

## **Recreation Specialization: Re-conceptualization from a Social Worlds Perspective**

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This paper initiated development of a theory of recreation specialization from a social worlds perspective and provided empirical testing for some of the stated propositions. Recreation specialization was re-conceptualized as 1) a process by which recreation social worlds and subworlds segment and intersect into new recreation subworlds and 2) the subsequent ordered arrangement of these subworlds and their members along a continuum. At one end of the continuum is the least specialized subworld and its members and at the other end is the most specialized subworld and its members. A series of eight propositions which linked specialization with elements of social worlds and the previous work of Bryan (1977) were stated. Empirical hypothesis tests regarding group differences in resource dependency, level of mediated interaction and importance attached to activity-specific and non activity-specific elements of the recreation experience provided strong support for three of the propositions of the conceptual framework. Although initial efforts at theory development were supported, much conceptual and empirical work remains. This paper provides a starting point for a focused line of recreation specialization research.

**KEYWORDS:** *Recreation specialization, specialization, social worlds, subworlds, segmentation*

### **Introduction**

To explore the potential diversity of recreationists within an activity, Bryan (1977) proposed the concept of recreation specialization based on the concept of leisure social worlds (Devall, 1973; Shibutani, 1955). Specialization was defined as "a continuum of behavior from the general to the particular reflected by equipment and skills used in the sport and activity setting preferences" (Bryan, 1977). Through inductive reasoning and on-site interviews, Bryan identified four types of anglers, with each having a unique place on the specialization continuum. At the lower end were occasional anglers, followed by generalists, technique specialists and finally, at the upper end, technique/setting specialists. He suggested that the typology and location of anglers on the continuum are reflected in such phenomena as frequency of participation, setting preferences, technique

preferences, choice of equipment, importance of catch, social setting of activity and preferences for resource management.

Following Bryan (1977), a number of authors have applied the concept of recreation specialization. Graefe (1980) suggested that level of fishing participation was a surrogate measure for fishing specialization. Those anglers who fished most often were also characterized by greater involvement with equipment, higher levels of self-reported skill and participation in a wider variety of fishing settings. Wellman, Roggenbuck and Smith (1982) examined the applicability of specialization in terms of the explanation of the individual's attitudes toward depreciative behaviors. Their research provided only limited support for the hypothesized relationship. Kaufman (1984) looked at the relationships between canoeists' level of specialization and resource-related attitudes and expected rewards. The relationships with specialization were strong for expected rewards of achievement, exercise and equipment testing; moderate for exploration and temporary escape; and weak for nature and group affiliation. Donnelly, Vaske and Graefe (1986) extended the application of specialization to comparisons of individuals engaged in different recreation activities. They suggested that activities can be classified according to a specialization hierarchy and that the specialization concept can be used to compare individuals who participate in different activities and subactivities.

Although previous researchers have contributed to understanding the diversity of recreationists, they have not advanced Bryan's conceptualization of recreation specialization to any great extent. Also, previous work has failed to recognize that Bryan's definition of specialization and supporting propositions are circular in their reasoning. When Bryan (1977) defined specialization as being "reflected by equipment and skills used in the sport and activity setting preferences," this definition is also an explanation. Therefore, it is a tautology (Chafetz, 1978). This is so, since specialization and subsequent propositions are both defined and measured in the same terms. In view of this problem, the objectives of this paper were to initiate development of a theory of recreation specialization based on a social worlds perspective.

### Literature Review

Early efforts to predict activity involvement and participation showed that traditional social aggregate variables could distinguish between participants and non-participants in outdoor recreation activities (Outdoor Recreation Resources Review Commission, 1962). However, when non-participants were eliminated from the analysis social aggregate variables such as occupation, income, age, education or place of residence failed to explain participation in leisure activities (Burch, 1969; Field & O'Leary, 1973; O'Leary & Pate, 1979; Romsa & Girling, 1976).

Burch (1969) identified two failings in the use of standard social aggregate variables. First, there is a lack of theory and appropriate hypotheses.

Second, common data collection techniques require that statistical aggregates be treated and analyzed as though they were social groups. The problem is that although a social aggregate may have a socio-demographic characteristic (i.e., income, education or occupation), that by itself does not define a social group or dictate a given leisure lifestyle.

In response to these limitations, Burch (1969) offered the "personal community" hypothesis, which argued that a leisure lifestyle is developed and gains direction through relationships with and socialization by social circles composed of co-workers, friends and family. His results indicated that social circles influenced leisure behavior, as expressed in style of activity pursued. Also, he suggested that within an activity, style was related to prior experience, that participants moved over time to more demanding styles rather than the reverse, and that to leave a leisure lifestyle usually meant leaving a circle of friends. While Field and O'Leary (1973) reported that social aggregate variables failed to explain differences in participation rate among those involved in recreation activities, they found that by adding social group to the analysis, the ability to explain participation rates was improved considerably.

Whereas consideration of social circle and social group variables has improved our ability to understand and predict activity involvement and participation, we feel the concept of social worlds offers additional insight to understanding diversity in leisure behavior.

### *Social Worlds*

Shibutani (1955) defined a social world as a "universe of regularized mutual response," "an arena in which there is a kind of organization," and as a "culture area," its boundaries being "set neither by territory nor formal membership but by the limits of effective communication." A contemporary definition of a social world is "an internally recognizable constellation of actors, organizations, events and practices which have coalesced into a perceived sphere of interest and involvement for participants" (Unruh, 1979). The social world of sport fishing, for example, is larger than its groups or organizations; is not defined or delimited by formal boundaries, membership lists or spatial territory; and lacks a powerful centralized authority structure. Social worlds must be viewed as part of a social organization which is diffuse and amorphous in character.

### *Social World Features*

To study social worlds, Strauss (1978) argues we should not limit our focus to forms of communication, symbolization or universes of discourse (Shibutani, 1955). Instead, we should examine "palpable matters" like activities, sites, technologies and organizations typical of particular social worlds. As an example, Strauss (1978) suggests each social world has at least one primary activity (i.e., mountain climbing, fishing, collecting), sites where the activities occur (making space and geographical features im-

portant), technology (which is likely to evolve and become increasingly complex) and organizations that evolve to further one or more aspects of the social world.

### *Features of Personal Involvement*

Conceptual work has categorized four features of personal involvement in a social world (Unruh, 1980). The first is voluntary involvement. Entry into and departure from social worlds is relatively free, accessible and frequently unnoticed. A second feature is partial involvement in the social world. Usually, one individual is not likely to know the sum of all activities in a social world. One's involvement is frequently focused in a specific subworld. A third feature is multiple identification, where participants can be involved in more than one social world. The final feature of involvement in a social world is mediated interaction. Because social worlds lack formal structure, communication relies more heavily on mediated means (i.e., radio, television and newspapers) than face-to-face interaction. Generally, the smaller the social world, the less reliance on mediated interaction. The larger and more dispersed a social world is, the greater the reliance on magazines, bulletins, journals, radio, television, etc. In certain social worlds, connections can be made only through mediated interaction (Crane, 1972; Goode, 1957; Katz, 1958; Mullins, 1973; Shibutani, 1961; Strauss, 1978).

### *Segmentation*

Inevitably, social worlds segment into subworlds<sup>1</sup> (Strauss, 1978, 1984). This has been defined as "the pervasive tendency for worlds to develop specialized concerns and interests within the larger community of common activities, which act to differentiate some members of the world from others" (Kling & Gerson, 1978). Any effort to focus attention on a social world leads to the issue of segmentation and the characteristics around which a social world segments.

Subworlds can segment around several sources or conditions (Strauss, 1984). First, subworlds can develop around *spatial* distinctions such as geographical or topographic characteristics, i.e., different stretches of stream for fly fishing or canoeing. Second, individuals can direct their attention and activities toward different types of *objects*. For example, some anglers seek to catch only certain fish species. The third distinction is *technology and skill*. Some groups of participants seek to keep pace with technology as it evolves, or even improve on it. As participants learn and use new tech-

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<sup>1</sup>The distinction between social worlds and social sub-worlds is subjective. Depending on one's perspective "the constellation of actors, organizations, events and practices" involved can be viewed as either a social world or social sub-world. For example, sport fishing which was referred to earlier as a social world could contain numerous sub-worlds such as fly fishing or bass fishing. However, these can be alternatively viewed as social worlds themselves.

nology, they can improve their skills. New technologies can also lead to new forms of activity. A fourth basis for subworld segmentation is *ideology*, where people can differ in their beliefs as to what is authentic or legitimate. Fifth, social worlds can be segmented along the lines of their *intersections* with other worlds. Participants can draw from each world, and in the process create a new subworld. An example would be a backpacker who flyfishes in remote areas. A final source of segmentation is *recruitment*. New members tend to maximize chances for new lines of activity, uses of technology, ideological positions and further segmentation.

### *Segmentation Processes*

Three processes have been described by which social worlds segment into subworlds, with each relating the new social subworld back to the full social world (Strauss, 1984). First, social subworlds can “bud off” from other subworlds. As people begin new forms of activity involving new technology, for example, they can feel they are different from the parent subworld and segment gently. A second process involves the perception that the developing differences are greater in magnitude, and perhaps a strong ideological position is involved. This process is best described as “splitting off.” Finally, there is the “intersecting” of two or more subworlds. Bryan (1977) provides an example where subworlds revolving around setting and technique intersect to form the technique and setting subworld.

### *Classification of Subworlds*

In order to categorize participants into social worlds for conceptual purposes, Unruh (1979, 1980) proposed a scheme of four generalized, trans-situational social subworlds. His four subworlds (strangers, tourists, regulars and insiders) were codified in terms of their social proximity to knowledge about the social world and the activities therein. The four subworlds can be ordered along a theoretical dimension having four characteristics (orientation, experience, relationships and commitment). From left to right they indicate the changes in participants as they move from strangers, to tourists, to regulars, to insiders (Figure 1). Also, Unruh (1979) suggests the process may not be linear nor inevitable.

	Subworld Types			
	Strangers	Tourists	Regulars	Insiders
Orientation	Naivete	Curiosity	Habituation	Identity
Experiences	Disorientation	Orientation	Integration	Creation
Relationships	Superficiality	Transiency	Familiarity	Intimacy
Commitment	Detachment	Entertainment	Attachment	Recruitment

Source: Unruh (1979)

*Figure 1.* Characteristics and types of participation in social worlds

Orientation is concerned with the extent to which a person understands, belongs to or is a member of a subworld. At one extreme is the person who is naive and has a simplistic perception of the social world, but is curious. At the other extreme is the insider, who not only understands the social world, but has made it a central life interest. For these persons the social world may function as their total identity.

Experientially, strangers do not fully appreciate the rules, procedures or norms concerning the social world. As they learn more about the social world, they obtain information and better understand how the pieces of the social world fit together. Eventually they may integrate this information, and maintain or create social world experiences for others.

Strangers can be characterized by their lack of social relationships in the social world. Although they may or may not seek these relationships, strangers typically lack close and enduring relationships with others in the social world. Regulars and insiders, in contrast, have regular contact with other participants. They are likely to develop close friendships, in part due to their previous experience in the social world and their high frequency of participation.

Finally, there is the matter of commitment. Unruh (1979) argues that strangers are generally detached from the social world and indifferent to its concerns. Tourists are more committed, but only to the extent they continue to be entertained or amused. Once the "novelty wears off" or the desired experience has been obtained, they move on. Being a regular implies some commitment to the continuation of the social world and its activities. This commitment is relatively long-term, and is sufficient to sustain the participant through good times and bad. Insiders are the most committed because their personal identity is tied closely to the social world. They have a stake in its continuance, and as a result have an interest in maintaining the necessary resources and in recruiting new members.

### *Components of Commitment*

Buchanan (1985) identified three major components as necessary for the existence of committed behavior. The first is consistent or focused behavior, which implies a rejection of alternative behaviors (Becker, 1960; Lee & Zeiss, 1978). This means persistence of goal-directed behavior over time, and that participation conditions other aspects of a person's life, producing behavioral consistency. This also implies that alternative activities will be rejected as commitment to an activity increases.

Second, commitment is a function of side bets. Side bets occur when something of value is invested in that activity, with the condition that to discontinue the activity would mean the loss of the investment (Alluto, Hrebiniak & Alonso, 1973; Becker, 1960). These side bet investments can include financial and emotional resources, friendships and self-perception. The more side bets at stake, the greater the commitment to an activity. Therefore, commitment is primarily a matter of ongoing and accrued in-

vestments. These investments can be viewed as personal and voluntary, since participation in a social world or subworld is voluntary (Unruh, 1980), or as socially necessary for feeling involved. Implicit is the idea that as side bet investments accrue over time, the attractiveness of other activities will tend to decline.

Third, commitment involves some degree of affective attachment to the goals and values of a role, activity or organization. Buchanan (1985) sees commitment as a process by which participant interests become attached to patterns of behavior which express their needs. This affective component of commitment is perhaps best viewed on a continuum.

### Conceptual Framework

Based on the social worlds literature, the conceptual work of Bryan and some of those who have applied his framework, recreation specialization is re-conceptualized as follows. Recreation specialization is: 1) a process by which recreation social worlds and subworlds segment and intersect into new recreation subworlds, and 2) the subsequent ordered arrangement of these subworlds and their members along a continuum. At one end of the continuum is the least specialized subworld and its members, and at the other end of the continuum is the most specialized subworld and its members. Between these two extremes are any number of subworlds having intermediate levels of specialization.

A series of propositions can be stated which link specialization with the elements of social subworlds and the previous work of Bryan (1977).

*Proposition One:* Persons participating in a given recreation activity are likely to become more specialized in that activity over time.

This proposition was derived from the work of Bryan (1977) and Unruh (1979, 1980). Both argue that over time participants will move from less specialized to more specialized subworlds. As Unruh (1979) points out, "all new recruits into social worlds must, at one time, have been strangers."

*Proposition Two:* As level of specialization in a given recreation activity increases, the value of side bets will likely increase.

Specifically, side bets include the financial and temporal costs of obtaining and learning to use various types of equipment, the general cost of participation (Bryan, 1977; Graefe, 1980; Strauss, 1978, 1984) and the emotional cost and value in developing and maintaining social relationships among family and friends (Buchanan, 1985; Johnson, 1973; Unruh, 1979, 1980).

*Proposition Three:* As level of specialization in a given recreation activity increases, the centrality of that activity in a person's life will likely increase.

It is argued that as specialization increases, the activity will attain a more central role in a person's life to the exclusion of competing activities

(Alluto, Hrebiniak & Alonso, 1973; Becker, 1960; Unruh, 1979). Consequently, we would expect selectivity (the number of times an activity is engaged in relative to analogous kinds of behavior) for that activity to increase (Lee & Zeiss, 1978).

*Proposition Four:* As level of specialization in a given recreation activity increases, acceptance and support for the rules, norms and procedures associated with the activity will likely increase.

This proposition revolves around voluntary acceptance and support for structural rules and procedures (laws, regulations, management procedures), and for non-structural social norms (the shared expectations by members of the social group) associated with the activity. The purpose of these rules, procedures and norms is to ensure that the activity will continue, in terms of both quantity and quality of the experience. Because the most specialized individuals would be impacted the most if the activity was discontinued, they can be expected to be the most supportive of rules, norms and procedures which maintain the activity. Rules, norms and procedures include laws and regulations, social norms which identify guidelines (Unruh, 1980), expectations and acceptable behavior and the management tools used by government agencies.

*Proposition Five:* As level of specialization in a given recreation activity increases, the importance attached to equipment and the skillful use of that equipment will likely increase.

Bryan (1977) and Graefe (1980) agree that specialized individuals are characterized by greater involvement with equipment, and more skillful use of that equipment. Strauss (1978, 1984) suggests that as technology and equipment evolve, some groups of participants will seek to keep pace with developments. Also, they will learn how to make effective use of new equipment and raise their level of skill. These distinctions in technology, equipment and skill serve as a source of subworld segmentation and differentiation of participants (Strauss, 1984).

*Proposition Six:* As level of specialization in a given recreation activity increases, dependency on a specific resource will likely increase.

This proposition is based on the idea that subworlds will segment around specific resource characteristics and objects (Bryan, 1977; Strauss, 1978, 1984) and that subworlds will compete for the same resources (Strauss, 1984). As level of specialization increases, preferences for certain resource characteristics and objects will emerge and competition will become intense.

*Proposition Seven:* As level of specialization in a given recreation activity increases, level of mediated interaction relative to that activity will likely increase.

A basic feature of involvement in a social world is mediated interaction (Unruh, 1980). As a social world grows in size and becomes dispersed and

segmented, the reliance on mediated interaction will increase. Those subgroups most involved and having the greatest investment in the activity will be the most in need of information. As level of specialization increases, so will the likelihood of involvement in various types of mediated means of communication (Bryan, 1977).

*Proposition Eight:* As level of specialization in a given recreation activity increases, the importance of activity-specific elements of the experience will decrease relative to non activity-specific elements of the experience.

Different participants in a given activity seek different benefits from their experiences (Bryan, 1977). The least specialized person will likely be aware of and seek only the most superficial and apparent elements of the experience. This individual, for example, may believe the most important aspect (or perhaps the only aspect of interest) of fishing is to “catch fish.” In this instance, this activity-specific element of the experience constitutes the experience; little else would be involved in the sport of fishing for the individual. Unruh (1979, 1980) would argue that such a person is “naive,” and has a simplistic perception of the fishing social world. For more specialized participants, the act of catching a fish is of lesser importance. Through greater knowledge and experience, they approach the social world in a “wholistic” fashion (Unruh, 1979, 1980). This type of angler would view non activity-specific elements of the experience to be equally important, if not more so. In this instance, the “authentic” recreation experience goes beyond simplistic surface elements.

### *Hypotheses*

From these propositions, a series of hypotheses were formulated. Only three propositions (6-8) are tested in this paper because of space limitations and the current research interests of the authors.

- Ha6: High specialization anglers have a higher resource dependency than do low specialization anglers.
- Ha7: High specialization anglers have a higher level of mediated interaction than do low specialization anglers.
- Ha8: High specialization anglers will attach less importance to activity-specific elements of the fishing experience than will low specialization anglers.
- Ha8a: High specialization anglers will attach more importance to non activity-specific elements of the fishing experience than will low specialization anglers.

## Methods

### *Data Collection*

Data for this paper were collected during a 1986 mail survey of salt-water fishing stamp holders in Texas (Ditton, Loomis, Risenhoover, Choi, Osborn, Clark, Riechers & Matlock, 1990). To fish in saltwater in Texas,

individuals were required to purchase a saltwater stamp. Using receipts from these stamp sales as a sampling frame, a systematic random sample of 6,371 individuals was obtained. The questionnaire was pretested with 310 stamp holders. As a result, several questions were modified to increase their effectiveness, but the intent of the questions remained the same. The final survey was administered between September 16 and November 4, 1986 following procedures outlined by Dillman (1978). This time period was selected to reduce recall problems (Hiett & Worrall, 1977) since most marine angling in Texas takes place in the spring and summer months. A final return of 4,215 usable questionnaires was achieved (a response rate of 71% when non-deliverable and non-usable questionnaires were excluded).

### *Classification Procedure*

To test the hypotheses, the sample of sport anglers was arranged along a continuum according to annual frequency of participation forming four groups. There is support in the conceptual literature for use of frequency of participation as a means for segmenting social worlds (Strauss, 1982; Unruh, 1979, 1980). Notice that this operationalization avoids the tautology; that is the amount of time spent in participating has *no necessary relationship to equipment*, whereas Bryan's definition supposed that specialization meant equipment. The classification of four groups served as the independent variable for analysis purposes.

To measure anglers' frequency of participation in fishing, respondents were asked to report the number of days spent fishing during the previous 12 months. Total fishing frequency was then collapsed into four ordinal categories, with anglers having similar rates of participation grouped together. Since no naturally occurring breaks were identified in the distribution, group boundaries were selected to form groups of near equal size. Approximately 25% of the respondents were assigned to each of the four groups. This division was not exact as an effort was made to keep individuals with similar participation levels in the same group.

### *Dependent Variable Measurement*

#### Resource Dependency

Anglers' orientation towards catching fish was used as a measure of resource dependency. Seven attitude statements from the scale developed by Graefe (1980) were used to understand resource dependency. Specifically, the items measured angler's preference for size, number and type of fish caught. Anglers were asked to indicate the extent to which they agreed with each attitude statement on a five-point Likert-type scale.

### Mediated Interaction

Anglers were asked to indicate on a five-point Likert-type scale the extent to which they made use of six mediated sources of saltwater fishing information, i.e., newspaper articles, magazine articles, television shows, etc.

### Activity and Non Activity-Specific Elements

Two motive statements dealt with experience elements associated only with sport fishing (activity-specific): "To obtain fish for eating" and "For the experience of the catch." Anglers were asked to indicate how important each item was as a reason for fishing on a five-point Likert-type scale. In addition, six attitude statements developed by Graefe (1980) were used to evaluate the importance of other activity-specific elements. At least two measures each of the following sub-dimensions were included: disposition of the catch and general orientation to catching something. Anglers were asked to indicate the extent to which they agreed with each attitude statement on a five-point Likert-type scale.

Nine motive statements rated by each respondent dealt with the generic benefits (non activity-specific) provided by most outdoor recreation activities. The statements were single-item measures of the following Driver (1977) domains: Family Togetherness, Being With People, Learning-Discovery, Relationships With Nature, Physical Rest and Escape Personal-Social Pressure. Anglers were asked to indicate how important each item was as a reason for fishing on a five-point Likert-type scale.

### *Data Analysis*

The null hypothesis of equality of group means for fishing frequency categories was tested using one-way analysis of variance (ANOVA) with the level of significance set at  $p = .05$ . Specific group differences were identified with the Student-Newman-Keuls post-hoc test which is regarded as a good all-around test for this purpose (Kirk, 1982).

### Results of Hypotheses Tests

Ha6: High specialization anglers have a higher resource dependency than do low specialization anglers.

Results of the ANOVA revealed significant differences between specialization groups on five of seven measures of resource dependency at the .05 level (Table 1). For four of these five measures, the mean scores across the specialization groups were arranged as predicted. Therefore, the null hypothesis was rejected and Ha6 was supported.

Ha7: High specialization anglers have a higher level of mediated interaction than do low specialization anglers.

**TABLE 1**  
*Results of Test for Differences in Mean Scores for Resource Dependency Scale  
 Items between Specialization Groups (H6)*

Items	Group <sup>a</sup>				F	p
	Mean score <sup>b</sup>					
	Student-Newman-Keuls test <sup>c</sup>					
To obtain a "trophy" fish	A <u>1.58</u>	B <u>1.90</u>	C <u>2.06</u>	D <u>2.30</u>	59.41	0.0001
I would rather catch one or two big fish rather than ten smaller fish	A <u>3.34</u>	B <u>3.42</u>	C <u>3.44</u>	D <u>3.58</u>	7.84	0.0001
It doesn't matter to me what type of fish I catch	D <u>2.78</u>	B <u>2.79</u>	C <u>2.84</u>	A <u>2.89</u>	2.02	0.1094
The bigger the fish I catch, the better the fishing trip	A <u>3.15</u>	B <u>3.22</u>	C <u>3.27</u>	D <u>3.35</u>	6.02	0.0004
I like to fish where there are several kinds of fish to catch	A <u>3.88</u>	B <u>4.09</u>	C <u>4.17</u>	D <u>4.22</u>	39.14	0.0001
The more fish I catch, the happier I am	D <u>3.47</u>	C <u>3.50</u>	A <u>3.52</u>	B <u>3.57</u>	1.59	0.1897
A successful fishing trip is one in which many fish are caught	D <u>3.12</u>	A <u>3.16</u>	C <u>3.20</u>	B <u>3.25</u>	2.56	0.0530

<sup>a</sup>Approximately 25% of the respondents were assigned to each group. Group A has the least number of fishing days and group D has the greatest number of fishing days.

<sup>b</sup>For the item 1 mean scores were based on respondents' answer for following categories; 1 = Not at all important, 2 = Slightly important, 3 = Moderately important, 4 = Very important, 5 = Extremely important. For the items 2 to 7 mean scores were based on respondents' answer for the following categories; 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.

<sup>c</sup>Any two means that are not in the same line are significantly different at the .05 level using Student-Newman-Keuls test.

All six items showed significant differences between specialization groups at the .05 level (Table 2). There was strong support for Ha7, since in every instance the order of mean values was as predicted. Therefore, Ha7 was supported.

Ha8: High specialization anglers will attach less importance to activity-specific elements of the fishing experience than will low specialization anglers.

Eight items were used to measure the importance of activity-specific elements of the fishing experience to the four specialization groups. Significant differences were found for seven of the eight items (Table 3). Based on these results, the null hypothesis, that no differences existed between the four specialization groups was rejected. The results relative to the alternative hypothesis were essentially as predicted with two exceptions. It was predicted that high specialization anglers would consider activity-specific elements of less importance than low specialization anglers. This prediction was supported for five of the seven items with significant results, and therefore the hypothesis was supported. On one item (to obtain fish for eating), however, the ordering of mean values was directly opposite of that predicted. For the other item, no meaningful order was apparent. Because five of the seven significant items were ordered as predicted, Ha8 was supported.

Ha8a: High specialization anglers will attach more importance to non activity-specific elements of the fishing experience than will low specialization anglers.

TABLE 2  
*Results of Test for Differences in Mean Scores for Mediated Interaction Scale Items between Specialization Groups (H7)*

Items	Group <sup>a</sup> Mean score <sup>b</sup>				F	p
	Student-Newman-Keuls test <sup>c</sup>					
Texas Parks and Wildlife Magazine	A <u>2.25</u>	B <u>2.42</u>	C <u>2.65</u>	D <u>2.76</u>	36.07	0.0001
Other information provided by Texas Parks & Wildlife Dept. (brochures, etc.)	A <u>2.38</u>	B <u>2.56</u>	C <u>2.75</u>	D <u>2.90</u>	38.01	0.0001
Newspaper articles	A <u>2.58</u>	B 2.92	C <u>2.99</u>	D <u>3.04</u>	37.47	0.0001
Magazine articles	A <u>2.31</u>	B <u>2.60</u>	C <u>2.75</u>	D <u>2.87</u>	47.57	0.0001
Radio shows	A <u>1.85</u>	B <u>1.95</u>	C <u>2.11</u>	D <u>2.16</u>	16.97	0.0001
Television shows	A <u>2.18</u>	B <u>2.45</u>	C <u>2.54</u>	D <u>2.68</u>	30.45	0.0001

<sup>a</sup>Approximately 25% of the respondents were assigned to each group. Group A has the least number of fishing days and group D has the greatest number of fishing days.

<sup>b</sup>Mean scores were based on respondents' answer for following categories; 1 = No use, 2 = Little use, 3 = Some use, 4 = Lots of use, 5 = A great deal of use.

<sup>c</sup>Any two means that are not in the same line are significantly different at the .05 level using Student-Newman-Keuls test.

**TABLE 3**  
*Results of Test for Differences in Mean Scores for Activity-Specific Elements of the Fishing Experience Scale Items between Specialization Groups (H8)*

Items	Group <sup>a</sup> Mean score <sup>b</sup>				F	p
	Student-Newman-Keuls test <sup>c</sup>					
A fishing trip can be successful even if no fish are caught	A 3.55	B 3.64	C 3.68	D 3.73	5.30	0.0012
When I go fishing, I'm just as happy if I don't catch a fish	B 2.73	A 2.78	C 2.79	D 2.90	4.11	0.0063
I'm just as happy if I don't keep the fish I catch	B 2.81	C 2.91	A 2.94	D 3.03	5.83	0.0006
I catch fish for sport and pleasure rather than for food	D 2.95	C 2.97	A 2.99	B 2.99	0.25	0.8631
I'm just as happy if I release the fish I catch	B 2.93	C 2.95	A 2.95	D 3.09	4.22	0.0055
I usually give away the fish I catch	D 2.31	A 2.27	C 2.20	B 2.16	4.75	0.0026
To obtain fish for eating	A 2.77	B 3.00	C 3.06	D 3.23	25.36	0.0001
For the experience of the catch	A 3.43	B 3.71	C 3.79	D 3.95	35.97	0.0001

<sup>a</sup>Approximately 25% of the respondents were assigned to each group. Group A has the least and group D the greatest number of fishing days.

<sup>b</sup>For items 1 to 6, mean scores were based on responses to the following categories; 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. For items 7 and 8, mean scores were based on responses to the following; 1 = Not at all important, 2 = Slightly important, 3 = Moderately important, 4 = Very important, 5 = Extremely important.

<sup>c</sup>Any two means that are not in the same line are significantly different at the .05 level using Student-Newman-Keuls test.

Significant differences were found between the four specialization groups on seven of the nine items used to measure the importance of non activity-specific elements (Table 4). For each of the seven significant items the mean values were ordered as predicted, and Ha8a was supported.

### Conclusions and Discussion

Results of the three hypotheses tests provide strong support for propositions six through eight of our re-conceptualization of recreation spe-

**TABLE 4**  
*Results of Test for Differences in Mean Scores for Importance to Non Activity-Specific Elements of the Fishing Experience Scale Items between Specialization Groups (H8a)*

Items	Group <sup>a</sup> Mean score <sup>b</sup>				F	p
	Student-Newman-Keuls test <sup>c</sup>					
To be outdoors	A 3.72	C 3.86	B 3.87	D 4.03	17.01	0.0001
For family recreation	A 3.33	C 3.35	B 3.42	D 3.44	2.13	0.0940
To experience new and different things	A 2.91	B 2.96	C 2.99	D 3.24	14.42	0.0001
For relaxation	A 3.95	B 4.15	C 4.20	D 4.22	16.00	0.0001
To be close to the sea	A 2.85	C 2.96	B 3.04	D 3.24	15.25	0.0001
To get away from the demands of other people	A 3.25	C 3.50	B 3.53	D 3.54	10.06	0.0001
To be with friends	A 3.29	D 3.30	C 3.32	B 3.39	1.61	0.1856
To experience natural surroundings	A 3.44	C 3.58	B 3.61	D 3.73	10.59	0.0001
To get away from the regular routine	A 3.65	D 3.85	C 3.88	B 3.92	10.96	0.0001

<sup>a</sup>Approximately 25% of the respondents were assigned to each group. Group A has the least number of fishing days and group D has the greatest number of fishing days.

<sup>b</sup>Mean scores were based on respondents' answer to the following categories; 1 = Not at all important, 2 = Slightly important, 3 = Moderately important, 4 = Very important, 5 = Extremely important.

<sup>c</sup>Any two means that are not in the same line are significantly different at the .05 level using Student-Newman-Keuls test.

cialization. For the hypotheses tested, the alternative form was supported in each case.

First, it would appear that high specialization anglers have a higher resource dependency than low specialization anglers. The former group of anglers considered catching big, distinctive or trophy fish to be an important part of their fishing experiences in contrast with the latter group of anglers who were disinterested in the "rare event" aspects of fishing.

Second, high specialization anglers were shown to have a higher level of mediated interaction than low specialization anglers. High specialization anglers were more dependent on various forms of mediated interaction whereas low specialization anglers were less involved with mediated interaction.

Finally, high specialization anglers were shown to attach less importance to activity-specific elements and more to the non activity-specific elements of the fishing experience than low specialization anglers. High specialization anglers saw many of the non activity-specific elements as being equal to, if not of greater importance than activity-specific elements; low specialization anglers had a superficial and naive view of fishing as being about fish to the exclusion of other important intrinsic benefits. High specialized anglers would probably view catching fish as a bonus of going fishing.

Propositions one through five remain to be tested in future research efforts; in two cases there are problems to be overcome first. To test proposition 1, a longitudinal panel study design is needed to investigate whether individuals change subworlds over time and whether change is linear or inevitable (Unruh, 1979). In order to test proposition 2, measurement problems need to be overcome related to understanding an individual's side bets or cumulative financial and emotional investment in fishing. Data needs in this regard exceed the information currently collected regarding annual participant expenditures.

We recognize the use of a single dimension (level of participation over the previous twelve months) is a simplistic means of classifying specialization groups. However, we chose this operationalization for hypothesis testing purposes because of previous support in the social worlds literature and empirical studies by other investigators. Despite the support provided for the three propositions tested, other variables beside frequency of participation may be useful from a theoretical perspective for classifying participants along a continuum for analysis purposes. Other variables for operationalizing specialization could include participant's age and number of years of participation. Since we have the data for these classification variables, we plan to retest our hypotheses accordingly. Also, we recognize that a case can be made for other specialization variables used previously by other investigators. Regardless of variables used, we favor a single-dimensional approach for hypothesis testing purposes at this time to avoid confounding problems. Ultimately, as further theory development and testing occurs, we see these results providing the basis for a multi-dimen-

sional approach (i.e., a classification using multiple discriminant analysis or an index) to operationalize specialization.

Although initial efforts at developing a theory of recreation specialization have been supported, much conceptual and empirical work remains. First, the eight propositions stated should not be viewed as comprehensive or final in content. As further work is completed, existing propositions may be supported or rejected and new propositions added and revised. Second, we view this paper as a starting point from which a focused line of research will hopefully emerge. Focus is needed to foster the process of theory development. And finally, successful theory development demands replication efforts.

The concept of recreation specialization has potential for providing managers with a grounded understanding of group differences on many matters of concern. Understanding participants in terms of varying levels of specialization stands in contrast with the approach often used whereby results are aggregated for the average participant (Shafer, 1969). Also, a recreation specialization view of segmentation contrasts with traditional market segmentation approaches which are usually problem solving in orientation and not conceptually grounded.

#### Acknowledgements

Partial funding support for this work was provided by the Texas Agricultural Experiment Station, the Texas Parks and Wildlife Department and Texas A&M University Sea Grant College Program. We acknowledge the assistance and encouragement of our research colleagues in the Coastal Fisheries Branch, Texas Parks and Wildlife Department. We appreciate the thoughtful review comments provided by three anonymous reviewers as well as suggestions provided by Tony Fedler, Steve Holland and Jane Sell.

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