

## AN ANALYSIS OF VALUES FOR DEVELOPMENT OF RECREATIONAL POLICY

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Any governmental agency should be aware of the public's values because accountability is the key to sustaining support. As Schoenfeld (1968: 1-4) expressed:

...In our day, in our kind of society, every form of American enterprise depends on public sufferance, if not on active public support, for its existence. Sooner or later, every organization, Institution, and movement stands arraigned at the bar of public opinion. The summons inevitably comes to all, and the jury cannot be "fixed".

...In a country where the bulk of the land is either in manifold private hands or under agencies immediately responsive to the public will, and in a country where issues are as often settled by appeals to emotion as by rational analysis; the public relations of resource management policies are paramount.

...Since public attitudes and actions are the core of the problem of defining and maintaining environmental quality, resource managers increasingly find themselves involved in various programs of communications with many publics.

...Somehow, the public must be taught to weigh the alternatives and make choices in natural resources. This involves establishing a system of values...

Borton and Warner (1971), like Schoenfeld have intimated the need for public acceptance as a means to sustaining support and responsive administrative programs as the tool to maintaining or achieving it. Administrative programs in this context, as Erickson (1970) has noted, is a matter of similarities and differences between groups based on individual values. The implication is that similarities and differences are the key to value modification of a group. He further suggests that modification should be from familiar to unfamiliar so that development is congruent with current cognitive structures.

The purpose of this study is to analyze value orientations of user and general populations toward a recreation area and to determine what types of variables are related to each of the value orientations isolated. This type of information will give land managing agencies perspective to help them better design programs to meet the recreational needs of these audiences.

#### THEORETICAL FRAMEWORK

##### Values (Dependent Variable)

Values are organized into unified systems that situationally direct behavior (Sandell, 1968). Values are an individual's cognitions, feelings, and action tendencies toward various objects (Katz, 1960). The cognitive component is the knowledge or belief that an individual has about an object--persons and things. There are various levels of cognitive responses possible: knowledge, comprehension, application, analysis, synthesis,

and evaluation (Bloom, et al., 1956)(Model 1). The affective component, that is, the emotion connected with the object, is what gives values their motivational character. There are various levels of affective responses possible: receiving, responding, valuing, organization, and characterization (Krathwohl, et al., 1964)(Model 1). The action tendency component; that is, behavioral actions associated with a value, is the result of an individual's experiences in trying to satisfy his desires. There are various levels of predisposition responses possible--high tolerance level, low tolerance level, occasional action, and consistent action (Krathwohl, et al., 1964)(Model 1).

Values differ in their systematic structure. Not all values have the same potency in directing behavior because of differences in characteristics. The differences in the value potency is a matter of degree. Values can be classified on their potency level: core and peripheral (Model 1). Core values are those that are the most stable and are perceived by an individual as having the greatest operational utility or instrumental importance. Peripheral values are those that have not proven their instrumental importance to the core values through the judgmental process but have been assimilated into the cognitive structure (Lee, 1966).

## Independent Variables

The two major types of variables that interact with the value components are the judgmental process and the situational variables. Judgmental process refers to an individual's perception, organizational, and decision-making processes. The situational variables are the conditions or circumstances that are not under the direct control of cognitive processes.

The following is a list and a brief description of the types of independent variables used:

### Judgmental Process

Selection process styles (Bettman, 1971; Kernan, 1968; Lime, 1971; Green, 1965)	A 3 point hierarchical scale based on an evaluation of amount of awareness and rationality used in selection of alternatives from chance to a selection style based on complete familiarity and consequences (pay off + opportunity costs)
Meaning (Gibson, 1950) Concrete - tangible results of the land being there in its present condition	a 3 point negative, neutral, and positive scale
Use - utility of the land being there in its present condition	"
Emotional - intangible results of the land being there in its present condition	"

Symbolic - intangible results that represent more than is seen; represents or suggests something else

"

Expectations (Groves and Erickson, 1973)

A 4 point hierarchical scale based on anticipated encounters with public forested land using a development - wilderness continuum with the following characteristics used in the evaluation process: number of people; quantity, quality, and diversity of wildlife and habitat; smell; sound; and development

Need (Maslow, 1943 and 1954)

A 5 point hierarchical scale based on motivational components from physiological to self-actualization needs.

Habits

A subjective percentage scale based on the respondent's estimate of his learned recreational behavior

Situational (Witt and Bishop, 1970; Knopp, 1972; Sandell, 1968; Barker, 1963)

Sex, age, residential status (resident vs. non-resident), occupation, and marital status

An equal interval assumption was made about those variables that were of an ordinal nature. This type of assumption does not seem to cause any major distortion in this type of data (Boyle, 1970; Labovitz, 1970)

In addition to the examination of the above, a time budget was used to assess behavioral patterns (Sorkin and Berger, 1939; Szolia, 1960). A time-budget was used because time, activities, and areas can be incorporated into one framework easily (Michelson, 1973). Information was

sought on the amount of free time (time free from work duties), leisure (time spent participating in activities of interest), time spent on outdoor activities, forest recreation, public forested land in the State College area. Due to the ambiguity involved with activities associated with each time and/or orientation, subjective definitions were used for activities within the broader context of interest or area limitations. The meaning of activities has and will continue to change, especially in an industrial society where the nature of work is changing rapidly.

This case study was undertaken in State College, Pennsylvania, U.S.A. because the population diversity that exists represents a spectrum of possible responses. It also has a recreational area, that is, Game Lands 176, within a short distance from the city. Due to its location, this Game Lands has stimulated much discussion about possible land uses. This situation provided an excellent opportunity to explore value orientations with regard to information that may be used in programs to create value congruence between segments of the population and a land managing agency.

#### MEASUREMENT METHODOLOGY

A semi-structured interview patterned after an instrument developed by Harvey (1970) was used. This approach was designed to obtain a knowledge, feeling, and action commitment and relate to this commitment

using "how" and "why" questions. An individual's responses were quantified, using developed typologies. (See previous sections on the dependent and independent variables) A problem in the operational use of the typologies was the establishing of reliable and valid items that discriminate the hierarchical levels. Experienced workers were consulted in the selection of items. These items were pretested on the user and general populations to test for a semantic understanding. The items were then adjusted, but the conceptual basis obtained from the experts was maintained.

Interviewers and judges were trained in the use of the interview schedule. A tape recorder was used so that the interviewer could concentrate on his interviewing technique and improve his skill through correction by insight. The recorder also allowed a team of 3 experts as a group to examine the information for classification. The minimum criteria for placement on a level was based upon a 2 out of 3 decision by the judges. To aid the judges in the classification procedure, responses from the preliminary interviews that characterized each level was used in the training procedures and were available for reference use. Response distribution where possible was also used to help establish critical levels in the measurement process.

Reliability of the interviews was checked with test-retest design on every fifth person interviewed using a correlation coefficient and a one-way analysis of variance. The value components were used in the reliability check because the interview was based upon these commitments.

There were significant relationships at the 0.001 probability level with the correlation coefficients but no significant differences at the 0.05 probability level with the analysis of variance between the two interviews for the valve components of both populations.

#### SAMPLING PROCEDURES

To obtain personal value information from representative segments of the population, the local (12 minor civil divisions adjacent to State College) user and general populations were sampled.

A proportionate, stratified, random sampling technique was employed to reduce cost and increase the efficiency of the sample design. Stratifications used for sampling were age, sex, marital status, occupation, and resident types. These variables were factor analyzed using principle component and Varimax methodologies to find interrelationships to reduce the effect of double sampling. Representative variables from each of the factors isolated were used as stratifications. The sample populations were proportionately stratified on the basis of the total local population within each strata.

Users of Game Lands 176 were identified and stratifications isolated using sampling techniques similar to those developed by James and Henley (1968) (The sample source included 89% of the total population). A simple random sample of 180 users of State Game Lands 176 was contacted and asked to participate in the study. Of the 180 individuals 173 (96%) were personally interviewed. Sixty of these individuals were proportionately, randomly selected to represent the user population.

Stratifications for the general population were identified using the 1970 Census data. The sample was selected from the Center County tax records and The Pennsylvania State University student directory. (The sample source included 95% of the total population). One hundred and seventy individuals were randomly selected and 153 (90% were personally interviewed. Sixty of these individuals were proportionately, randomly selected to represent the general population.

SUMMARY OF PREVIOUS ANALYSIS

In a previous study the cognitive, affective, and action tendency components were analyzed using Q analysis (Johnson, 1969) to isolate the value orientations. A multi-variate cross tabulation framework was utilized then to characterize each value orientation in terms of high and low scores for interpretive purposes. The following is a condensation of the value orientations isolated.

The component relationships isolated for the user population are:

Group 1	N	%
high cognitive (core) = low action tendencies (peripheral)	16	27
low cognitive = high action tendencies	17	28
low affective = low action tendencies	5	8
Group 2		
high cognitive = high affective = high action tendencies	7	12
low cognitive = high affective = low action tendencies	15	25

From Q analysis of the user's value components there were two groups of individuals isolated. There were significant differences at the 0.001 probability level using Mahalanobis  $D^2$  in an F-test between these groups. Group 1 was associated with two dimensions that only included two of the value components: a cognitive-action tendency axis and an affective-action tendency axis. Group 2 was associated with two dimensions that included all three of the value components.

The component relationships isolated for the general population are:

Group 1	N	%
low cognitive = low affective = low action tendencies	18	30
neutral cognitive = neutral affective= neutral action tendencies	18	30
high cognitive = high affective = high action tendencies	3	5
low cognitive = low affective= high action tendencies	1	2
Group 2	N	%
high cognitive = high action tendencies	8	13
high affective = high action tendencies	3	5
high affective	9	15

There were two group's isolated from the analysis. There were significant differences between these groups at the 0.001 probability level using Mahalanobus  $D^2$  in an F-test. Group 2 was associated with three

dimensions that included only one or two of the value components: an affective-action tendency axis, and affective-cognitive axis, and an affective axis.

## DESIGN

Each of the value orientations isolated in the previous study were used as an independent variable and analyzed using discriminate analysis to identify potential variables important in the formation of the value groups. Independent variables were factor analyzed (orthogonally) to reduce the number of variables and to obtain a conceptual understanding among them. Representative variables from each of the factors were used as dependent variables in discriminate analysis. The representative variable selected was the one with the highest positive correlation. If there were no variables that had a positive correlation, the one with the highest negative correlation was selected. The data were also standardized so that the discriminate function coefficients would give an indication about the time importance of the variables.

## RESULTS

From a factor analysis of independent variables the following were selected for use in the discriminate analysis:

### Users:

1. Judgmental Process variables - symbolic meaning, use meaning, expectations, and selection process styles
2. Situational variables - sex and residential status

3. Behavioral factors - related to the following time dimensions, free time and Game Lands 176

General Population:

1. Situational variables - symbolic meaning, use meaning, and selection process styles
2. Situational variables - sex and age
3. Behavioral factors related to the following time dimensions - free time, forest recreation, and Game Lands 176.

From the discriminate analysis of the general population's value groups, the following four variables were significantly related to them: (1) symbolic meaning (discriminant function coefficient (C) = -3.2), (2) sex, (C = 2.6) and (3) age (C = 1.4). From the analysis of the users value groups the following four variables were significantly related to them: (1) use meaning (C = 3.7), (2) expectations (C = 3.1), (3) sex, (C= 3.1) (4) free time (C = 1.9) and (5) residence (C = 1.0). The C = variables identified in the analysis were the ones that contributed significantly to the explanation of variance on an F-test.

#### IMPLICATIONS

Results indicate that the two major types of variables that are related to value orientations in both populations are the situational and judgmental process variables such as sex and meaning. These are the types of variables that are important in the formation of perspective.

Perspective is an individual's philosophy of operation that helps establish priorities. In terms of policy this suggests that there is a need for educational programs to help the users and general population to clarify their values. These programs should be developed to help them interpret their experience and/or the importance of the existence of these type of recreational lands.

The most notable result was the lack of strength of relationships with behavioral factors, even though, among the users there was a relationship between value orientations and free time. The factor here as with other cases is not showing a correlation. Even though an individual has certain value orientations he may not know how to utilize his time to translate his values into actions which may be a source of frustration within our society. The question is one of efficiency and effectiveness in time utilization.

Distribution of Component Scores

Value Scores and Levels	Cognitive Component	Affective Component	Action Tendency
Core - 1. - 2.	- 1. Evaluation - evaluating worth in terms of established criteria	Value complex - philosophy of life based upon commitment	Consistent behavior, active - Actions which are frequent and extensive
	- 2. Synthesis - putting together elements and relationships to clarify structure and process	Organization - commitment to an object to seek to convert others	Consistent behavior passive - Actions which are frequent and limited
	- 3. Analysis - breaking down elements and relationships to clarify structure and process	Valuing - identifying with object and wanting it	Occasional action, active - Actions which are infrequent and extensive
Peripheral - 4. - 5.	- 4. Application - use of abstractions in a new situation without being prompted	Responding - seeking and gaining satisfaction from working with object	Occasional action, passive - Actions which are infrequent and limited
	- 5. Comprehension - use of ideas or materials without seeing their fullest implications	Selected attention - attends to object when the circumstances are favorable	Low tolerance level - Limited amount of stimulation needed for action
	- 6. Knowledge - recall or recognition	Receiving - tolerates the presence of an object	High tolerance level - Crisis needed for action
Core + 7. + 8. + 9. + 10. + 11.	7. Neutral	Neutral	Neutral
	8. Knowledge	Receiving	High tolerance level
	9. Comprehension	Selected attention	Low tolerance level
Core + 12. + 13.	+ 10. Application	Responding	Occasional action, passive
	+ 11. Analysis	Valuing	Occasional action, active
	+ 12. Synthesis	Organization	Consistent behavior, passive
	+ 13. Evaluation	Value complex	Consistent behavior, active

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