

## **From Novice to Expert? A Panel Study of Specialization Progression and Change**

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The recreation specialization concept assumes that over time, participants in an activity move along a continuum of progression from beginner to expert. Past specialization research, however, has made exclusive use of cross sectional data and never specifically tested this proposition about change in leisure participation. This study used data from two panels of boaters at the Apostle Islands National Lakeshore: a three-wave panel contacted in 1975, 1985 and 1997, and a two-wave panel contacted in 1985 and 1997. The study analyzed change on seven specialization indicators including boat ownership, frequency of participation on other Great Lakes and oceans, racing, perceived boating skill, interest in boating, and discontinued participation. The results showed that specialization progression was the exception rather than the rule among boaters. Only two of five people showed patterns of change that resembled specialization progression. The majority either sustained low levels of casual participation over time or decreased their participation. These findings indicate that change in leisure participation is more complex than the change represented by specialization progression. These findings also suggest the need for alternative management frameworks for thinking about leisure change.

**KEYWORDS:** *Apostle Islands, boating, panel studies, progression, specialization.*

### **Specialization and Progression**

It is easy to understand the trajectory of change implicit in the recreation specialization framework. When people try out a new activity and have a positive experience, they then continue to participate, adding new equipment and friends to enhance their experience. They also develop expecta-

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tions and standards for appropriate and exacting ways to perform the activity, and take on a level of commitment and identification with the activity. Can this process of progression, however, be generalized to all recreation participants, or is change in leisure participation more variable than the linear trajectory of progression hypothesized by the specialization literature (Scott & Shafer, 2001)? When interviewing several members of a 1975 panel of Apostle Islands boaters recently, one person articulated a different pattern of boating participation. We knew from the data that this individual had owned 3 boats since the early 1960s, but had sold the last boat in 1982 and had not boated since the early 1990s. When asked why he quit, the respondent said boating for him and his family had simply "run its course."

This anecdote raises at least four questions about the specialization framework. First, is the framework's focus on progression misguided when applied to a population of activity participants? How many people are also experiencing some process of regress in their participation trajectory? How many people in a population of participants are not on any trajectory at all, and are instead happy to be casual or occasional participants? Finally, are cross-sectional research designs obscuring variation in the history and trajectory of leisure participation?

Scott and Shafer (2001) were the first to formally address the problem of progression in the specialization literature. They acknowledge that the idea of progression has only been a background assumption in the specialization literature. Research has generally used the specialization framework in a more pragmatic way to help managers understand the variety of recreationists who visit a destination. The specialization concept has been an effective way to segment users based on dimensions such as past experience (Hammit, Knauf, & Noe, 1989; Schreyer, Lime, & Williams, 1984), commitment (Bricker & Kerstetter, 2000; Kuentzel & McDonald, 1992; McFarlane, 1994, 1996), involvement or lifestyle centrality (Block, Black & Lichsteinstein, 1989; Chipman & Helfrich, 1988) and skill (Donnelly, Vaske, & Graefe, 1986; Hollenhorst, 1990). Once segmented, researchers then identify differences in users' attitudes (Shafer & Hammit, 1995; Virden & Schreyer, 1988; Wellman, Roggenbuck, & Smith, 1982) motives for participation (Chipman & Helfrich, 1988; Ditton, Loomis, & Choi, 1992; McFarlane, 1994), preferences for management initiatives (McIntyre & Pigram, 1992; Virden & Schreyer, 1988), or setting preferences (Ewert & Hollenhorst, 1994; Kuentzel & Heberlein, 1992; Scott & Godbey, 1994). If the management goal is to provide quality recreational experiences, the specialization framework offers one way to understand visitor differences, and to offer targeted programs to subgroups in the visitor population.

Scott and Shafer's (2001) goal in the review of the specialization literature was to bring the concept of progression and change in leisure participation to the forefront of specialization research. They elaborated three analytical dimensions of progression that overlap with current thinking about specialization. First they argued that progression involves a focusing of behavior, where individuals increasingly invest more time and energy in a lei-

sure activity at the expense of other activities. One's attention and social life become consumed by the activity and other leisure options fade in importance. Second, they stated that the development of skill and the acquisition of knowledge associated with the activity characterize progression. Skill and knowledge are typically the outcome of repeated engagements where performance is refined and expectations and standards about the activity are developed. Third, commitment to the activity is an indicator of progression. Those who progress in an activity have developed from casual participants to passionate experts who derive a sense of self-identity from the activity, and who commit substantial resources to their ongoing participation.

They acknowledged in their review that no research to date has "test[ed] the extent to which recreationists progress to more advanced levels of involvement over time (p. 321)." They cited limited evidence of progression from cross-sectional studies that incorporate a retrospective measure of past experience. Researchers have correlated years of experience with different styles of sailing (Donnelly et al., 1986), different paths of socialization into an activity (Kuentzel & Heberlein, 1997), skill (Virden & Schreyer, 1988), commitment and centrality to lifestyle (Kuentzel & McDonald, 1992), and intensity of involvement (Scott & Godbey, 1992). Scott and Shafer (2001) concluded that these studies offer only marginal support for the notion of progression, and that future research should analyze the antecedents and contingencies of the specialization process. What conditions predetermine an individual's ability to progress in a leisure activity, and what conditions short-circuit that ability? They also called for longitudinal designs that specifically test the notion of progression in leisure participation.

We agree that the first step in understanding change in the specialization process is the use of longitudinal designs. If recreation specialization is fundamentally a framework of change, then the exclusive use of cross-sectional data is problematic. Cross-sectional designs offer no critical test of specialization as a process of change. One will naturally find variation in measures of specialization in a cross-sectional survey. Some have participated more and some have stronger feelings about their participation. Identifying variation in a cross-sectional recreation sample, however, is no demonstration of progression, where the less specialized user has become more specialized over time. Neither can cross-sectional designs account for attrition. Instead, cross-sectional sampling may systematically bias the selection of respondents to exclude the population of occasional participants or drop-outs who were disinclined to follow a trajectory of progression. So while cross-sectional designs almost always provide evidence to support the specialization hypothesis, they are unable to provide evidence that would falsify the hypothesis.

The goal of this study is to determine how well the specialization framework characterizes a population of recreationists over 22 years. We used data from two panels of boaters at the Apostle Islands National Lakeshore. One three-wave panel was first contacted in 1975, again in 1985, and a third time in 1997. A different two-wave panel was first contacted in 1985 and again in 1997. The study will determine what proportion of boaters at the Apostle

Islands National Lakeshore became specialists over time and displayed trajectories of change consistent with specialization progression. The analysis was based on seven indicators of specialization including boat ownership, frequency of boating on other Great Lakes and oceans, racing, boating skill, change in boating interest, and whether or not one quit boating during the interval.

### Boating Specialization

Two studies in the literature have considered boating specialization. Donnelly et al. (1986) compared the degree and range of specialization between sail boaters and power boaters in Maryland. Following Bryan (1979), they hypothesized a continuum of boating behaviors from day boaters, to long range and overnight cruisers, to racers. They assumed that racers would be more specialized than cruisers, who would be more specialized than day boaters. They also hypothesized that as the degree of specialization increased, the range of behaviors would become narrower and more focused. The results showed that sail boaters were more specialized than power boaters, but that the range of specialization did not differ between the two sub-activities. In other words, sail boaters were more likely to race than power boaters, but the more specialized sail boaters were also just as likely to participate in a variety of sailing activities and behaviors.

A second study (Kuentzel & Heberlein, 1997) tested the notion of a single specialization continuum among boaters at the Apostle Islands. Do boaters follow a single linear path of specialization from novice to expert and from general to specific behaviors? Or do boaters follow different specialization paths that depend on the way they enter, and are socialized into the activity: through yacht club participation, through a sailing school course, or through boat show sales? The results supported the single continuum approach, and showed that different styles of participation were not unique to different entry groups. Even though some people may begin sailing in their youth at a yacht club, others begin later in their lives by taking sailing courses, and still others begin by purchasing a boat at a boat show, the results did not offer evidence for three distinct styles of boating participation. Yacht club members boated more frequently and more seriously than the other groups, but there was no evidence that the range of behaviors differed among the groups.

### *Boat Ownership and Progression*

Both of these studies used cross sectional data with static measures of specialization that only infer progression. In addition, both studies profiled boating on large bodies of water—Chesapeake Bay in Maryland and Lake Superior in Wisconsin. This type of activity presents a substantial contingency for progression along a specialization continuum. For a boater to progress smoothly along a continuum, one must have access to a boat. And the boat

one uses on a large body of water is typically not the kind that is easily pulled behind a car or parked in the backyard. Instead, boat owners often must either purchase large horse powered vehicles, heavy trailers, and special towing rigs to pull the boat. Or they must rent slip space at a marina and storage space in the winter. Either way, boat ownership is usually a significant investment that requires ongoing financial outlays for operation, maintenance, and storage.

For those who own a boat, a trajectory of progression over time seems reasonable. Boat ownership allows one to gain experience and practice one's skills under a variety of conditions. It allows the boater to integrate the activity more fully into one's lifestyle, where boating dominates one's leisure and is frequently expressed in non-leisure contexts. It also facilitates social ties oriented to boating activities where one entertains friends or participates in group outings, regattas or races. But, given the demands in time, money, and energy of boat ownership, is progression in boating the rule or the exception? Kuentzel (2001), in a response to Scott and Shafer (2001), argued that contemporary leisure is becoming more diversified and commodified, offering people an expanding range of leisure choices. This may mean that people are less likely to specialize in just one activity, but instead may become leisure generalists participating in a cluster of activities such as outdoor activities, water-based activities, sports activities, or fitness activities. If so, boat ownership may "run its course" because some people become distracted by a diversity of leisure alternatives and the development of other interests. How many boat owners grow tired of the ongoing financial burden of ownership and the nagging obligation to keep using their investment while their leisure attention is diverted elsewhere? From a specialization perspective, these people may become the "backsliders" who feel increasingly ambivalent about owning a boat and about their participation in the activity. Once people become boat owners, are they always boat owners? Or is attrition from boat ownership more prevalent?

For those who do not own a boat, the idea of a trajectory is even more problematic. One can become a capable sailor, yet because they cannot afford a boat may only participate occasionally with a friend or family member at an opportunistic moment. Similarly, some people, after take a few boating lessons, may be content to charter a boat for an annual week-long trip or a couple of weekend excursions each boating season. Others may prefer to be career generalists, never specializing in one activity, but instead fishing on one occasion, day cruising on another, water skiing on another, and anchoring overnight in a quiet bay at another time. Are these people able, or even interested in developing the skill and knowledge of the boating specialist? Do they develop a deep commitment to boating and the strong social ties to other boaters? Or are they simply happy to be on the water a few times per year, or perhaps tied to a dock or anchored in a quiet bay while grilling steaks with family or friends?

Because of these contingencies of boat ownership, there is reason to believe that progression across a continuum of boating specialization may be

constrained. Instead, occasional or casual boating may be a common pattern of participation. Others may display patterns of progression and regression, where one's growing ambivalence about boat ownership may be a more dominant process than specialization progression. It is possible that progression could be the exception in recreational boating rather than the rule.

To test these questions, this study used panel data across a 22-year span to explore changing patterns in an individual's boat ownership, frequency of boating on other Great Lakes and oceans, racing participation, perceived boating skill, and interest in boating. How many people followed a progression of behaviors and perceptions consistent with the specialization framework? Did they purchase and/or maintain a boat across the 22 years? Did they boat more frequently on more challenging locations such as other Great Lakes or oceans? Did they take up racing? Did their skill increase, and did they express growing interest in the activity over time? Conversely how were their patterns of boating behavior inconsistent with the specialization framework? Were there patterns of casual participation where one never owned a boat, rarely boated, and reported consistently low skill and interest across the years? Did people display patterns of regress where they sold their boat, reduced their frequency of participation, reported declining skills, lost interest in boating, or stopped boating altogether? The purpose of the analysis was to create a typology of change among boaters that identified "backsliders," casual boaters or career generalists, serious boaters with sustained participation, and specializing boaters with increasing participation. If specialization progression is the rule, one would expect most people over time to cluster in the sustained or increasing category.

## Methods

### *Study Site*

The Apostle Islands National Lakeshore is a unit in the U.S. National Park system that includes a 21-island archipelago located in Lake Superior at the northern tip of Wisconsin. The Islands have historical significance as an early site of the fur trade, and later as the site of a thriving regional fishing and timber industry. They are also known for their six Victorian style lighthouses, which were an important part of the Great Lakes shipping industry in the late 1800s and early 1900s. Today, the Islands primarily serve a recreational function. The only way to access them is via boat, and because of the big water of Lake Superior, access generally requires larger seaworthy boats. One usually sees runabout power boats in the 20-foot range and overnight cabin cruisers from 25 to 40 feet long. One can occasionally see 20-foot day cruising sailboats and overnight yachts from roughly 30 to 50 feet long. Boaters travel at varying speeds through the area docking at islands to hike the trails, visit interpretive sites, or sunbathe on the beaches. At night they will either tie up to a Park Service dock or anchor in one of the six or eight bays throughout the Islands that provide reliable protection from the weather. High-use season is from July through mid-September. Low-use sea-

son is in May, June, and October when air and water temperatures can make boating uncomfortable. Much of the water around the Islands freezes in most winters, so visitors are rare during the winter months.

### *The Panel*

*Initial contact.* Data for this study were taken from two panels of boaters. One panel was first contacted in 1975. These same people were contacted again in 1985, and then once more in 1997. By way of replication, we also used data from a second panel that was first contacted in 1985 and again in 1997. The 1975 panel was first contacted using a combination of self-registration cards at two locations on Stockton Island (90% of the 1975 overnight visitors stopped at these locations), and slip rental information provided by three of the four marinas. From a list of 2,253 names gathered during the 1975 boating season, a systematic random sample of 926 boaters was drawn and sent a 16-page questionnaire. From this list, 648 people returned questionnaires (70% response rate) and became part of the panel. The 1985 panel was contacted while anchored or docked overnight at one of five sampling locations around the Islands that receive the majority of overnight use. Field workers were stationed at each location for 15 nights during the 1985 boating season. They were instructed to approach each boat and ask any adult over 16 to fill out a census card with contact information. This procedure generated 1,217 visitor contact cards. A random sample of 500 names was drawn and sent a mail back questionnaire. From this sample, 377 people returned questionnaires (75% response rate).

*Follow-up contacts.* At the end of each questionnaire, respondents were asked to provide address information for two people who might know how to contact the respondent in the future. During subsequent waves of the study, letters were sent to original respondent asking them to acknowledge their current address. For those who did not reply, letters were sent to the 2 contacts listed in the earlier questionnaires asking them to provide address information for the panel member. From these efforts, 501 of the original 648 people in the 1975 panel were located (77.3%) in 1985. Of this group, 397 people (79.2%) completed and returned questionnaires. From the original group, 61.3% filled out both the 1975 and the 1985 follow-up questionnaires. Researchers repeated these methods in 1997, but added internet address searches to help locate people. When there was a question about the identity of the person found in the internet search, phone calls were made asking the individual to confirm whether or not they had boated at the Apostle Islands in 1975 or 1985. Using these techniques in 1997, researchers were able to find 409 out of the original 648 (63.1%) from the 1975 panel and 327 of the original 500 (65.4%) from the 1985 panel. After sending a follow-up questionnaire, 249 people (60.8% response rate) from the 1975 panel returned useable surveys. Among these respondents, 55 people filled out questionnaires in only 2 of the waves (1975 and 1997), while 195 people filled out questionnaires in all three waves (1975, 1985, and 1997). Of the

original 648 boaters in the 1975 panel, 38.4% were still participating in the study in 1997. In the 1985 panel, 160 people returned questionnaires (48.9% response rate) or 32% of the original 500 people.

### *Measurement*

The study analyzed change among boaters at the Apostle Islands using seven measures of specialization: boat ownership, frequency of boating on other Great Lakes, frequency of boating on oceans, participation in sailing regattas or boat races, self-perceived boating skill, a self-rated measure of changing interest, and whether or not respondents had stopped boating. Boat ownership was used as a key indicator of boating experience and commitment. A person can boat casually with a friend or charter a boat for the occasional vacation excursion. Purchasing a boat and maintaining it over the years, however, represents a substantial commitment of money and time. It also enables one to gain more skill and more knowledge about the activity. The frequency of boating on Great Lakes and oceans represents a more advanced stage of specialization (Donnelly et al., 1986). As a person gains more experience and confidence, he or she may test one's skills on longer trips and more challenging water by boating further through the Great Lakes chain or out on the ocean. Boat racing represents an even more advanced stage of specialization where skill and precision performance become one's focus and other types of boating activities may become less interesting (Donnelly et al., 1986). Perceived skill is one of the social-psychological measures of boating specialization that reflects one's identification with the activity and self-perception as a boater. Finally, two measures served as critical tests of specialization progression: one asked if respondents' interest in boating had decreased, stayed the same, or increased over the years. The other measured whether respondents were still boating at time 2 and time 3. If progression is the rule, most of the panel should continue to boat over the years. Only four of these measures were included in the 1985 panel's questionnaire: boat ownership, perceived boating skill, interest in boating, and whether or not one quit boating.

Three of these measures (boat ownership, racing, and quit boating) were dichotomous (yes/no) indicators. Each of the study's three waves asked respondents if they currently owned a boat.<sup>1</sup> Sail boats (4 out of 5 visitors use sail boats) and power boats were treated as equivalent in this study. The average boat length was similar: 34 feet for sail boats and 28 feet for power boats. And, while the on-the-water experience is different (straighter and

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<sup>1</sup>An alternate way to measure progress in boat ownership is to analyze change in boat length over time. Out of 245 people, there were 8 people who downgraded to a shorter boat over time and 11 people who upgraded to a longer boat. There were 13 people who reported the same boat length over time. However, because we only measured boat length in 1985 and 1997, we had missing data ( $n = 29$ ) on nearly half of the respondents who could have upgraded or downgraded the length of their boats over time. Consequently, the dichotomous boat ownership measure offered a more consistent indicator of progress.

faster with power boats), both types of craft require similar navigational skills and experience to negotiate Lake Superior waters. Racing was only measured in 1985 and 1997. A 1985 measure, however, asked how many years the respondent had been racing. Those who reported 10 or more years of racing were coded as 1975 racers to construct a 3-wave indicator. Boaters were next asked in 1985 and 1997 to indicate whether they were still boating (everyone in the panel boated in 1975). This indicator was constructed from 3 items in the 1997 questionnaire that asked (1) if they took a boating trip in 1997, (2) if not, what was the year of their last trip, and (3) why they quit boating. In constructing this variable, it is possible that some people may not have taken boating trips for several years, but still considered themselves active boaters. Consequently, we used a 6-year criterion to judge whether people were still boating. If a person reported that their last trip was 1990 or earlier, we coded the respondent as having quit boating. However, there were 56 people in the sample whose last boating trip was between 1991 and 1996. Of this group, 10 people said they were still boating (and thus categorized as still boating), 33 people confirmed they had quit boating by offering reasons why they quit, and we could not tell with the remaining 13 people. We categorized those 13 as people who stopped boating.

The remaining variables used measurement scales. The frequency of boating on Great Lakes and oceans were measured with a 4-point scale from "never" to "seldom" to "occasionally" to "frequently." The boating skill measure used a 5-point scale from "none" to "novice" to "intermediate" to "high" to "expert." Finally, the change in boating interest measure used a 5-point scale with "decreased" at one extreme, "no change" at the mid-point, and "increased" at the other extreme.

### *Typologies of Progression*

The analysis assigned each respondent to one of 5 patterns of change for each of the 7 variables: (1) decreased, (2) low stable, (3) mixed, (4) high stable, and (5) increased. For example, on the boat ownership variable, respondents were said to be decreasing in boating specialization if they owned a boat in 1975, but had sold that boat before 1985 or 1997. Respondents were categorized as low stable if they never owned a boat across the three waves. They followed a mixed pattern if they either did not own a boat in 1975, owned one in 1985, but sold it before 1997; or they owned a boat in 1975, sold it before 1985, but then purchased another by 1997. Respondents were assigned to the high stable category if they owned a boat at each of the 3 waves. Finally, they were increasing in their specialization if they did not own a boat in 1975, but owned a boat that they purchased prior to either 1985 or 1997.

For the scaled items, responses were collapsed into dichotomous categories.<sup>2</sup> Respondents who "never" boated on Great Lakes or oceans were

<sup>2</sup>An alternative way to construct indicators of progress is to use change scores ( $t^2 - t^1$ ). When comparing the change score method with the dichotomous method, there was little difference in the way respondents were categorized. Correlations between indicators using the two different methods ranged from .70 to .91. We chose not to use the change score method because it is hard to know how much of a change from "4" to "3" over time reflects real change and how much reflects regression to the mean.

coded as "no," while those who had boated "seldom," "occasionally," or "frequently" were coded as "yes." Similarly, for the skill variable, respondents who reported "none," "novice," or "intermediate" were coded as "low," while those who reported "high" or "expert" were coded as "high." The quit boating typology was slightly different. Since all people in the panel boated in 1975, they could not increase over time. Neither could they remain at a low stable level. In this indicator, panel members could stop boating before either 1985 or 1997 (decrease), continue to boat throughout the three waves (high stable), or quit in 1985 yet return to boating in 1997 (mixed).

Within the five categories, the "high stable" and "increasing" categories describe patterns of change consistent with the idea of specialization progression. Those who show increasing specialization have first purchased a boat since 1975, have begun to take trips on other Great Lakes or oceans, have started to race, and have improved their boating skills over time. Those in the high stable category have sustained their participation and skill over the years and probably have developed their knowledge and commitment during the 22-year period.

The "decreasing," "low stable," and "mixed" categories describe patterns of change that are not consistent with the idea of specialization progression. People in the decreasing category reflect attrition from activity participation over time. Respondents in the low stable category are people whose interest never took hold. They were perhaps content with an occasional boating trip, but were never interested enough to purchase a boat, try out new activities, or improve their boating skills. Finally, those in the mixed category reflect a variety of contingencies in their participation, or an "on again, off again" pattern of changing participation. If specialization progression is the rule, we would expect more people over the 22-year time frame to cluster toward the high stable or increasing category. If specialization progression is the exception, we would expect respondents to be distributed across all 5 categories of change.

## Results

### *The 1975 Panel*

*Boat ownership.* The results showed that specialization progression was not the rule. Boat ownership in particular showed more attrition than proliferation (Table 1). The largest proportion of the panel (42.5%) sold their boat and never replaced it. In addition, a fourth of the sample (26.9%) never owned a boat at any time during the 22-year interval. Conversely, less than a fourth of the sample either owned a boat throughout (17.6%) or purchased a boat for the first time (5.4%). Overall, 62.7% of the panel owned a boat in 1975, while only 23.3% owned a boat in 1997. Over time, getting rid of one's boat was a more frequent occurrence than boat purchase.

*Great Lakes and ocean boating.* Specialization progression, as measured by the frequency of big water boating was also not the predominant pattern of change (Table 1). For Great Lakes boating, 3 out of 5 people showed

**TABLE 1**  
*Changing Patterns of Specialization among the 1975 Panel of  
 Apostle Islands Boaters*

1975 PANEL	Boat Ownership	Great Lakes Boating	Ocean Boating	Racing	Boating Skill	Change in Interest	Quit Boating
Decreasing	104 (42.5%)	45 (18.4%)	47 (19.2%)	4 (1.6%)	26 (10.6%)	68 (35.4%)	116 (47.3%)
Low Stable	66 (26.9%)	103 (42.2%)	63 (25.8%)	133 (53.4%)	92 (37.6%)	12 (6.3%)	NA
Mixed	18 (7.3%)	26 (10.6%)	31 (12.7%)	8 (3.2%)	23 (9.4%)	22 (11.5%)	26 (10.6%)
High Stable	43 (17.6%)	31 (12.7%)	47 (19.3%)	21 (8.4%)	66 (26.9%)	35 (18.2%)	103 (42.0%)
Increasing	14 (5.7%)	39 (15.9%)	56 (23.0%)	83 (33.4%)	38 (15.5%)	55 (28.6%)	NA

patterns of change that were inconsistent with specialization progression. Nearly 1 of 5 people showed decreases in Great Lakes boating (18.4%) and 42.2% of the panel never boated on other Great Lakes. Conversely, 15.9% increased their boating frequency on other Great Lakes, and 12.7% sustained their Great Lakes boating frequency over time. For ocean boating, an equal number of people showed patterns of specialization regress (45.0%) and specialization progression (43.3%). One out of 5 people decreased their ocean boating frequency across time (19.2%) while 1 in 4 people never took a boating trip on any oceans (25.8%). Conversely, 23.0% of the panel increased their boating frequency on oceans, while 19.3% sustained their levels of boating participation on oceans over time. Overall, in 1997 only about one-third of the panel frequently boated on Great Lakes and about two-fifths of the panel frequently boated on oceans.

*Racing.* The change in racing participation over the 22 years showed a bipolar distribution (Table 1). Only a few panel members decreased their participation in racing (1.6%), but more than half of the panel (53.4%) never participated in boating races. Conversely, a small number of people in the panel raced consistently over the years (8.4%), while a third of the panel (33.4%) took up racing at some point between 1975 and 1997. While the majority never took up racing, those who did were less likely to stop over time.

*Perceived skill.* Table 1 shows that boating skill was generally constant across the years. Nearly two-thirds of the sample believed their boating skill remained unchanged, with 37.6% reporting consistently low levels of skill, and 26.9% reporting consistently high levels across the 22 years. Only 10.6% reported declining skills, and only 15.5% reported increased skills. Overall, roughly 2 in 5 people (42.4%) reported skill levels consistent with speciali-

zation progression, while nearly half (48.2%) reported declining or sustained low skill levels over time.

*Interest in boating.* Interest in boating showed a bipolar distribution. Just over one-third (35.4%) reported that their interest in boating had decreased over the 22-year interval, while just under one-third said their interest had increased (28.6%). A small number of respondents (6.3%) said that their low interest in boating had remained unchanged, while a larger percent (18.2%) said their high interest in boating had remained unchanged over the years.

*Stopped boating.* The quit boating indicator measured the overall attrition from boating participation across the three waves. Table 1 shows that just under half of the people in the panel (42.0%) continued their boating participation throughout the years. Conversely, an equal number (47.3%) stopped boating during this time. In between, about one in 10 people (10.6%) had stopped boating prior to 1985 but had started boating again by 1997.

### *The 1985 Panel*

Results from the two-wave 1985 panel generally replicated those from the 1975 panel (Table 2). Two thirds of the sample (66.3%) did not own a boat in 1997. Half the sample (49.7%) never owned a boat and 16.6% sold their boat between 1985 and 1997. Conversely, about a third of these boaters owned a boat in 1997. A fourth of the sample owned a boat in 1985 and in 1997 while 8.9% purchased a boat during the interval. Boating skill remained low or decreased for half the panel (53.0%), while it remained high or increased for just under a half (47.0%). The 1985 panel became generally more interested in boating over time than did the 1975 panel. Almost two thirds of the 1985 panel expressed continued high levels of interest (31.4%)

TABLE 2  
*Changing Patterns of Specialization among the 1985 Panel of  
Apostle Islands Boaters*

1985 PANEL	Boat Ownership	Boating Skill	Change in Interest	Quit Boating
Decreasing	26 (16.6%)	11 (7.2%)	44 (28.2%)	58 (36.5%)
Low Stable	78 (49.7%)	70 (45.8%)	22 (14.1%)	NA
High Stable	39 (24.8%)	48 (31.3%)	49 (31.4%)	101 (63.5%)
Increasing	14 (8.9%)	24 (15.7%)	41 (26.3%)	NA

or increasing interest in boating (26.3%). Also, unlike the 1975 panel, about two thirds (63.5%) of the 1985 panel was still boating in 1997. These higher levels of interest and participation in the 1985 panel indicate that there were lower levels of attrition from boating participation during the 12-year interval than during the 22-year interval.

### Discussion

The results show that specialization progression is more the exception, rather than the rule among boaters at the Apostle Islands. They confirm Scott and Shafer's (2001) speculation that "[a]lthough some people certainly progress (and some to an elite status), most probably either maintain involvement at a relatively fixed level or actually decrease their participation over time" (p. 334). The findings also show that there were more people who maintained their involvement at a low fixed level than at a high fixed level. Boaters who were regressing in specialization or remained as casual participants over the years outnumbered those who were specializing—i.e., increasing participation or the long-term committed participants.

What do these findings mean for the specialization concept? They challenge the notion that people naturally progress through various stages of specialization. The idea that an angler might move through a progression of stages from dock fishing with worms to trout fishing on a spring fed stream (Bryan 1977) is intuitively appealing. It also makes sense that hunters might move through a progression of stages from shooters to sportsmen (Jackson & Norton 1980). The findings from this study show, however, that most boating participants at the Apostle Islands National Lakeshore do not follow progressive stages of specialization over time. Many appear happy to remain casual participants. Moreover, there appears to be a natural process of attrition from an activity that leads to decreases in participation for many.

The results suggest that leisure participation for many serves as a diversion, as entertainment, or perhaps an easy-going social occasion rather than as a forum for self-development, improvement, and goal achievement. They suggest that concepts such as activity commitment, leisure identities, and lifestyle expressions are less common features of ongoing leisure engagements. While these are inherently interesting social-psychological processes to understand, the findings could mean that processes like fear or reticence about an activity, the lack of knowledge about normative expectations, and constraints to participation are more pressing issues faced by the occasional participant or career generalist in a leisure activity. A more common pattern of early participation in a leisure activity may be a "try-it-out-and-see-how-things-go" attitude, rather than a goal-directed commitment to skill development and the leisure lifestyles associated with specialization progression.

This does not mean that researchers and managers should discount past research efforts to understand specialization. Our results confirm that some people do move along a continuum from beginner to expert, and understanding these patterns of behavior has important management implications.

The cross sectional designs employed in the field also offer viable ways to segment user populations and to understand differences among visitors. Finally, understanding how people become committed to an activity or how an activity becomes a central life interest has deep roots in the social psychology literature. But this study shows that progression is not a universal process, and that specialization is only one pattern of change in leisure participation not shared by all users.

### *Cross Sectional Samples and Management Strategies*

These results suggest that researchers and managers may need to read and interpret specialization results from cross sectional surveys differently. Specialization research has segmented visitors based on an assumption of progression, and then focused on the behavioral and cognitive qualities of the more specialized user. A focus on the specialized user, however, encourages at least two potentially misguided management strategies. First is the way recreation managers provide satisfying experiences. From a specialization framework, the specialized user is typically more satisfied. Their participation is sustained over time and they are more specific in their expectations for quality service provision (McFarlane, Boxall, & Watson, 1998). That is, they know what makes them happy. They also typically have more knowledge about management, have stronger opinions about management action (Virden & Schreyer, 1988), and may be more likely to attend public meetings. The manager is more likely to see and talk with the more specialized user, and less likely to see and talk with the less specialized user. The results from this study, however, show that the majority of people in a cross section are less specialized users with little intention of becoming more specialized. Consequently, what satisfies a specialized user may have little appeal to the casual or one-time visitor. This approach to management may privilege the specialized user in a way that excludes the interests of those who have no desire to specialize. In short, it risks a management strategy based on the preferences of an elite user (Kuentzel, 2001).

A second strategy inspired by the concept of specialization is that recreation managers should provide experiences that facilitate progression along the continuum. They can provide easier access for increased participation, educational clinics and seminars, and events that increase social ties to the activity. An educated/specialized visitor is presumably a more responsible visitor. This traditional focus on specialization fits easily within a management framework where increasing use, crowding, and environmental impact are considered the dominant challenges for managers. Recreation managers should encourage more specialized users because they are the most knowledgeable (Williams, Schreyer, & Knopf, 1990), environmentally concerned (McFarlane & Boxall, 1996), have a stronger sense of place (Bricker & Kerstetter, 2000), and may be more likely to enforce norms of appropriate behavior. Therefore, when managers encourage more specialization, they are seen as responsible stewards of the resource.

The results from our study, however, show that this may be unrealistic. The majority of people in the panel did not progress, may have had no intention of progressing, and probably were content with their level of participation over the years. Consequently, the interests and perceptions of those with no intentions of specializing may be a more important focus. For many recreation destinations, the dominant management challenges may not be over use and excessive environmental impact. Rather, in some areas, under use may be a more pressing issue. There may be too few visitors to support a viable rural tourism industry. There may be inordinate resources allocated to areas with little visitor demand. Or declining or stagnate participation may be a growing problem (e.g., hunting, fishing, downhill skiing). In these cases, understanding the occasional visitor or the drop out may be a more important research task. Resource managers may need to focus more on its non-specialized segment of users, and learn more about their standards for high quality recreation experiences. In short, recreation providers may need to target their programs and services at the needs of the novice and occasional visitor, while allowing the more experienced users to find their own way along the specialization continuum.

#### *Specialization Change—Understanding Why*

One obvious path for future research is to replicate this study among participants in other recreation activities. Is the proportion of casual participants less in other activities than in boating? It could be that certain activities such as rock climbing, snowboarding, or kayaking naturally encourage participants to specialize. Leisure activities like these may demand specialized skills even before one can participate. Moreover, could it be that the demands of boat ownership may encourage more natural attrition than other activities? One does not keep a 36-foot yacht that is no longer used. Yet, the same person can easily store a kayak in the garage and occasionally pull it out at certain opportunistic times. Over time, a kayaker may never fully stop participating. It is likely that all leisure activities have some casual participants and some level of attrition over time, but is the proportion as high in other activities as it is in boating?

A second obvious path for future research is an exploration of why some people specialize and why some never do. These are the “antecedents” and “contingencies” suggested by Scott and Shafer (2001). For example, there was a clear process of attrition from boat ownership over time. Boat ownership may have “run its course” for some. For others, the declining abilities of age may have made boat upkeep increasingly onerous. Perhaps retirement and fixed incomes made it difficult to keep a boat for some. Still others may have developed too many other leisure interests to make boat ownership worthwhile (Kuentzel, 2001). Changes in the life course may also affect the trajectory of boating participation. Some may be avid sailboat racers in their early 20s, but may find that factors such as marriage, job change/career development, or residence change may keep them from participating as fre-

quently in racing. Having children or later, having children leave home (empty nest) tends to refocus one's leisure participation patterns and interests. Later in the life course, marital changes, retirement, or health problems can alter the trajectory of participation in boating. No research has specifically tested the link between life course changes and specialization change.

Another path for future research is to track change in social psychological measures of specialization such as commitment, self-identity, or social ties to the activity. In this study, the 1975 questionnaire was written before Bryan's (1977) original work on specialization. Panel research designs always face the challenge of research specialties that develop after the original questionnaire was designed. The 1985 questionnaire did include good measures of commitment, centrality, self-identity, and social ties. However they only offer indicators of change across one 12-year wave of the panel. Future research should test these items more thoroughly with panels started in the 1980s or 1990s. It could be that psychological indicators of specialization show less change over time. These results showed little change in the self-perceived skill measure. Once one develops some boating skills (about 15% of the panel over 22 years), this becomes a quantity that tends not to diminish, even when people sell their boat and are away from boating for a time. Only 1 out of 10 people reported declining skills over time, and boating skill remained the same over 22 years for two thirds of the sample. It may be like the bicycle phenomenon, where once people learn how to boat, they never forget. Similarly, one may maintain friendships with other activity participants and express high levels of commitment to an activity even while behavioral expressions of participation are on the decline.

The specialization framework offers researchers and managers an appealing way to think about change in leisure participation. The results from this study, however, show that the assumption about progression along a continuum from general to specific does not apply to a majority of participants. These findings indicate that change in participation is a more complex phenomenon that deserves more systematic analysis, and which may deserve alternate conceptual frameworks.

## References

- Block, P. H., Black, W. C. & Lichtenstein, D. (1989). Involvement with the equipment component of sports: Links to recreational commitment. *Leisure Sciences*, 11, 187-200.
- Bricker, K. & Kerstetter, D. L. (2000). Level of specialization and place attachment: An exploratory story of whitewater recreationists. *Leisure Sciences*, 22, 233-257.
- Bryan, H. (1977). Leisure value systems and recreation specialization: The case of trout fishermen. *Journal of Leisure Research*, 9, 174-187.
- Bryan, H. (1979). *Conflict in the great outdoors*. Birmingham, AL: Birmingham Publishing Co.
- Chipman, B. D., & Helfrich, L. A. (1988). Recreation specialization and motivations of Virginia river anglers. *North American Journal of Fisheries Management*, 8, 390-398.
- Ditton, R. B., Loomis, D. K., & Choi, S. (1992). Recreation specialization: Re-conceptualization from a social world perspective. *Journal of Leisure Research*, 24, 33-51.

- Donnelly, M. P., Vaske, J. J., & Graefe, A. R. (1986). Degree and range of recreation specialization: Toward a typology of boating related activities. *Journal of Leisure Research*, 18, 81-95.
- Ewert, A., & Hollenhorst, S. (1994). Individual and setting attributes of the adventure recreation experience. *Leisure Sciences*, 16, 177-191.
- Hammit, W. E., Knauf, L., & Noe, F. (1989). A comparison of user versus researcher determined level of past experience on recreation preference. *Journal of Leisure Research*, 21, 202-213.
- Hollenhorst, S. (1990). What makes a recreation specialist? The case of rockclimbing. In: J. Vining (Ed.), *Social science and natural resource management* (pp. 81-90). Boulder, CO: Westview Press.
- Jackson, R. M., & Norton, R. C. (1980). Phases: The personal evolution of the sport hunter. *Wisconsin Sportsman*, 9, 17-20.
- Kuentzel, W. F. (2001). How specialized is specialization research? *Journal of Leisure Research*, 33, 351-356.
- Kuentzel, W. F., & Heberlein, T. A. (1992). Does specialization affect behavioral choices and quality judgments among hunters? *Leisure Sciences*, 14, 211-226.
- Kuentzel, W. F., & Heberlein, T. A. (1997). Social status, self-development, and the process of sailing specialization. *Journal of Leisure Research*, 29, 300-319.
- Kuentzel, W. F., & McDonald, C. D. (1992). Differential effects of past experience, commitment, and lifestyle dimensions on river use specialization. *Journal of Leisure Research*, 24, 269-287.
- McFarlane, B. L. (1994). Specialization and motivations of birdwatchers. *Wildlife Society Bulletin*, 22, 361-370.
- McFarlane, B. L. (1996). Socialization influences of specialization among birdwatchers. *Human Dimensions of Wildlife*, 1, 35-50.
- McFarlane, B. L., & Boxall, P. C. (1996). Participation in wildlife conservation by birdwatchers. *Human Dimensions of Wildlife*, 1, 1-14.
- McFarlane, B. L., Boxall, P. C., & Watson, D. O. (1998). Past experience and behavioral choice among wilderness users. *Journal of Leisure Research*, 30, 195-213.
- McIntyre, N., & Pigram, J. J. (1992). Recreation specialization reexamined: The case of vehicle based campers. *Leisure Sciences*, 14, 3-15.
- Schreyer, R., Lime, D., Williams, D. (1984). Characterizing the influence of past experience on recreation behavior. *Journal of Leisure Research*, 16, 34-50.
- Scott, D., & Godbey, G. (1994). Recreation specialization in the social world of contract bridge. *Journal of Leisure Research*, 26, 275-295.
- Scott, D., & Shafer, C. S. (2001). Recreational specialization: A critical look at the construct. *Journal of Leisure Research*, 33, 319-343.
- Shafer, C. S., & Hammit, W. E. (1995). Purism revisited: Specifying recreational conditions of concern according to resource intent. *Leisure Sciences*, 17, 15-30.
- Virden, R. J., & Schreyer, R. (1988). Recreation specialization as an indicator of environmental preference. *Environment and Behavior*, 20, 721-739.
- Wellman, J. D., Roggenbuck, J. W., & Smith, A. C. (1982). Recreation specialization and norms of depreciative behavior among canoeists. *Journal of Leisure Research*, 14, 323-340.
- Williams, D. R., Schreyer, R., & Knopf, R. C. (1990). The effect of experience use history on the multidimensional structure of motivations to participate in leisure activities. *Journal of Leisure Research*, 22, 36-54.