

A DEVELOPMENTAL MODEL OF RECREATION CHOICE BEHAVIOR

Daniel R. Williams

ABSTRACT: Recreation choices are viewed as including, at least implicitly, a selection of an activity, a setting, and a set of companions. With development these three elements become increasingly differentiated from one another. The model is tested by examining the perceived similarities among a set of 15 recreation choices depicted in color slides.

DEVELOPMENTAL PERSPECTIVES

The subject of how recreationists choose leisure settings or activities has received increasing attention among researchers and managers as made obvious by these proceedings. Drawing on behavioral decision theories, much of this work has been directed at describing how a specific recreation choice is made using various cognitive models. The developmental perspective on choice taken in this paper turns the focus away from describing how individual decisions are made to searching out patterns of choice and the process by which people develop and become specialized in their leisure pursuits.

Calling for a cognitive developmental theory of leisure and work, Blocher and Siegal (1981:42) describe the dynamics of leisure development: "As individuals move into higher cognitive levels, the meaning of leisure activities may change.... as people grow cognitively they are attracted to stimuli (recreation settings and activities) that involve higher and higher degrees of novelty, complexity, ambiguity, and abstraction." Thus, with cognitive development comes a gradual change in the expression of choice. This paper explores how such growth comes about and what influence it has on subsequent recreation choices and preferences. A developmental model of recreation choice will be described.

The concept of leisure or recreation development has been explored in various contexts including studies of socialization (Kelly 1977), comparisons of pre- and post-retirement leisure patterns (Yuskaitis 1981), discussions of leisure and family life cycles (Parker 1979), and analysis of play behavior (Levy 1978). In outdoor recreation research, developmental perspectives have taken three forms. One emphasizes the influence of previous use or participation on perceptions, preferences, and attitudes (Schreyer and others

1984, Hammitt and McDonald 1983). The second, recreation specialization, assigns developmental levels based on the participant's involvement in and commitment to a leisure pursuit as indicated by participation, monetary investment, and impact of the activity on the participant's lifestyle (Bryan 1977; Wellman and others 1982). The third form examines socialization as a shaper of preference (Burch 1969). Studies may focus on one's membership in social circles of leisure or social reference groups, for example, socialization in the surfing community (Devall 1973), or the influence of childhood recreation experiences on adult leisure patterns (Yoesting and Burkhead 1973; Sofranko and Nolan 1972). Common to all three perspectives is that amount and timing of experience as a participant is thought to be an important determinant of setting preferences, activity styles (trolling for bass versus fly casting for trout), and the social context of the outing (Bryan 1977).

The cognitive developmental level of an individual is by definition the amount and type of information a person has, and is thought to influence the frame of reference by which a participant evaluates recreation choices. In forming cognitive developmental models some indicator of the recreationist's accumulated experience is used to evaluate preference for recreation experiences or participation. Variables that indicate skill, knowledge, or familiarity may act as indicators. Among people with different amounts of recreation experience (and presumably development), for example, perceptions of crowding vary (Schreyer and Roggenbuck 1978).

Such learning or developmentally based approaches may better represent the mental process through which a person interprets life (and recreation opportunities) than static antecedent variables, which consider only past history. Traditional socio-demographic and personality approaches assume shared similarities in life history and home environment that help to define the mental processes through which recreation choices are made. The developmental approach attempts to describe the process by more directly quantifying the amount of information a person has relevant to the activity being considered. Thus, locating a person on a leisure development continuum provides a summary description, a frame of reference from which a person makes decisions about recreation.

Paper presented at the Recreation Choice Behavior Symposium, Missoula, MT, March 22-23, 1984.

Daniel R. Williams is Assistant Professor, Department of Recreation and Leisure, University of Utah, Salt Lake City, UT 84112. The research was supported by North Central Forest Experiment Station, USDA Forest Service, St. Paul, MN.

Further, a developmental continuum may be useful in analysis of change in decision-making styles. Research on recreation decision-making has focused on identification of the attributes of decision alternatives, the order in which they are considered, and the importance assigned to them. Both the attributes considered and the way they are combined and weighted in forming a decision are likely

to vary with the developmental level of the decision-maker. For example, some participants may become highly involved in an activity. If development were related to commitment we might expect more advanced participants to base decisions on attributes that facilitate an enjoyable experience and less on constraints (time or money) in their choices (Krumpe and McLaughlin 1982).

COGNITIVE DEVELOPMENT

Usually development is thought of in terms of growth in ability to acquire, organize, and use information--as a cognitive skill acquired with time and experience. To distinguish development from simple change, definitions of development usually imply progress, direction, and order along some continuum. In applying developmental theories to research on large-scale environment-behavior interactions, Moore (1976, p. 145) defines development as:

qualitative changes, differences, or variation in the organization of behavior such that what are called developmentally "more advanced" behaviors are more differentiated than what come to be called "lower" stages of behavior, and logically include and heirarchically integrate the "lower" stages...

Moore leaves open the question of whether a particular developmental stage is correlated with age or time. Differences in the organization of behavior or information may be described developmentally in the context of life cycle changes (ontogenetic development; along an age continuum). However, development may also be described as changes occurring at different periods of time (microgenetic development; for example, learning about a new city or achieving new levels of leisure satisfaction with increasing participation). In studies of cognitive complexity (Bieri 1966), categorization and judgment (Rosch and others 1976), and environmental cognition (Moore 1976; Williams 1980), persons more advanced in their interest and thinking within a domain (developmentally specialized persons), may be expected to perceive and structure elements within that domain in more complex ways and make finer discriminations among the elements. Thus, developmentally advanced recreationists are expected to process decision attributes in more complex ways.

A DEVELOPMENTAL MODEL OF RECREATION CHOICE

According to Flavell (1972) the three requirements for a developmental analysis of any behavior include: (1) specifying a set of acquisitions (what it is that develops), (2) identifying the order and processes involved, and (3) defining the time dimension of the sequence.

What is it that develops? For Flavell (1972) the items in a developmental sequence may refer to a structure, skill, concept, belief, attitude, bit of knowledge, or any other type of cognitive unit that a developmental psychologist might define and study. A logical starting place for examining

developmental sequences of recreation participation is to focus on what it is that recreationists choose among. A recreation activity often is considered the basic element of choice. Though such a definition is widely used, it is widely viewed as inadequate (Driver and Brown 1983). The activity concept perpetuates the belief that recreation is a behavior rather than an end state, which is equivalent to viewing education and health as behaviors rather than end states. Still, choices result in alternative behaviors and what is lacking is an adequate procedure for describing what has been chosen when we talk about recreation decisions. The set of acquisitions for development may be defined as the amount, type, and organization of information about recreation choices.

Cognitive Structure and the Elements of Choice

A consumer behavior analogy is behind many choice theories applied to recreation (Krumpe 1979). Recreation activities have been viewed as a product line in decision-making research. People participate in, make decisions about, and hold preferences for recreation activities--hunting, camping, and hiking, for example. Unlike most consumer products, however, participants can exercise some control in the design of their desired products and thus the experiences they derive from participation. To shape an experience, recreation consumers have three basic choice elements: activities, settings, and companions. Every decision to participate, consciously or unconsciously, includes a decision about what to do, where to do it, and whom to do it with. The research task is to describe the psychological structure of recreation choices (the underlying decision elements) and the dynamics of how these structures evolve and change with experience.

Past approaches to describing recreation choice have been too limited. For most research, an activity definition of recreation has been used in attempts to unravel the mechanisms of leisure participation. The nature of the activity, however, may not be the basis of participation. Activities may be subordinate to the social meaning of the participation (with whom we participate may be more important in the decision to recreate than what activity we select; O'Leary and others 1974). Or the nature of the activity may be subordinate to where recreation takes place (Ditton and others 1975). The basis for participation in any recreational activity also may be linked to some symbolic or emotional attachment to specific places or types of settings (for example, "Granite Peak" Wilderness or any national park; Williams 1980; Tuan 1977). Take the social basis of participation as an example. For a particular group of people who have gathered together to enjoy the outdoors, several activities and a variety of leisure settings may present equally satisfying recreation opportunities for the group. Therefore, what people choose are not activities as the term is commonly used, but what Driver and Tocher (1970) describe as recreation engagements highlighting the multi-element nature of recreation participation.

Three components, then, are needed to completely specify any form of outdoor recreation

participation--activities, settings, and companions. Such a model is not derived from empirical data; it is based on a survey of the literature. The three components, which appear scattered and unconnected in the outdoor recreation literature, may be combined to varying degrees to define what was chosen. The three components describe how recreation choices may be classified: recreation choices may be differentiated by activity categories, by setting categories, and by categories of social organization or interaction. Any one component is not considered in general to be more important, superordinate, or dominant; although the relative make-up, importance, or salience of any one component may vary across individuals and for any specific choice.

The developmental model begins with a multi-element choice structure as the set of developmental acquisitions. For any individual decision, the choice structure may be specified as a weighted combination of the three components described above: activity, setting, and social. All three are necessary to uniquely categorize any recreation choice. But not all possible combinations of activities, settings, and social groups are equally likely to occur. Some forms of activity and some settings naturally co-vary; canoeing requires a body of water. However, this should not be construed as a reason to ignore one component when describing a recreation choice. An activity may necessarily take place in a certain setting (fishing near water), but specifying the setting (water) is not sufficient to indicate the activity (fishing).

The Developmental Sequence

How does the cognitive structure evolve and change with development? Within the recreation literature, the specialization concept has attracted some attention (Bryan 1977) and appears particularly germane. Specialization in recreation behavior indicates an evolution of preference and style of participation in an activity from the general to the particular and may reflect changes in the role or importance of one or more of the decision elements. However, with Bryan's concept of specialization as a sequence of acquired behaviors a different set of acquisitions must be identified for each activity. An alternative approach, which may apply across activity types, is to expand the notion of activity specialization to include all of the recreation choice elements.

Specialization is one of two processes Flavell (1972) identifies for development that have significance for a developmental analysis of recreation choices. The other, differentiation, refers to the degree of structural complexity of a concept as it is organized in the brain. Differentiation as a developmental process involves making conceptual distinction where none had previously been made. Thus, what was initially a single, "undifferentiated" response becomes with development two "differentiated responses each restricted to one region of the original domain" (in this case two elements within the domain of a recreation choice).

Specialization in the cognitive literature is related to differentiation but is linked more to the content of cognitions than their structure. Differentiation of responses to some event results in each being a "specialization or delimitation of function which represents some sort of constraint or restriction on the way an individual will respond to an event" (Flavell 1972:300). Specialization represents a process of focusing attention on some subset of the differentiated structures. Specialization follows differentiation in that the brain must be able to differentiate two items before it can selectively attend to one over the other.

Building further a model of recreation development, components of a recreation choice become increasingly differentiated from each other (structurally more separate and complex, see fig. 1). As each domain becomes differentiated, specializations develop (a tendency to focus differentiation in some domains more than others). The limitation of Bryan's (1977) concept of recreation specialization is overcome because specialization is no longer tied to changes in content of a specific choice element (activity) to describe the specialization process.

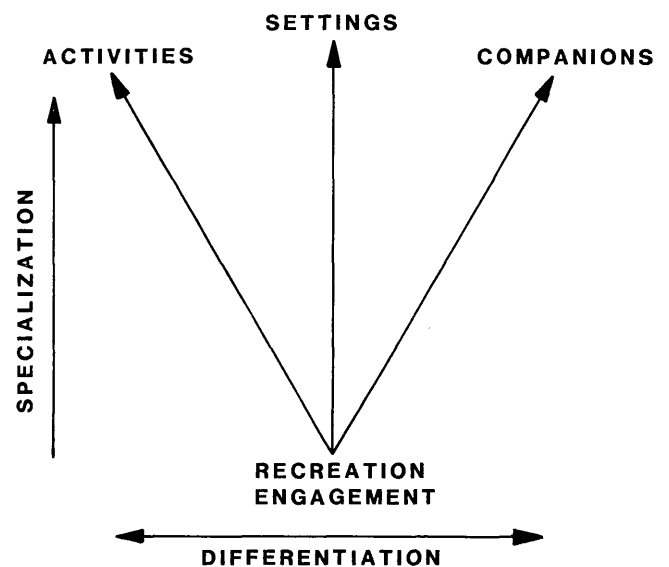


Figure 1.--As the three components of recreation choice become increasingly differentiated, specializations develop.

A tendency to focus attention, learning, or the acquisition of knowledge in one domain over another may be defined as specialization. Thus, for any choice, specialization is the relative cognitive differentiation within and perceptual orientation toward each domain; social character, activity type, and setting type. Thus, differentiation is the making of conceptual distinctions and specialization denoting the content domain where the differences are made. If, for example, a participant were to distinguish one choice from another with exclusive regard to the primitiveness of the surroundings he/she would be a setting specialist.

In a developmental sequence a decision-maker first perceives recreation choices as different to some degree (differentiation). The form that differentiation takes may be based on any of a number of components of recreation choices; the most prominent in the choice model are hypothesized to be activity, setting, and social group. Next in the sequence is specialization which refers to the contents or results of the differentiation process. Specialization may be described by specifying the domain in which differentiation is concentrated. An attempt is made to identify the type or nature of the conceptual differentiations of a decision-maker. To the extent that a decision-maker uses one or a subset of the possible components to differentiate recreation choices he/she may be described as a specialist. To the extent that a decision-maker uses all or a large subset of possible components he/she may be described as a generalist. Note, however, that "generalist" is not meant to imply one who is casually interested in many things, but one who differentiates recreation choices on many components. The generalist is perhaps the closest to what Bryan (1977) described as highly specialized; a participant who demonstrates an advanced technique and displays well-developed preferences for settings and companions.

The Developmental Continuum

As in any developmental study; subjects, responses, characteristics, skills, or preferences must be compared across some time continuum if we are to identify an ordered sequence. For most explanations of development the continuum is age of the subject. Moore (1976) argues, however, that experience in or familiarity with a situation may also be considered a developmental continuum. For studying recreation development, experience with the objects of recreation choice is the developmental continuum of interest; that is, the role of experience in how recreation choices are structured.

Wellman and others (1982) present the most complete attempt to measure amount of experience. They scaled canoeing experience along two dimensions, participation and commitment, using a series of questionnaire items. A single index was constructed by standardizing selected items and summing the score across all items. The approach would appear to be applicable to scaling experience in other activities.

ANALYSIS OF THE MODEL

The model was tested by examining the perceived similarities among a set of 15 recreation choices as depicted in color slides. From research on cognitive differentiation (Bieri 1966) it was hypothesized that increasing participation, involvement, and commitment to a recreation activity would result in increasing differentiation of similarity judgments. Further, differentiation would be concentrated along three dimensions--activity, setting, and companions. Individual subjects would display a specialization in the use of one or more of these dimensions in their similarity judgments.

A series of laboratory studies was conducted to evaluate the developmental model just outlined; two will be described here. The first study was used to scale a set of photographs in terms of the structure of recreation choices proposed in the developmental model (the three elements of choice--activities, settings, and companions). In the second study, subjects' judgments of recreation choices were compared at three levels of activity experience. Common to both studies was the use of photographs depicting alternative outdoor recreation choices. Fifteen color photographs, carefully selected through a series of pilot studies, varying in activity, setting, and social content, were used to elicit subjects' cognitive structure of recreation choices. These structures can then be compared across experience levels to identify how the perceived structure of recreation choices changes with development.

The first study served as a stimulus scaling procedure designed to assign scale values to each of the 15 photographs for each element of recreation choice. Ten judges were asked to sort the 15 photographs (in the form of 3½ by 5-inch prints) into categories according to three rules (the rules corresponding to each element in a recreation choice). In random order, judges were asked to sort the pictures into categories according to the recreation activity portrayed, the social group present, and the setting of the recreation outing. For each sorting rule, judges first sorted the pictures into as many categories as desired and then into three, five, and seven categories. An index of similarity between each pair of pictures for each sorting rule was derived by a method described by Ward (1977). This method assumes that the more categories available when two photographs are placed in the same category, the more similar are the two photographs. For each sorting rule, a two-dimensional matrix of similarities (photos X photos) was derived by averaging across the 10 subjects. The three resulting matrices were analyzed using SINDSCAL algorithm (Prusansky 1975) for individual differences multidimensional scaling.

Though a three-dimensional solution was hypothesized, a four-dimensional solution derived from the analysis provided the best fit to the data. The dimensions were labeled activity (active-passive), setting (primitive-urban), social (intimate/family-social/group), and land-water based on the pattern of dimension weights derived from the three sorting rules. The fourth dimension (land-water) that emerged in the judges' ratings was related both to the activities and settings portrayed in the photographs, indicating some covariance between activities and settings as represented in the photographs (fishing activities go with water and hiking with land).

The results, consistent with the model of recreation choice, were used in a second study that solicited photograph ratings from 60 subjects of varying levels of participation and involvement. Subjects judged the perceived similarity among all 105 possible pairs of photographic slides. Using individual differences multidimensional scaling these individual judgments were then fit to the

four-dimensional configuration of the photographs derived from the first scaling of photos.

Indexes for amount of participation in each of the activities shown in the photographs (fishing, canoeing, and backpacking) were constructed. Further, an index was constructed for nonparticipatory commitment and involvement in the subject's most preferred of the three activities following the method of Wellman and others (1982). This latter index included items concerning the importance of the activity to their lifestyle, membership in organizations, and expenditures on equipment.

Differentiation is indicated by the degree to which a subject's similarity ratings fit the four-dimensional scaling of the photographs; the greater the fit the more differentiated are the judgments along the four dimensions. In table 1 the correlations between developmental indexes and fit are listed. Only in the case of fishing experience was a significant correlation observed. Those higher on the fishing participation index showed greater differentiation of recreation judgments as indicated by fit.

It was further hypothesized that increasing participation and involvement would result in specialization in the use of the various dimensions of similarity judgment. Specialization, the importance of a particular element of recreation choice, is indicated by the relative importance of each of the four dimensions in describing (in terms of fit) a subject's similarity ratings. Correlations between developmental indexes and dimensional salience (importance) weights are given in table 2. Only two relationships were found significant. Greater backpacking experience was positively associated with the social dimension and involvement/commitment was positively associated with the activity dimension.

For both differentiation and specialization the results seem to be activity specific. No general trend of differentiation or specialization was identified for the various indexes. Therefore, relationships between the preferred activity and fit and dimensional salience weights were examined (table 3). A significant difference was found for the social dimension with fishermen using the social dimension in their judgments less than

Table 1.--Correlations of experience indices with individual fit scores

Developmental index	Correlation with fit index
Fishing experience	0.30*
Canoeing experience	- .10
Backpacking experience	- .05
Involvement/commitment	- .01

*Significant at 0.01.

Table 2.--Correlations between experience indices and dimensional weights

Developmental index	Dimensional weight correlation			
	Land/water	Social	Activity	Setting
Fishing experience	0.15	-0.15	-0.09	0.07
Canoe experience	- .15	.01	.08	.13
Backpacking experience	- .14	.20*	.18	.02
Involvement/commitment	- .10	.09	.26*	- .11

*Significant at 0.05.

Table 3.--Analysis of variance and group means for activity preference differences on fit and dimensional salience weight scores using Student-Newman-Kuels difference of means

Criterion	Activity Preference			F-value	SNK
	Fishing (n=11)	Backpacking (n=26)	Canoeing (n=23)		
Fit	0.74	0.67	0.69	0.47	
Social	.07	.14	.11	3.12*	F-B
Activity	.25	.39	.37	6.26*	F-B,C
Setting	.39	.30	.34	1.76	
Land/water	.39	.31	.32	.58	

*Significant at 0.05.

backpackers. Further, those who preferred fishing used the activity dimension less than both canoeists and backpackers. Though not significant, the fishing group relied more on the setting and land-water dimensions than the canoeists or the backpackers.

CONCLUSIONS

Viewed in the context of the tentative and exploratory nature of the methods employed, finding partial support for the developmental model suggests that it has promise and warrants further investigation. The data provide the beginnings from which developmental patterns of recreation choice behavior may be studied. However, measurement of recreation participation levels (amount of experience and involvement) appears to be a major methodological constraint in the further exploration of developmental models. The lack of variance on the items used to build experience indexes and the low accuracy inherent in such self-report measures tend to moderate any real correlation between the perceived structure of recreation choices and amount of experience. An alternative would be to study groups of participants who have demonstrated different levels of skill and involvement (for example, participants in beginning versus advanced backpacking classes).

The model has important implications for substitutability research (Williams 1983). The elements of recreation choice represent the basic dimensions along which substitutes may be conceptualized. What constitutes a substitute depends on the developmental level upon which the decision-maker approaches the choice. An activity specialist, for example, is not likely to exchange the activity component of participation, but may be willing to participate in a different setting or with a different set of companions. Others may be more sensitive to setting or companion components of the choice, substituting activities to maintain satisfaction in a specific setting or with a specific group.

Future research might evaluate some of the implications of differentiation and specialization in a more direct decision-making context. For example, following Krumpal's (1979) study on influencing recreation decision-making, one might hypothesize that specialists (more experienced subjects) would be less likely to change choices when provided with information (consistent with their specialty) and that persons who differentiate recreation choices along activity dimensions might be more likely to make use of new information than those differentiating in setting terms. Further, different decision models might be tested with the hypothesis that specialists in one form or another might show different decision-making styles than non-specialists.

REFERENCES

- Bieri, J. Cognitive complexity and personality and development. Harvey, O., ed. Experience, structure, and adaptability. New York: Springer Publishing Co., Inc.; 1966: 13-37.
- Blocher, D.H.; Siegal, R. Toward a cognitive developmental theory of leisure and work. The Counseling Psychologist; 9(3): 33-44; 1981.
- Bryan, H. Leisure value systems and recreation specialization: The case of trout fishermen. Journal of Leisure Research. 9:174-187; 1977.
- Burch, W. R., Jr. The social circles of leisure: completing explanations. Journal of Leisure Research. 1(2): 125-147; 1969.
- Devall, W. The development of leisure social worlds. Humbolt Journal of Social Relations. 1(1): 53-59; 1973.
- Ditton, R. B.; Goodale, T. L.; Johnsen, P. K. A cluster analysis of activity, frequency, and environment variables to identify water-based recreation types. Journal of Leisure Research. 7: 282-295; 1975.

- Driver, B.; Brown, P. Contributions of behavioral scientists to recreation resource management. In: Altman, I.; Wohlwill, J., eds. *Behavior and the natural environment*. New York: Plenum Press; 1983: 307-339.
- Driver, B.; Tocher, R. Toward a behavioral interpretation of recreation engagements, with implications for planning. In: Driver, B., ed. *Elements of outdoor recreation planning*. Ann Arbor: University of Michigan Press; 1970: 9-31.
- Flavell, J. Analysis of cognitive developmental sequences. *Genetic Psychology Monographs*. 86: 279-350; 1972.
- Hammitt, W.E.; McDonald, C. D. Past on-site experience and its relationship to managing river recreation resources. *Forest Science*. 29: 262-266; 1983.
- Kelly, J. R. Leisure socialization: a replication. *Journal of Leisure Research*. 9: 121-132; 1977.
- Krumpe, E. E. Redistributing backcountry use by a behaviorally based communications device. Ph.D. dissertation. Ft. Collins, CO: Colorado State University; 1979. 156 p.
- Krumpe, E. E.; McLaughlin, W. A model of recreationists' decision-making process. In: Lime, D., coord. *Forest and river recreation: research update*. Agricultural Station, Miscellaneous Publication 18. St. Paul, MN: University of Minnesota; 1982: 94-99.
- Levy, J. *Play behavior*. New York: John Wiley; 1978.
- Moore, G. Theory and research on the development of environmental knowing. In: Moore, G.; Golledge, R., eds. *Environmental knowing*. Stroudsburg, PA: Dowden, Hutchinson, and Ross; 1976: 138-164.
- O'Leary, J. T.; Field, D. R.; Schreuder, G. Social groups and water activity clusters: an exploration of interchangeability and substitution. In: Field, D.; Barron, J., Long, B., eds. *Water and community development: social and economic perspectives*. Ann Arbor, MI: Ann Arbor Science; 1974: 195-215.
- Parker, S. Leisure in the life cycle. In: Van Doren, C.; Prinddle, G. B.; Lewis, J. E., eds. *Land and leisure*. Chicago, IL: Maaroufa Press; 1979: 25-35.
- Prusansky, S. How to use SINDSCAL: a computer program for individual differences multidimensional scaling. Murray Hill, NJ: Bell Laboratories; 1975. Unpublished report.
- Rosch, E.; Mervis, C. B.; Gray, W. D.; Johnson, D. M.; Boyes-Braem, P. Basic objects in natural categories. *Cognitive Psychology*. 8(3): 382-439; 1976.
- Schreyer, R.; Lime, D. W.; Williams, D. R. Characterizing the influence of past experience on recreation behavior. *Journal of Leisure Research*. 16: 34-50; 1984.
- Schreyer, R.; Roggenbuck, J. W. The influence of experience expectations on crowding perceptions and social-psychological carrying capacities. *Leisure Science*. 4: 373-394; 1978.
- Sofranko, A. J.; Nolan, M. F. Early life experiences and adult sports participation. *Journal of Leisure Research*. 4: 6-18; 1972.
- Tuan, Y. *Space and place: the perspective of experience*. Minneapolis, MN: University of Minnesota Press; 1977: 235 p.
- Ward, L. M. Multidimensional scaling of the molar physical environment. *Multivariate Behavioral Research*. 12(1): 23-42; 1977.
- Wellman, J. D.; Roggenbuck, J. W.; Smith, A. C. Recreation specialization and norms of depressive behavior among canoeists. *Journal of Leisure Research*. 14: 323-340; 1982.
- Williams, D. R. Relationship to place as a determinant of outdoor recreation preferences. Logan, UT: Utah State University; 1980. 116 p. Thesis.
- Williams, D. R. Recreation engagements: rethinking the stimulus in activity clustering research. In: Iso-Ahola, S. and Howe, C., eds. 1983 Symposium on Leisure Research: abstracts; 1983 October 2-5; Alexandria, VA: National Recreation and Park Association.
- Yoesting, D. R.; Burkhead, D. L. Significance of childhood recreation experience on adult leisure behavior: an exploratory analysis. *Journal of Leisure Research*. 5: 25-36; 1973.
- Yuskaitis, J. Leisure attitudes in relation to locus of control orientation under conditions of work and retirement. New York: City College of New York; 1981. Unpublished M.A. Thesis.