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RECONCEPTUALIZING THE MOTIVE/ENVIRONMENT LINK IN RECREATION CHOICE BEHAVIOR

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ABSTRACT: Effective inventory, management, and planning for recreation resources depend upon knowing why persons choose certain environments to attain specific goals, and what elements in those environments facilitate goal-attainment. Research focused on relating motives for participation to specific components in the environment has had only limited success. This paper proposes an alternative organization of the motive-behavior/environment relationship intended to improve the predictive power of this line of research. The model is founded on an attempt to separate the process of recreation behavior from the content (i.e., the specific overt manifestations of behavior). The process of recreation behavior is seen as the attempt to attain a desirable state of consciousness which is experienced as satisfaction in recreation.

INTRODUCTION

Perhaps the most significant contribution of social scientists conducting recreation research during the last decade has been to focus attention on the goal-directed nature of recreation participation. We have come to dismiss recreation as being random or spontaneous behavior, conceiving it as directed, purposeful behavior intended to realize specific outcomes for the individual. Further, research has supported the notion that these outcomes, rather than the activity pursued per se, motivate participation.

These new perspectives appeared to have provided a model of the recreation resource management process that allowed direct comparison to other resource production efforts. These psychological "outcomes" became construed as products delivered by the resource management process. Ostensibly, they could be measured and evaluated, allowing them to be compared to other products, both recreational and non-recreational, which might be produced by the resource. Lack of such comparability has troubled recreation resource specialists for years.

Further, there was the possibility of defining direct links between given products and environmental conditions leading to their production. Particular patterns of behavior (e.g., different recreational activities) in given environmental settings would yield specific, identifiable kinds of products. If these could be cataloged, then planners could develop a means for inventorying outdoor resources according to the products they yield, and specify the conditions necessary in those settings for the production process to occur. This would be analogous to inventorying and managing a forest environment in order to maximize the production of certain classes of timber products. In fact, a major resource management planning system, the Recreation Opportunity Spectrum (ROS), is being implemented based on these assumptions.

While insights from social science have resulted in a marked sophistication in understanding the nature of the recreation resource in general, the dreams of defining the production process in operational terms have been slow in coming to fruition. Studies have reported differences on scales developed to measure motivation for participation across groups engaged in different outdoor activities (Knopf 1972), among different persons engaged in the same activity in the same setting (Schreyer and others 1976; Schreyer and Nielson 1978) and in different outdoor settings (Knopf and others 1983). But while studies yield differences on motive scales attaining statistical significance, the studies generally fail to register substantial differences in absolute scale values. In other words, these studies have not provided compelling evidence for variations in motivation which can be attributed to either activity or setting.

After more than a decade of intensive research on the dynamics of recreation choice, capacity to predict either behavioral or environmental choice through knowledge of motive scores has yet to be demonstrated. It is possible to argue that such scales are not intended to predict at high levels of specificity. This leads to broader questions, however, concerning how the recreation product output model is in fact expected to work, and which variables are necessary to provide what degree of predictive

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power. Such questions have theoretical as well as pragmatic implications.

Our purpose in this paper is to take a closer look at the conceptual bases for understanding the link between motivation and the choice of recreation behaviors and environmental settings. We will begin by providing a brief statement of the model of choice behavior as it currently exists. We will then examine a number of issues concerning application of the model. Finally, we will show how a different organization of the same variables might increase the strength of the link between psychological variables and environmental behavior. It is not our purpose to provide a new model of human behavior. Rather, we wish to provide an alternative perspective as to how the model might be elaborated through a more useful specification of the various concepts and their interrelationships.

MOTIVATION FOR PARTICIPATION AND ENVIRONMENTAL CHOICE

The prevailing view of recreation participation suggests that a person selects a given behavior in a specific environment to attain desired psychological outcomes. In essence, the person is motivated to pursue certain behaviors to gain psychological rewards. Thus, outcomes are operationalized in terms of identified psychological rewards.

The individual is assumed to be "rational," selecting from a known repertoire of responses those behaviors which, based on past learning and reinforcement, are judged most effective in obtaining the targeted rewards. By definition certain behaviors are consequences of motivations to obtain specific desired psychological outcomes. Figure 1 illustrates the components of this model of recreation behavior, which is in reality a specific application of a general model of human behavior.

The environment plays a major role in this model. Different environments provide varying opportunities to engage in certain behaviors. This affects the repertoire of responses available to the individual. Conversely, certain environments may be sought precisely because they allow behaviors which will yield the desired outcomes. Thus, the link between motivation and behavior cannot be understood in itself, but must be seen as motivation X leading to behavior A in environment B. It is the combination of behavior and environment that defines the "experience opportunity setting" (Driver and Brown 1978), the fundamental unit for identifying the products which may be produced from a recreation resource.

If these assumptions are valid, then it is necessary to be able to predict what outcomes are produced by different combinations of behaviors and environments. If this is not the case, then there is no basis for operationalizing the concept of desired outcome as a planning/management tool, except as an anecdotal heuristic that helps managers better appreciate that "people are different." The following section will describe problems which have been encountered in attempting to establish these relationships.

Issues in Understanding Motivation--Behavior/Environment Linkages

While the model shown in figure 1 suffices as a general explanation of human behavior, we must be careful about applying it to any specific circumstance. It is one thing to assert that a given motive will result in a person acting on it, and quite another to say that an observed behavior explained ex post facto was the direct inevitable consequence of a certain motivation. While it is possible to argue that the effort to satisfy certain needs involves specific behaviors in a given environment, that does not satisfy the conditions for determining which aspects of either the behavior or the environment will allow for goal attainment.

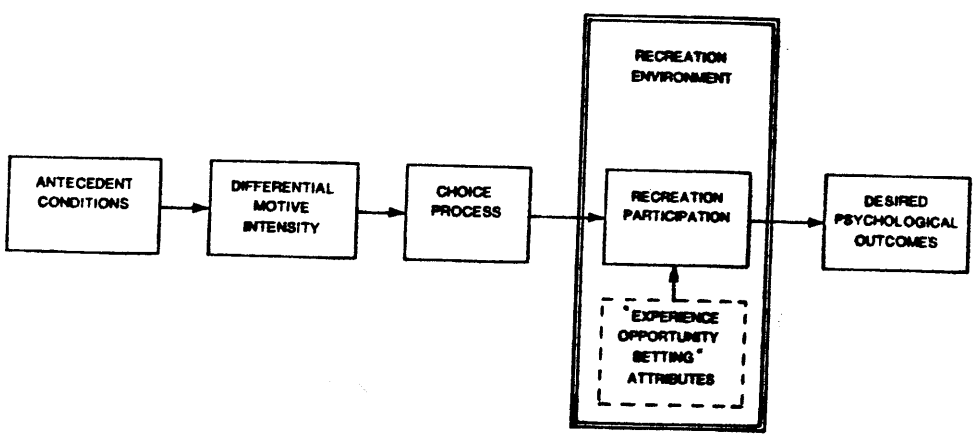

Figure 1.--Basic model of recreation behavior.

The Directness of the Link

A key consideration in the attempt to classify recreation behavior is the extent of the directness of the link between behavior and motivation. Keep in mind that there are many ways in which behavior may be initiated. Models presented in recreation motive research imply a more direct correspondence than is likely present. Three aspects of this problem will be discussed in this section. The first has to do with the level of generality at which the various concepts are organized. The second involves the problem of motive intensity. The last concerns definitions of the concepts being used.

Levels of organization.--We assume that there are elements of an environment which facilitate goal attaiment. If that were not true, it would make no difference where a person was at any particular point in time. We are perplexed, however, by the seemingly insurmountable challenge of not being able to identify deterministically the elements of an environment which actually serve as facilitators.

The major issue we are dealing with here is how to organize the concepts of motive, behavior, and environment in such a way that we know what is to be predicted. For instance, the term "behavior" can mean "to recreate," or it can mean "to go for a two-day backpacking trip with a close friend." It can also mean spending the greater part of the day while on that trip sitting in a comfortable place reading and engaging in casual fishing. Environment can mean "the outdoors" or "a wilderness" or "the Bridger Wilderness" or "the southern tip of Green River Lake at the north end of the Bridger Wilderness." At what level is motive to predict either behavior or environment?

While a set of scales can be devised to measure "motives," there is no guarantee that these do not relate to behaviors or environments at differing levels of organization. One motive may relate to the broadest of behavioral categories, while another may be able to predict a much narrower set of behaviors. This can also be applicable for the range of environmental conditions in which such behaviors may be pursued. Part of this problem may be due to the fact that we may not be controlling for the level of organization of motives as well. We could start at the most general level of "approach positive outcomes," move down to the desire for "affiliation," then to the need for "doing things with the family" and finally to "kinship bonding." Each will be more specific in its implications for behavior. Unless the level of focus is made a direct element of research, these relationships will continue to be masked by spurious influences.

Motive intensity.--Motive scales request a rating by the individual of the relative influence on the specific behavior of the reasons listed. The assumption is, the more important the rating, the more direct causal link between that motive and the behavior being studied. This is not necessarily the case. General motives scales may not be able to capture the overall importance of behavior to need-fulfillment.

For instance, two persons receive a questionnaire upon completion of a river trip, and are asked, among other motive questions, how important was the opportunity for escape. Both mark "of utmost importance," and both are correct. One was there, however, without strong allegiance to the particular activity. He had a strong desire to get out of town for the weekend, and river-running seemed like a good thing to do at the time. Going for a ride in the hills would have done just as well, as would going to the movies. The other was a person who carefully evaluated every plausible alternative for meeting her needs at the time, and concluded that only a float trip on that particular river in that particular setting would yield the exact requirements she needed to gain a sensation of escape. Both persons have very different resource requirements, exhibit very different behaviors on the river, demand different support facilities, have differing opinions about management and conflict when they interact. Yet both elicited identical responses for the motive scale. Thus, the score of intensity for a motive scale may not be an accurate predictor of behavior, because relative intensity is not accounted for.

Conceptual semantics--A major part of this problem may result from problems with the semantics of recreation. Few concepts have been defined with precision, resulting in unclear conceptions of how people are likely to behave, or to choose recreation environments. For instance, the Recreation Opportunity Spectrum is founded upon a continuum of primitive to urban experience (Buist and Hoots 1982). Is it really the "degree of primitiveness" that constitutes the specific aspect of outdoor environments which dictate the character of outcomes generated? We agree that primitive environments provide opportunties for self-reliance and solitude, for spiritual experience and challenge (Brown and others 1978). But can we conclude that urban environments do not? Ask any street gang member about self-reliance and challenge. Ask devout believers of any faith where they get their spiritual experience. As for solitude, why do we have locks on bathroom doors?

This underscores the problem of a possibly misplaced focus on what aspects of the environment are important to people in the outdoors. Even if the "primitive-urban" continuum as posed by ROS is proved to be statistically associated with variation in the delivery of outcomes, we cannot necessarily conclude that we have construed the correct aspect of environmental variation. How much of what we describe as "primitive" really implies other environmental attributes that covary with

primitiveness, but are not really the same? For instance, research in environmental psychology has generated findings that one of the most fundamental dimensions along which people differentiate environments is natural/manmade (Ward and Russell 1981). This may not be equivalent, however, to the primitive/urban dimension. The former may have to do with the presence or absence of certain patterns of stimulation which may be more or less preferred in processing information about the environment (Kaplan and Kaplan 1978). The latter may have more to do with the presence or absence of facilities which may be more or less preferred in accommodating levels of physical comfort in the environment (Schreyer and Roggenbuck 1978).

The Nature of Decisions

The third box in figure 1 shows that the link between motivation and environment/behavior is through some sort of choice process. Decision-making is extremely complex; recreational choices are influenced by certain aspects of decision-making which tend to confuse our analysis of the motive-behavior/environment link. Two of these will be described below. One has to do with the way motives are involved in decisions; the second deals with the regularity of decision-making.

Layers of decision-making.--When we ask a person what reasons were important for engaging in a particular activity at a specific point in time, we assume the answers they give are directly relevant to that participation. There are several layers, however, of decision-making underlying the choice to engage. Consider the case of a person choosing to go canoeing on Jackson Lake next Saturday. At one level, there are a set of reasons why the person elected to engage in recreation as opposed to non-recreation alternatives, such as doing chores or fulfilling social obligations. At a second level, there are a set of reasons why canoeing was chosen for recreation over many other possible alternatives. Why does the person want to canoe rather than hike, assuming he/she does both? At the third level, there are a set of reasons why Saturday at a certain time was appropriate for this behavior, as opposed to other possible times. At the fourth level, there are reasons why Jackson Lake was chosen instead of the Snake River.

All of the reasons involved in all of the levels of decision-making will be included in the person's self-report of reasons for engaging in that specific behavior. From one perspective, they are indeed all relevant to the situation, and it is appropriate to consider them to gain an overall profile of the activity. Motives, however, precipitating the general decision to recreate will not discriminate among specific recreation activities. Motives precipitating the decision to engage in canoeing as opposed to hiking will not be able to distinguish between different types of canoeing opportunities for planning/inventory purposes. In other words, the reported motivations for making a choice to participate may not be sufficiently detailed to allow for the definition of an experience opportunity setting.

Routinized decision-making.--Rational models of decision-making imply a direct correspondence between the need state at a given point in time and choice of behavior. Humans, however, have the capacity neither to exhaustively analyze the requirements for an optimal existence nor to analyze the consequences of every behavioral alternative. Indeed, humans might be more characterized by the regularity of behavior patterns.

The patterns of behavior one adopts may most likely be continuations of appropriate forms of expression one has learned over time rather than specific and rational attempts to fulfill existing needs of the present. One's desire to go canoeing, for example, may really reflect the fact that canoeing is something that person does every August. Over time the behavior has satisfied needs which have surfaced in the past. There may be a package of outcomes that a person will gain through such participation. The specific behavior, however, may have little to do with the need state of the individual at the time of decision.

We must understand that the more routinized a behavior, the more likely that motives will be general and not specific to the behavior itself. The study of motives, however, usually ties them to the specific behavior and specific environmental features. An alternative behavior and/or environment may have been more functional, given one's motives at the point of decision. But the individual continues engaging in what has historically been beneficial. As long as some motives are serviced, the cost of searching for new behavioral options is avoided. The behaviors and the need state are only incompletely linked.

Antecedent Conditions

It is also possible to assert that the link of motive to behavior and environment cannot explain the situation unless more information is available. Such information may have to do with what are often referred to as "antecedent conditions" (see figure 1). These may have to do with the nature of individual differences that will determine which motives are likely to initiate behavior, and what behaviors and environments are seen as being best suited to attain the desired outcomes. Such forces may also influence the nature of the choice itself. Beyond mentioning that they exist, there has been little in the way of systematic research inquiry into what facets of individual diversity may be most important to targeting motives to specific behaviors and environments.

One of the most important of these factors is the social milieu. It has often been suggested that social motives themselves may be among the most important reasons for recreation participation. Social dynamics may do much to mask the link between motive and environment/behavior. Given that many environments and behaviors may be selected to attain various outcomes, the specific behaviors and environments observed may be more indicative of socio-cultural values about participation than of the inherent characteristics of either.

We often recognize the importance of obligate functions, or the tendency to go along with certain types of behavior because friends or family are so engaged. Such behavior removes direct need fulfillment from the choice process, except for the social needs. As such, a person's answers on a motive scale may reflect nothing more than a social mythology, a shared belief about what one is supposed to be getting from the participation. People tend to play out social scripts, which makes the process of the behavior more significant than the outcomes. Thus, we cannot understand the link between motive and choice unless we know the social context.

The amount of information available to the individual may also affect the link between motive and choice of a specific recreation setting. Persons may select generic types of environments in which to recreate based on the assumption that the attributes desired will be present. There may be little correspondence, however, between what is encountered and what one desires. Decisions can often be made based on images which are not entirely correct. For instance, a person may choose to visit a specific national park assuming it will have visitor services generally associated with such environments, though this may not actually be the case.

Thus, if research measures motives which resulted in the choice of a particular environment, but the environment does not actually conform to the image that resulted in the choice, then the link between the two will be assumed to be stronger than it actually is. The likelihood of this occurring increases to the extent that conditions in environments are changing. Rapid shifts in the nature of social interaction, managerial regimentation, and facility development can increase the likelihood that reported motives represent conditions which may not actually be in the environment under analysis.

RECREATION STATES AND GOAL-ATTAINMENT

These issues, while troubling, should not be insurmountable. Rather, we believe there is a need for us to examine the motive link to environment and behavior in light of these concerns, and to try to begin identifying approaches to the problems that will move in the direction of greater predictive power.

We wish to propose an elaboration of the motivation-based recreation behavior model. It is founded not only on the addition of key concepts required to predict specific behaviors and environmental characteristics sought, but also on a conceptual clarification of the meaning of motivation. The approach is founded on a systematic separation of elements of the model which describe the process of recreation behavior and those which characterize the content or specific manifestation of that behavior. It also seeks to describe the increased significance of antecedent conditions influencing the working of the model.

Figure 2 presents the components of this model. In the following sections we will explain the nature and significance of the

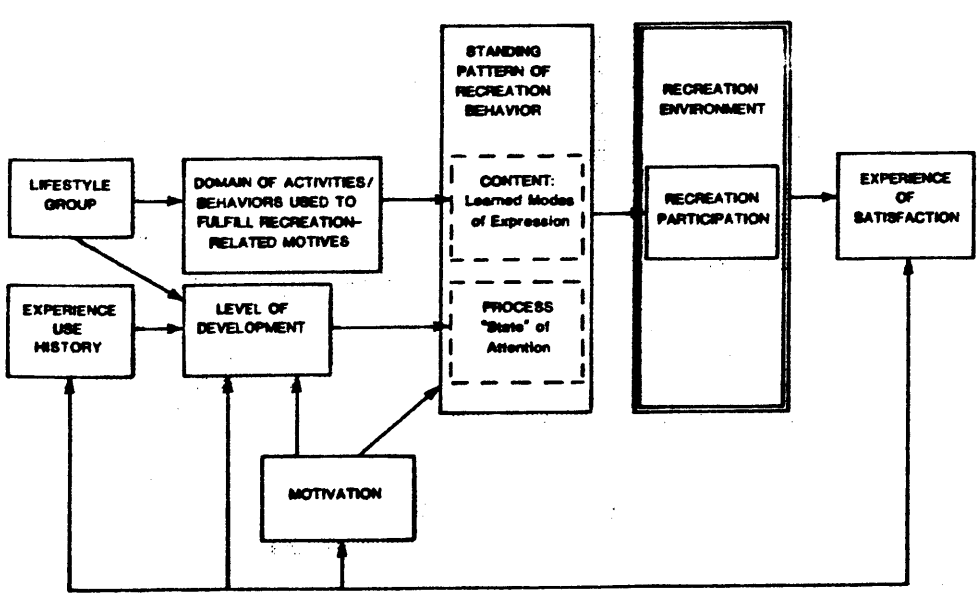

Figure 2.--Elaborated model of recreation behavior.

interrelationships among these components. First, we will examine the process of recreation behavior from a cognitive perspective. Next we will show why it is useful to consider "recreation experience preferences" (or what we measure to represent motivation) as the content of recreation participation. We will then show how the recreation environment fits within this model. Finally, we will discuss some issues related to the measurement of these concepts.

Recreation as On-going Process

State vs. outcome.--In resource management-based research, we have tended to emphasize identifying and inventorying the outcomes of various choice processes (which are measured as "recreation experience preferences"). Motivation is assumed to be part of the process by which outcomes are attained. We believe it is more useful to consider the various motives as the content of recreation behavior, and that the process is more correctly expressed through the dynamics of the states of attention applied to such behavior.

An increasing amount of research is being pointed toward understanding the subjective state of the experience of leisure (Mannell 1982; Dirkin 1983). The focus is less on documenting the "products" of leisure and more on understanding the processes or psychological states experienced during leisure involvement. This research has developed along two fronts. One seeks to define what are the essential components of what people describe as leisure (Unger and Kernan 1983). That is, what is leisure itself; how do people know leisure when they experience it? The second is more cognitive in nature, concentrating on the more extreme states of consciousness afforded by human behavior, commonly described as flow or peak experiences (Csikszentmihalyi 1975; Murphy 1977). This research explores the requisites for bringing these states into existence.

Process-oriented research reports what the person experiences while recreating. This may be what we describe as "satisfaction" in progress. There is the tendency for people to describe the subjective feeling as "fun." The rationale for engaging in recreation behavior is often described as the desire to "have fun." This is usually dismissed by motive theorists as an inaccurate expression of the "real" reasons why one recreates, which are to attain rather specific products that are delivered by conditions present in environments.

We believe however that there is more than meets the eye to the concept of "fun." Fun--the enjoyment of a process--may in itself be a motivator for engagement in outdoor recreation, a notion which may have little to do with meeting needs created in non-recreation environments. To the extent that recreationists make decisions based on "having fun," the predictive utility of traditional motivational models may break down. Our desire now is to describe the concept of "state" as a human motivator, and to suggest how that concept can help us better organize our conceptions of the relationships between recreational motives and behavior/environment choices.

The meaning of "fun".--The dynamics of leisure involvement are in fact more complex than previously described, as there are many possible states which are subsumed under the notion of "fun." The varied state could hypothetically be arrayed along a developmental continuum from least to most complex in terms of the degree of involvement of the cognitive arousal process.

At the most fundamental level are states involving involuntary attention (James 1892), where consciousness is free to attend to whatever is inherently gripping. By definition, there are no distractions, as there is no need to suppress unwanted stimuli (Kaplan 1978). Such processes may be most frequently associated with casual removal from one's more mundane surroundings, perhaps described best as "letting the mind wander." The mind is free to follow its will; there is little in the way of concentrated involvement.

As we move up the continuum, we find states that could be described as sensory arousal. These states would involve momentary and pleasurable stimulation of sensory equipmer beyond its rested homeostatic level. At the higher end of the continuum are states involving flow experiences (Csikszentmihalyi 1975), evoking sensations of self-environment fusion and loss of time-consciousness. States at the top of the continuum might best be epitomized by what Maslow (1971) described as peak experiences, perhaps the ultimate display of human cognitive capacity.

Why are these states relevant to recreation? From a cognitive perspective, there is value in being able to pay attention only to those stimuli which one desires to attend. Taken as a process, we can say that satisfaction represents the ability of the person to engage in desired behaviors, paying attention to whatever will attain a desired state. When constraints offered by the environment are not sufficiently critical to cause the person's attention to deviate from the tasks at hand, that person can be described as satisfied. The feeling the person has is one of having fun.

The capacity to engage in a desired degree of attention is experienced as positive by the individual. We believe the primary value of recreation lies in its ability to deliver these kinds of states. We posit that people are oriented to, and make choices based upon, the prospect of attaining the state itself, rather than the various externally defined products that may be manifested through those states. Since the subjective feeling associated with any of these states, regardless of location on the continuum, can be experienced as "fun,"

recreationists are being accurate in their stated intent "to have fun" as a major motivation for recreation participation.

If there is a desire to be able to control the circumstances of one's attention, and if the opportunities to do so are more strongly limited in day to day situations, then more emphasis may be placed upon leisure situations as vehicles to attain such states. The process of the state is what people are attracted to.

In figure 2 we represent the process of attaining a certain state as being part of the standing pattern of behavior, the routine pattern of participation which characterizes the way a person goes about engaging in recreation. The cognitive process, however, is only one component of that standing pattern. In order to understand the behavior, we must also know what characterizes the content of that behavior. This is where motivation comes in.

Linking Motives to States

Where do our traditional conceptions of recreation motives in general and motive scales in particular fit withn the context of this state orientation? People do identify motivations which they say precipitate leisure behavior beyond mere fun. Our model still deals with goal-directed behavior, but it simultaneously calls for a much more integrated or global concept of goals. We believe that motives should be construed in terms of a relatively limited set of cognitive states that people pursue during leisure.

We recognize, of course, that it has been possible to develop a number of complex motive scales which people, through their responses, seem to affirm. What is being responded to however? Are these scales a measure of what people are searching for, or of learned modes of expression which yield access to the desired cognitive states? We believe that our current use of motive scales tends to intermingle goal-directed behaviors with modes of expression. The concept "experience nature" could be a means by which people engage in behaviors designed to get into cognitive states at all points along the continuum. As such, we would not expect it to be very predictive of behavior. Similarly, persons may have learned to attain a level of sensory arousal through different paths, one doing it by way of achievement, another through leadership/autonomy.

If the states people pursue are few and the routes to them are many, this implies a great deal of potential functional equivalency across a wide range of activities and settings. We believe that people tend to choose particular activities in specific environments for such innocuous reasons as convenience, access, time available, money, and familiarity. The specific domain of activities people select from is circumscribed by their socio-cultural value system, which in turn is strongly influenced by the opportunities that are immediately available.

While most discussions of recreation behavior acknowledge these facts, they tend not to recognize that these very variables limit the capacity to predict preferred behaviors and environmental arrays. From the perspective of ultimate function, these behaviors are highly interchangeable. Directedness toward particular activities and settings thus becomes a matter of opportunistic convenience rather than a matter of rational examination of the differential rewards which might accrue from a host of alternatives.

The focus for research should not be on motives as predictors of behaviors and environments. Rather, it should be on those elements in the individual's environment that determine which modes of expression are linked to which cognitive states. These variables will allow for a more useful prediction of behavior and environmental choice. We are thus proposing that the notion of motive must be considered as part of three-part construct including antecedent conditions, motive (learned pattern of behavior) and cognitive state.

How can the indicators of cognitive state best be represented? This remains to be determined. In figure 2 are shown two factors we feel, however, are of major potential importance: experience use history and lifestyle. Experience use history relates to the nature and extent of information available to persons in making recreational choices. It is also likely related to the extent of progression along the developmental continuum of cognitive states applied to recreation.

The social milieu, the values expressed by the lifestyle with which the individual identifies, will provide directed information concerning both behaviors and environments seen as desirable to attain various cognitive states. Cultures will likely also provide input into the extent to which certain states have status value or are seen as being "unhealthy." Thus they will also influence the level of development sought through recreation.

To the extent that these lifestyles are shared across wide segments of a culture, there will be a consistency in patterns of recreation participation. Within this model, recreation planning involves not so much providing the opportunity to engage in behaviors facilitating certain outcomes as it involves facilitating certain generally accepted modes of expression which allow persons to attain cognitive states.

The Role of the Environment

We have already stated that environment features do make a difference to persons in terms of their desired experience. There continues to be

the question of how the environment should best be represented in light of this model. A basic concern is how to define the appropriate level of specificity at which attributes should be represented in predictive models. How stringent are people's requirements for the attainment of desired states?

It is possible to construe the character of an environment as ranging along a continuum from macroscopic to microscopic. At the macroscopic level, we see environments basically as settings, as holistic environments which affect behaviors by very broad and generalized features perceived as a whole by the individual. At the microscopic level of analysis, we see environments as an array of attributes, as collections of individual entities, each of which may have the power to impact certain aspects of human behavior.

We believe that the most useful organization of environment for the study of behavioral choice is at the holistic level rather than at the attribute level. This presumption seems more in line with emerging conceptions of the organization and operation of human cognitive processes, and the attendant limitations in our capacities to evaluate a broad range of features as we make discriminations among environments. Rather, persons tend to match environments (as well as other objects or aspects of life) to broadly defined representatives of categories of similar environments, or "prototypes" (Rosch 1978; Mervis and Rosch 1981).

We recognize, of course, that perceptions will vary from most specific to most general. We feel, however, that the major dimensions of recreation behavior are aligned with more general organizations of environment than traditional paradigms in outdoor recreation research acknowledge. We believe people do not search for specific elements of the environment as much as they search for settings which will allow them to behave in the ways they desire--for settings which will give them sufficient leeway to attend to that which will allow for the attainment of the desired cognitive state.

This line of thought may initially sound consistent with the notion of the "experience opportunity setting" as described in the literature (Brown and others 1978). But here we are implying much more looseness of structure on what needs to be present in the environment. As remarkably resourceful and adaptive organisms, humans have considerable capacity to engage in desired behaviors under a broad range of environmental situations (Stokols 1978). Much of this position is founded in our belief that outdoor recreation behavior is primarily used by people to help them maintain certain states of consciousness. We feel that people can be extremely adaptive in attaining these states, and should not be construed as being passive victims of whatever external forces may be present (Knopf 1983). As long as outdoor settings meet minimum criteria for behavioral flexibility to allow one to pay attention to desired stimuli, then the larger portion of the collection of environmental attributes becomes virtually irrelevant.

This approach raises a new wave of unanswered questions. At what level are environmental features interpreted by recreationists acting in those environments? At what level can the character of the environmental setting be defined? At what level are constraints on free initiative perceived?

While the answers to such questions must await future research, we believe there are few elements in outdoor settings which functionally serve to constrain free initiative beyond providing the basic capacity to engage in an activity (one does need water for canoeing). We feel that the most important factors influencing free initiative lie not in the external environmental backdrop, but in the social milieu in which the recreation activity takes place, and in the managerial policies controlling that social milieu.

As social interaction is very fluid, it becomes difficult to associate particular patterns of interaction with specific forms of environmental setting (Lee 1972). Physical setting is seen not so much as a facilitator or controller of behavior, as it is a repository for the social definitions of the appropriate behaviors.

Resource inventories focus on physical characteristics because they are easy to measure. We focus on them, however, for the wrong reasons. The presence of water obviously allows the pursuit of canoeing. However, it is the social definition of the setting that will determine what behaviors will take place. Thus, we believe that those elements which most likely constrain free initiative (and therefore thwart the attainment of the desired states) are least likely to be captured in traditional motive-environment choice models.

Measurement Considerations

If the concept of motivation to participate is ever to be successfully captured for recreation planning/management purposes, it must be carefully separated from the modes of expression. A key is to make the distinction between the initiation of behaviors (motivation) and the expression of that behavior (learned mode).

Such a process might occur in a two-step fashion. First, it would be necessary to identify critical outcomes. Recognizing the generality of the different levels of decisions about participation described previously, it would be necessary to identify which would discriminate individual choices for engaging in certain activities in specific settings. The combination of such critical outcomes with key antecedent variables (experience, lifestyle) should predict a given mode of expression.

The mode of expression would then be tied to states that people are trying to attain in order to describe the standing pattern of behavior. These variables represent the experience opportunty setting characteristics of recreation by representing social forces in the physical setting. The question then is how to describe such a concept.

We believe that one way to help the process is to develop an expanded conception of the dimensions required to inventory learned modes of expression. Since we wish to discriminate this concept from the traditional motive measure, we need to focus more directly on the link between behavior and environment. Our earlier arguments that people respond to environments at the broad level of organization as settings as opposed to the specific attributes present suggests that such indicators should accordingly be more holistically descriptive.

In this sense, the primitive-urban continuum proposed in ROS is a useful dimension. It is but one dimension, however, and the identification of alternate predictors of important differences in mode of expression is a challenge yet to be unravelled by research. Nevertheless, we might find that the process-oriented inquiry examining the subjective states of leisure is already offering some clues. The key is to identify dimensions of human activity that represent contrasting modes of expression, which ultimately would affect the capacity to attain a desired state. Continuums such as active/passive, social/solitary, experiential/informational, arousal-seeking/arousal-reducing, and comfort/asceticism are potential candidates for research.

CONCLUSIONS

What we have presented here is inherently frustrating because it adds another layer of complexity to an already complex situation. Further, it has disturbing implications for the applied efforts to inventory recreation resources for planning and management purposes. We are talking about defining recreation settings in terms of appropriate modes of behavior and social settings rather than in terms of physical features. This does not lead to easy application, and renders physical inventory of extremely limited utility.

We are essentially offering another means of organizing a body of concepts about outdoor recreation behavior. We do not intend to invalidate the traditional conceptions, as much as to put them in a different context. We recognize that virtually everything we have offered is conjecture. Our motives are to stimulate more systematic and directed debate concerning which organization of reality is the most useful for the purposes to which these inquiries are ultimately to be put. In so doing, we hope that this mode of expression of those motives will allow us to attain the desired level of consciousness!

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