now.	.19	-.02	.10
Eigenvalues for factors extracted:	4.01	.92	.74
Communalities for respective factors:	.243	.370	.447
Respective percentages of variance:	16.7	3.8	3.1

Table 16

Results of Oblique Rotation of Factors Extracted
Through Principal-Axis Factoring
(Spirituality-related Items Removed)

Variable/Statement	Factors 1	2	3
1. I make friends more easily now.	.51	-.11	-.08
2. I enjoy being outdoors more now.	.21	-.05	-.55
3. I developed new skills.	.01	.70	.24
4. I feel strong physically.	-.04	.00	-.50
5. I am more relaxed when I am alone now.	.08	.28	-.11
7. Working with others seems easier now.	.53	-.03	-.11
8. I have more respect for Nature now.	.39	.05	-.26
9. I learned new things this summer.	.02	.46	.01
10. I am less nervous at night now.	.17	.25	-.08
12. Helping others seems more important now.	.02	.42	-.39
13. I learned more about Nature this summer.	.35	.20	.04
14. I feel healthier now.	.37	.03	-.32
15. I think I understand myself better now.	.13	.32	.04
17. I had fun with people.	-.23	.32	-.18
18. I hear more things when I'm outdoors now.	.38	.14	-.03
19. I do some things better now than before.	.04	.51	-.15
20. I have more self-confidence now than before.	.20	.29	-.06
22. I get along better with others now than before.	.26	.20	-.09
23. I see more things outdoors now.	.16	.20	-.12
24. I did things I never thought I could do.	.17	.19	-.19
25. I conquered some old fears this summer.	.40	.09	-.07
27. Giving makes me happier than getting now.	.60	-.01	.15
28. I feel more need to protect the environment now.	.40	.09	.00
29. I am less scared of insects now.	.14	.13	.06

based upon 22 oblique iterations of the factor matrix, with selected loadings at ± .35 or higher. Factor 1 was comprised of three environment-oriented items, as well as three from the sociability group. Also included is one item each from the areas of achievement and independence. Factor 2 was made chiefly from achievement statements, with one sociability item loading here as well. Factor 3 was split among three statements--one from the environmental group, one from achievement, and one sociability item. The results from this table illustrate some similarity to those which were elicited from principal-components/varimax calculations. Both analyses demonstrate first-factor dominance of social and environmental aspects; even the same one-item additions from achievement- and independence-related areas. Factor 2 had fewer independence statements than those observed in the varimax-rotated factor matrix, but still displayed prominence of achievement variables from the survey instrument. Second-factor items in both Table 14 and 16 are almost identical, with items 3, 9, 12, and 19 selected to both tables' loadings. Factor 3 in both tables is also quite similar, with items 2, 4, and 12 representing common variables. Though factors 2 and 3 in Table 14 contain more items from the survey instrument, both tables depict similar aspects of variable groupings.

The researcher decided at this time to implement two-factor analysis of the data set. Principal-components analysis coupled with varimax rotation yielded cloudy results. Principal-axis factoring with oblique rotation of factors extracted yielded equally little. Oblique rotational patterning failed to merge factor loadings in SPSS-X's predetermined 24 iterations. The researcher decided to discontinue factor analysis at this point and begin a more subjective analysis of factor structures yielded by calculations undertaken thus far.

The results of the various calculations had shown the potential existence of environmental, sociability, and achievement/independence areas once the spirituality variables--already distinguishing themselves as a unit--had been removed. It was now time to analyze these findings in a more subjective manner. The ideas proposed by the researcher will be reviewed in Chapter V, with particular attention paid to factor loadings, and instrument-item patterns, and potential inferences which may be made from the results obtained will be asserted by the researcher.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

In Chapter IV, the results of statistical calculations were reported without subjective explanations on the researcher's part. This chapter will review briefly these findings, adding subjective discussion regarding the response patterns elicited from the sample population via the survey instrument. Also examined will be possible solutions to the research problem; that is, if personality areas are enhanceable through exposure to the programmatic content and activities which are "the summer camp experience."

This chapter is divided into three sections. The first section is a review of findings obtained in the study and discussion of relationships among instrument items. The second section will discuss how these findings demonstrate potential evidence for the researcher's hypothesis that certain aspects of personality are enhanceable through the summer camp experience. The third section of this chapter will discuss the study's inherent limitations as implemented by the researcher, and will present alternatives which may bring improvement to efforts of those attempting replication.

Summary and Explanations of Findings Obtained

In this section the researcher discusses findings from the study and possible explanations for them. Explanations are discussed regarding the characteristics of the sample population, and the effects of its exposure to four weeks of programmatic content and activity at Greene Family Camp.

The first step toward a deeper understanding of the findings is to examine the demographic profile of the sample population studied. Frequency counts taken yielded some interesting details as to the relationship between these characteristics and responses elicited by the survey instrument's attitudinal statement-items. Most of the camper population had attended camp before, averaging three years previous attendance. Most of these children, however, lacked much actual outdoor living experience in rustic camping situations. Over half had been camping less than three times. One reason for this may have been that over 80% of the campers surveyed were from cities of over 100,000 people. Thus, respondents may have had, on the whole, relatively little chance to either observe nature's processes or experience the challenges presented by a more rustic existence.

Results of cross tabulation between demographic data and responses to attitudinal items showed little or no

effect of such characteristics on first-segment responses. Such homogeneity of responses regardless of home-town size, previous camping experience, age, gender, or even previous camp attendance tend to reinforce the possibility of personality enhancement potential regardless of demographic background. Indeed, research discussed in Chapter II might lend credence to this notion. Studies done by others had yielded consistent results without regard to sociocultural characteristics of the population studied.

As one reviews the data gathered from the initial first-section frequency counts, one notices certain personality-area-items yielded higher per-response values than others. Chapter IV's Table 3 shows the statements from the achievement group yielded the highest mean scores. This may show the greatest degree of self-assessed change in the respondents. These items--relating to learning new things, doing things better, and developing new skills--yielded a group mean of 2.4 on the 5-point Likert scale used in the instrument. This might be taken as evidence of self-perceived enhancement in this personality area over the camp session.

Although reporting lower values than those in the achievement grouping, the mean score for sociability/ cooperation items was still over 2.3 on the Likert scale.

Items relating to making friends more easily, working with others, and getting along with others yielded significant response values. This area, too, might be considered as one enhanced by exposure to summer camp programming and to an intimate social environment so characteristic of Greene Family Camp. With campers in such close proximity all day long, learning to accept and enjoy the company of others is not only fun, but becomes a necessity if one is to enjoy oneself at camp.

Other personality-factor groupings showed lower mean scores, yet all were about 2.0 or greater on the scale. Among these, spirituality items averaged 2.12; environmental items, 2.07; independence statements, 1.99. All of these factors were to emerge in later factor analysis to at least a nominal degree.

Upon examining the results of initial factor analysis, the researcher implemented analysis based on a more-collapsed factor structure. Results of six-factor analysis yielded little meaning relative to the factor groupings proposed, and the five-factor analysis yielded little more. Although Table 5 showed some variables falling into place, the researcher had hoped four-factor analysis would yield results which would bring added reinforcement relative to the researcher's proposed groupings.

When four-factor analysis was performed using principal-components extraction, first-factor loadings continued to dominate the findings. However, when varimax rotation was implemented on factors extracted, more meaningful results were achieved for the first time. Factor 1 in Table 6 showed strong correlation among sociability items, with variables 1, 7, and 27 loading into this factor. Factor 2 displayed a marked congruence among the instrument's spirituality-oriented statements, with four of the five emerging area-items loading at values of .50 or greater. Factor 3 was dominated by items from the achievement and independence categories. One might consider an inherent link between achievement and independence, as these are attitudes which are very similar. Both concern ingestion of new experiences and doing new things, and both are feelings experienced when integration of a new phenomenon is perceived as benefitting the individual.

One should also notice the slight proliferation of spirituality, sociability and environmental variables in Table 6. These areas of personality, though considered as distinct in the initially-proposed factor structures, seemed to permeate other factor groupings. Areas such as spirituality and sociability are inherently broad-based,

more pervasive areas of personality, in that one's spiritual and social perceptions may well affect one's attitudes in many different types of daily encounters. These attitudes are very deep in their origin and may affect synthesis of new stimuli. One's perceptions of oneself relative to others, and of supernatural, spiritual aspects of life may well affect one's personality and how one reacts to stimuli encountered. Taken in this manner, items from sociability and spirituality areas might naturally cluster as was demonstrated in Table 6.

Environmental-oriented items may have yielded results which can be considered in a variety of ways. Some statements in this category were concerned more with observation of external phenomena; hearing more, seeing more, and learning more about Nature over the camp session. This group also included ideas which were concerned with internalization of attitudes derived through observation; feeling a greater need to protect the environment and enjoying time spent outdoors are examples. Thus, the results in Table 6 do reflect, to some degree, the double-edged nature of these statements. Factor 1 showed environmental items clustering with sociability variables. This may connote a similar aspect of the two groups; that is, that both items relate to the ingestion of external

stimuli and to one's ability to react positively to such stimuli. Factor 4 shows a coupling of variable 2 with achievement and independence items, which may arise from a feeling of enrichment or growth in terms of one's being able to enjoy the outdoors more than before attending the camp session. For some of the metropolitan-residing respondents, this greater enjoyment of outdoor life may well be considered an achievement, lending itself to a feeling of greater self-reliance and independence; perceiving an ability in oneself to positively adapt to a change in environment.

Three-factor analyses were performed next, and results of principal-components/varimax calculations were very similar to those yielded by principal-axis/oblique analysis. Tables 7 and 8 in Chapter IV showed very similar loadings relative to all three factor structures elicited. Factor 1 showed once again the very high correlation among spirituality statements, with one self-confidence item added. This is a logical co-variable when one considers that increased self-reliance may be derived from feeling closer to the spiritual/religious aspects of oneself.

Factor 2 in Table 7 and Factor 3 in Table 8 show close correlations among sociability items, with spirituality and environmental awareness statements joining the factor

structures in both tables. One should first consider that the sociability that one feels is affected by one's attitudes toward others as well as one's perceptions of how he is perceived by others. Internalization of informative stimuli is crucial here, as it is relative to spiritual and environmental aspects of the camp experience. Greene Family Camp's program attempts to bring spiritual and environmental attitudes in line with each other to reinforce the link between God--the Creator--and that which God created--people like ourselves and the natural phenomena which make up the physical environment at camp. Considered this way, one can understand more easily the co-existence of variables from these categories with socially-oriented instrument items.

Factor 3 in Table 7 bears close resemblance to Factor 2 in Table 8. Both show a certain congruence among achievement/independence variables as well as added loadings like "I had fun with people," and "Helping others seems more important now." It seems logical that one will have more fun with others if one is feeling more self-confident about oneself. Likewise, if one feels that he/she has the capability to help others--a feeling often derived from a recent accomplishment--it will become easier to feel comfortable lending a hand in a camp activity,

cabin cleanup, or other cooperative effort among bunkmates.

After such discernable results were achieved in three-factor analysis, and keeping in mind the strength of spirituality items, the researcher deleted spirituality-related items from further data analysis. An attempt was made to isolate more clearly the existence of factors from the other four proposed groupings. Chapter IV's Table 10 and Table 12 show marked similarity in matrices yielded by both extraction/rotation processes utilized.

As can be seen in these two tables, Factor 1 in Table 10 bears a strong resemblance to Factor 4 in Table 12. Both show strong correlations among independence and achievement variables, with almost identical factor loading-selections. Again, sociability items joined these factor structures; one such item in Table 10's fourth factor, and one in Factor 1 of Table 12. Now that the powerful spirituality variables had been removed, greater clarity among independence and achievement items was demonstrated. The sociability statements joining these factors--"helping others seems more important" and "getting along better with others"--seem logically related to the other two proposed factor groupings; at least when considered from the internal/external viewpoint described in the preceding several paragraphs.

Factor 2 in Table 10 bears some resemblance to Factor 1 in Table 12. Though not as strongly related as the two factors described above, environmental awareness and sociability items clustered similarly in the two tables. These statements have more inferrable similarity when considered from a perspective incorporating stimuli existing outside the organism. Getting along better with others, working better with others, having more respect for Nature, feeling more of a need to protect the environment, etc., are all made easier when one is exposed positively to others and to natural phenomena. Through the leadership of trained camp staff, and through well-planned, properly-implemented camp activities, children may gain a clearer understanding of themselves relative to others and relative to the natural environment in which they live at camp. When considered in this way, feeling better about working with others, and feeling more of a need to protect the environment are logical factor co-loadings.

The third factor in Table 10 seems to mesh well with Factor 3 in Table 12. Both factors share items 2, 4, 12, 14. Here, one observes a split among achievement, sociability, and environmental items. "Feeling healthier" and "feeling stronger physically" are naturally linked here, with "enjoyment of the outdoors" and "helping others"

being grouped in these factor structures as well. Outdoor living in a more rugged setting like a unit overnight, for example, will, out of necessity, bring people closer together. Such an experience may also help one feel stronger and healthier once required work is completed. Thus, the grouping seems sensible in this way.

Factor 4 in Table 10 and Factor 2 in Table 12 also share common variables; items 1 and 17. Though these sociability items are only two of the several proposed by the researcher, they did, nonetheless, emerge together. The researcher is quick to point out, however, that the items comprising this factor are also part of other factor groupings. It is quite possible that such an attitudinal area as sociability is too broad an area to be covered by such a research design as was implemented in this study. Social factors are, after all, key ingredients in every aspect of camp life; in daily activities, cabin cleanup, mealtime duties, and athletics events. Thus, this proposed grouping of statement-items may be too diverse in nature to be accurately measured as a factor in and of itself.

Factor structures shown in Tables 14 and 16 demonstrate similar factor loading-clusters to those described above. Factors in the two tables are quite similar in variable-composition. Factor 1 in both tables

shows nine instrument-items in common. These items are, for the most part, from the sociability and environmental areas; once again demonstrating potential relationships among social and environmental aspects of camp life. Interaction with people and with Nature in general is most positive and most productive when one more accurately perceives oneself as a part of such a functioning whole--both in terms of a social situation and within our global ecosystem. Though children do not readily perceive themselves as part of such functioning entities as society and the global ecosystem, they must understand to some degree their place in the schemes of such entities. If they are able to better understand such matters, they may be more comfortable interacting within social and physical environments in which they find themselves. Proper staff supervision and instruction can lead to such an understanding if provided on the intensive level as is characteristic at Greene Family Camp.

The second factors from Tables 14 and 16 demonstrate strong correlations among common items 3, 9, 12, and 19. Three of these items are self-reliance- and achievement-oriented; the other, sociability-related. All are linked in that, learning new things, developing new skills, and recognizing that one is doing some things better than

before all may help one to feel more comfortable doing things which may benefit others. Table 14 adds to its second factor "having fun," being "more relaxed when . . . alone," and being "less nervous at night" to its factor structure. These items, too, relate to greater self-assurance, and security which, when applied to social situations, might enhance proficiency in dealing with other people in cooperative encounters.

Both tables' third factors also share similar variable-items. These items, concerning environmental awareness, sociability, and achievement, all may have some connection when considered from the internal/external viewpoints described herein.

In this section relationships among emerging factor loadings have been discussed. Potential reasons for the results elicited by analysis undertaken by the researcher have been presented for further consideration. In the next section, the researcher will discuss how the findings obtained may help to answer the research problem; namely, whether or not the proposed personality areas may be enhanced through the summer camp experience and, if they are, to what extent the results gathered reflect such personality enhancement.

Answering the Research Question--Personality Enhancement at Camp

Results reported in Chapter IV demonstrated factor structures which supported the existence of some of the researchers's proposed factor groupings. In the first section of this chapter, possible explanations for these groupings were discussed, along with ideas regarding the nature of the personality areas in general. In this section, the researcher will discuss how the findings obtained from analyses undertaken may lend credence to the researcher's hypothesis that personality may be enhanced through this summer camp experience.

One of the first questions which must be asked of the research design concerns the instrument itself. As was demonstrated in the fourth chapter, analysis yielded results which were, to some extent, congruous with the researcher's proposed factors and statement-item groupings. Spirituality emerged so strongly as to merit the removal of these instrument items from further analysis. Once this change was initiated, statistical analysis showed high correlations among achievement and independence statements from the instrument. Though these were initially proposed as two distinct groups of items, examination of findings relative to the two groups shows that a possible connection between them may be inherent in their character. Both are

concerned with internally-derived cognition which is generally positive in nature. Both connote a sense of security and accomplishment which may eventually lead to improved and more accurate self-perceptions.

The only grouping not emerging consistently in numbers sufficient to be considered as a true statistical entity unto itself was the sociability grouping. This factor, when seen as a part of so many facets of camp life, becomes difficult, if not impossible, to classify with specific attitudinal criteria. Though existence-potential of this factor was elicited from the data gathered, sociability was an unlikely candidate for consideration as a separate factor grouping as was originally proposed. Its instrument items did emerge at times, but not in numbers as significant as those demonstrated by the statements from the areas of environmental awareness, achievement, and spirituality. Overall, however, the findings did show that statement-item groupings were to some degree analogous to the proposed factor-item areas suggested by the researcher.

The next aspect of the research design which must be considered if results are to be meaningful is the nature of the results obtained relative to the research question. This is, whether or not, and if so, to what degree, personality is enhanceable through daily, intensive

exposure to that programmatic content and social climate which characterize the summer camp experience.

First of all, one must determine the criteria by which personality enhancement may take place. As discussed in the first two chapters, personality enhancement is very much an internally-driven process in which a variety of internally and externally derived stimuli are ingested and synthesized into the individual psyche. It is from the awareness of needs, both physical and psychological, that human beings are driven, and it is through productive interaction with the physical environment and with fellow human beings that one becomes proficient at meeting these needs. The staff and program content at Green Family Camp are built around accomplishing these ends, and it is with some confidence that the researcher asserts that such is the case with many other well-designed, well-managed camps.

Secondly, because personality is an internally-oriented phenomenon, much of the evidence one might discover about its potential enhancement must be obtained from observations of and/or questions directed toward the campers under study. Since much of what takes place at camp is activity-oriented, one of the only ways to determine the degree of personality changes in a 230-member sample population at a given point in time is with a survey

instrument. The researcher utilized this method for the study implemented and described herein.

When one examines the responses given and the data gathered, the answers provided may lead one to conclude that the children at Greene Family Camp perceived some degree of change in themselves. The campers perceived a sufficient degree of change in the statement-item-areas to warrant the responses discovered in this study's data analysis. Whether or not actual personality change--permanent change--has taken place here will not be known for quite some time, and then only if one implements further study on the same population over time. One thought is certain, however; that is that changes relative to instrument items were reported by the sample population studied, and their responses resulted in findings similar to those suggested in the researcher's hypothesis.

Project Limitations and Recommendations for Further Study

Data have been gathered, analyzed, discussed, and evaluated. Findings have been reviewed with respect to the instrument itself as well as within potentially-enhanceable personality components. In this section the researcher will discuss inherent limitations in the research design as implemented, and discuss possible changes which may be made

by those wishing to replicate the study or implement similar research designs.

For any survey-oriented research to be successful, a number of factors must be assessed and solutions to potential research problems studied and prevented to the greatest extent possible. One of these is the overall design of the research. The study implemented here would be of far greater validity if a pretest-posttest design was utilized. If surveys were taken of the sample population during the first and fourth weeks of camp, a more accurate measure of population attitudes and changes in these attitudes might be possible. This does, however, present problems with scheduling of activities, free time on the part of the camp staff, and the like. Still, the results of this study are, as implemented, not truly generalizable to other camp populations in statistical terms as dictated by social science practice. The results may be considered valid within factor structures proposed by the researcher, and may be valid with regard to the sample population studied at the time. This is, however, as far at the researcher will carry his assertions with any authority. Further study must be implemented on different populations using this or similar instruments for results to become applicable to other groups of campers.

This leads to discussion of the survey instrument used in the study. Though its items were derived from other instruments known to be reliable and valid, the instrument used here was designed by the researcher. Since it had never been used previously as written, it cannot be considered reliable. To establish such reliability would require extensive use with different populations, or at least with populations attending several summers of Greene Family Camp sessions. This problem can be solved only through further implementations of the survey instrument, or items from it, with other campers.

Another inherent limitation which should be corrected in subsequent research is the basic design of the survey instrument. As written, the instrument has no latitude allowed for negative responses--only a lack of positive change may be reported. For example, if one feels less healthy after a summer at camp, the questionnaire, as written, does not contain a mechanism by which such feelings may be accurately expressed and tabulated. One method which might be used to solve this problem is to add a negative-numbered scale to the opposite side of the positive-numbered Likert scale used for this study, coupled with some slight rewording of statements in the questionnaire. For example, "feeling healthier" might be

restated more simply as "I feel healthier now" with an accompanying continuum arranged with "agree" and "disagree" sides to denote such values; each side having one-to-five scales to denote positive or negative feelings perceived by the respondent. "Zero" might be used as well to denote a neutral point to one's perceptions. Such additions and corrections to the survey instrument might yield more accurate, more meaningful results for those wishing to attempt replication or similar future studies.

One last note deals directly with the camper population studied. The respondents were children ranging in age from 8 years to 14 years old. Any studies attempted on camper populations such as these must be implemented as unobtrusively as possible. The schedule of an average summer camp is so tightly packed with activity, both physical and mental, that any major disturbance of the daily camp routine will potentially throw a young camper's mind "out of synch." Youngsters are usually so busy during a normal day at camp that to ask them to sit down for any substantial length of time to complete a questionnaire is a difficult task. Statements used must be kept simple if the entire sample population is surveyed using the same instrument. Eight-year-olds simply cannot be expected to read and comprehend the connotations of items which are

worded at a level which challenges the oldest campers. Item responses must be quickly answerable and accurately assessable when instruments are collected and data are to be analyzed. These factors make detailed, accurate, in-depth analysis of such camper populations very difficult to implement. The researcher believes that this study has shown certain aspects of personality (as described in the survey instrument's statement-items) may be enhanced through exposure to summer camp programming. Further, the researcher believes that much of personality enhancement takes place within the human organism itself. As a result, one must remember that trying to analyze aspects of personality such as spirituality, sociability, independence, achievement, and environmental awareness may be very difficult to accurately assess "on paper." These are feelings which are to a large extent internally-derived, and may never be accurately determinable based on outwardly-recognizable, readily-quantifiable criteria such as those making up any survey instrument's items. Still, these types of factors are ones which should be the focus of study when one attempts to analyze personality enhancement the researcher believes is inherent in good summer camp programming.

One other point worth mentioning here is that human beings are very complex creatures. Any study of human existence reflects only that which has been experienced relative to a particular and studied point in time. Much of our very soul and inner nature is displayed in ways which defy any sort of statistical quantification. Life's situations are usually far too complex, and underlying etiology far too broad in scope for better-than-vague results to be obtained. Nonetheless, social science will, through perseverance on the part of researchers everywhere, gather enough data from enough sample populations over sufficient time frames to shed some light on certain commonalties in human existence. It is toward this end that social science is directed--this study being no different. On this note shall this study be concluded, with thanks to the professors of North Texas State University's Division of Recreation and Leisure Studies.

APPENDIX

Camp Survey

CAMP SURVEY

The following survey is confidential. All of the answers you give will be kept secret. Please do not put your name on the survey, or write anything that might let anyone know who you are. Please answer all of the questions as honestly as possible, and as accurately as possible. We only want you to compare yourself NOW with how you saw yourself before camp started this summer. If you need help answering any of the questions, please ask your counselor or one of the other staff. All you need to do is read the statement, and circle the number that best describes how you feel you have changed, if you believe you have changed. Thank you very much for your cooperation.

1. I make friends more easily now.	0	1	2	3	4	5
2. I enjoy being outdoors more now.	0	1	2	3	4	5
3. I developed new skills.	0	1	2	3	4	5
4. I feel stronger physically.	0	1	2	3	4	5
5. I am more relaxed when I'm alone now.	0	1	2	3	4	5
6. I understand more about religion now.	0	1	2	3	4	5
7. Working with others seems easier now.	0	1	2	3	4	5
8. I have more respect for Nature now.	0	1	2	3	4	5
9. I learned new things this summer.	0	1	2	3	4	5
10. I am less nervous at night now.	0	1	2	3	4	5
11. I believe more strongly in God now.	0	1	2	3	4	5
12. Helping others seems more important now.	0	1	2	3	4	5
13. I learned more about Nature this summer.	0	1	2	3	4	5
14. I feel healthier now.	0	1	2	3	4	5
15. I think I understand myself better now.	0	1	2	3	4	5
16. I enjoy worship services more now than before.	0	1	2	3	4	5
17. I had fun with people.	0	1	2	3	4	5
18. I hear more things when I'm outdoors now.	0	1	2	3	4	5
19. I do some things better now than before.	0	1	2	3	4	5
20. I have more self-confidence now than before.	0	1	2	3	4	5
21. I believe more in some sort of afterlife now.	0	1	2	3	4	5
22. I get along better with others now than before.	0	1	2	3	4	5
23. I see more things outdoors now.	0	1	2	3	4	5
24. I did things I never thought I could do.	0	1	2	3	4	5
25. I conquered some old fears this summer.	0	1	2	3	4	5
26. I believe more strongly in Judaism now.	0	1	2	3	4	5
27. giving makes me as happy as getting now.	0	1	2	3	4	5
28. I feel more need to protect the environment now.	0	1	2	3	4	5
29. I am less scared of insects now.	0	1	2	3	4	5
30. I think about God more often now.	0	1	2	3	4	5

Have you ever been to camp before (Greene Family Camp or somewhere else, too)?
Yes___ No___
If you answered yes, how many times before? 1 2 3 4 5 or more times before
Have you ever been camping outdoors before this summer? Yes___ No___
If you answered yes, how many times?
(less than 3 times) (4-7 times) (more than 7 times)
How big is the city you live in? (Over 500,000 people) (100,000 to 500,000)
(50,000 to 100,000) (less than 50,000)
My unit is: Niviim Kohanim Melachim (circle one)
I am a: Male Female (circle one)

That's it! Thank you very much for your time and for your cooperation in filling out this survey! We really appreciate it, because it will help make camp a better, more fun place to be in the future. Please turn this survey back in to your counselor or other staff member immediately. We don't want to lose any of them!

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