

# Differentiating Between High, Spurious, Latent, and Low Loyalty Participants in Two Leisure Activities

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**ABSTRACT:** Loyalty is conceptualized as having two dimensions: psychological attachment and behavioral consistency. This conceptualization suggests a four-cell paradigm into which program users can be categorized: high loyalty, spurious loyalty, latent loyalty, and low loyalty. Two samples consisting of golfers and tennis players were classified into these four categories. Two hypotheses were tested to determine if selected personal and environmental variables could be used to differentiate between participants exhibiting different types of loyalty. Discriminant analysis revealed that level of involvement, motivation, side bets, and perceived skill level were useful for differentiating between participants in the four loyalty categories.

**KEYWORDS:** Loyalty, level of involvement, side bets, perceived skill level, motivation, leisure activities.

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In recent years, the concept of activity loyalty has received some attention as a factor influencing participants' continued use of recreation activities (Selin *et al.* 1988). There seems to be agreement that loyalty to recreation activities is a two-dimensional construct, comprised of both a psychological attachment and a behavioral/consistency dimension. The purpose of this article is to extend previous work in three ways. First, the psychological attachment and behavioral/consistency dimensions of loyalty are integrated and operationalized into a paradigm which reflects participants' loyalty to selected recreation activities. Second, recognizing that activity loyalty is not an "all-or-none" phenomenon, the use of the study's paradigm facilitates segmentation of participants into meaningful target groups. Third, differences are identified in selected personal and environmental characteristics between participants exhibiting high, spurious, latent, and low loyalty.

## Conceptualization of Activity Loyalty

A considerable volume of research focusing on the concept of consumer loyalty has been reported during the past three decades in the marketing literature, whereas this has emerged as a relatively recent research focus in the leisure field. Early research in marketing was plagued by the use of different definitions of loyalty which inhibited comparison and generalizability of the findings; but, over time, substantial progress has been made in conceptualization and measurement of the loyalty phenomenon.

An early major contribution by Pessemier (1959) utilized only behavioral measures to study loyalty, but he suggested that loyalty should be viewed along a continuum rather than as a loyal-disloyal dichotomy. Previous to his contribution, loyalty had been viewed as an all-or-none phenomenon.

Day (1969) agreed with Pessemier that consumers exhibit different degrees of loyalty, but he challenged the appropriateness of using intensity of use alone to measure loyalty. He suggested that such behavioral measures led to an overestimation of true loyalty because in addition to those who were truly loyal, intensity of use incorporated those who were spuriously loyal—that is, those who purchased repeatedly but who were not strongly psychologically attached to it. Day suggested that attitudinal data should be integrated with intensity of use to measure loyalty.

Further development of Day's conceptualization and empirical support for the notion that loyalty was a two-dimensional phenomenon quickly emerged. Olsen and Jacoby's (1971) study of consumer loyalty empirically supported the notion that cognitive and behavioral loyalty were separate and identifiable components. They defined loyalty as "a process in which various alternative brands are psychologically compared and evaluated on certain criteria and the selected brand or brands are selected" (p.49). The "definitive" conceptualization and definition of loyalty which has been used by most subsequent researchers was offered by Jacoby and Kyner (1973). It states that loyalty is biased behavior expressed over time by an individual with respect to one or more alternatives and is a function of psychological processes. Jacoby and Kyner (1973) suggest that the dynamics underlying simple repeat behavior, or habit, and consumer loyalty are different. Thus, neither behavioral measures nor psychological attachment measures alone are sufficient to capture the notion of loyalty (Jacoby and Chestnut 1978).

Leisure researchers have only recently begun to conceptualize and empirically examine the notion of loyalty. Howard, Edginton, and Selin (1988), using Jacoby and Kyner's (1973) definition of loyalty, integrated behavioral and attitudinal components to compute an index to measure participants' loyalty in health/fitness and cultural arts classes. The behavioral dimension was operationalized by adopting a proportion of purchase measure which has frequently been used in consumer behavior studies. This involved dividing the number of park and recreation agency classes that respondents purchased within the two program areas of concern, into the total number of classes within these program areas offered by all agencies within the SMSA area. Program commit-

**Figure 1**  
**The Loyalty Paradigm**

|  |      | Psychological Attachment |        |
|--|------|--------------------------|--------|
|  |      | Weak                     | Strong |
| Behavioral Consistency<br>(Intensity of use) | Low  | Low                      | Latent |
|  | High | Spurious                 | High   |

ment, which was their attitudinal component, was measured with a five-item Likert scale. They reported that only one-fifth of their respondents expressed a high degree of attachment to the programs in which they were enrolled, emphasizing the importance of the psychological attachment dimension in measuring loyalty.

Figure 1 illustrates the four cells which emerge from the two-dimensional paradigm of activity loyalty. Psychological attachment refers to the strength of a participant's general attitude or commitment toward the activity, while behavioral consistency is measured by intensity of participation.

High loyalty describes participants who exhibit strong psychological attachment and high intensity of participation.

Spurious loyalty refers to participants who exhibit high intensity of participation but whose psychological attachment is weak. For example, individuals may consistently play tennis because of peer group influences, but they may not be very strongly committed to it. Such individuals are likely to switch activities if their social circumstances change. Latent loyalty describes those who have a strong psychological attachment to the activity, but exhibit low intensity of use. Such individuals may lack the resources necessary to increase their intensity of use. Costs of participation (e.g., time, money, equipment, distance) may inhibit an individual's level of use. Finally, low loyalty refers to those individuals exhibiting weak psychological attachment and low intensity of use.

The distinction between high, spurious, latent, and low loyalty is important to leisure service administrators. For example, Selin *et al.* (1988) suggested that participants who exhibit high loyalty are more likely to continue to participate in a specific activity or program than to switch to other services. On the other hand, spuriously loyal participants are more likely to discontinue their participation because it was based only on habit. Howard and Thomason (1984) reported that habit and convenience were the most common reasons cited by participants

for registering for programs, suggesting that only a relatively small proportion of users were highly loyal.

#### *Operationalization of the Loyalty Paradigm*

Behavioral consistency was measured by asking respondents to indicate their intensity of participation in golf or tennis during the preceding twelve months. The following categories were used: a) never; b) once a month; c) twice a month; d) once a week; and e) almost daily. The samples of golfers and tennis players were divided *ex post facto* into two groups (low and high), using the median as the dividing point. Respondents whose participation in golf or tennis was high were defined as exhibiting high behavioral consistency, while those classified into the low participation category were defined as exhibiting low behavioral consistency.

Psychological attachment was measured using a seven-point semantic differential scale composed of fifteen items chosen from the evaluative domain. The reliability of the scale measured by Cronbach's alpha was .92. Scores across items were summed to identify respondents with high and low overall scores. Scores above the median represented strong psychological attachment toward the activity, while scores below the median represented weak psychological attachment.

Based on their scores on the behavioral consistency and psychological attachment measures, respondents were assigned to one of the four cells which constitute the loyalty paradigm. Thus, the criteria variable "activity loyalty" was operationalized as a categorical variable.

#### *Operationalization of the Predictor Variables*

Several studies specifying different variables have reported a relationship between personal variables and tendency to use leisure services (Tinsley and Tinsley 1986). Based on the findings of those studies, five personal variables were selected as predictor variables in this study and they were incorporated into the first hypothesis:

Locus of control, motivation factor scores, degree of innovativeness, values, and level of involvement will discriminate among high, spurious, latent, and low loyalty participants.

Locus of control was assessed by summing individuals' responses to a seven-item scale derived from Rotter (1966). An alpha of .78 was achieved for this scale. The voluminous number of motivation items reported in the literature made it necessary to be selective so the questionnaire would be less time consuming. To measure motivations for participating in golf or tennis, a fourteen-item Likert scale representing three dimensions for participating in recreation activities was developed. The three dimensions were: a) personal competence; b) mastery; and c) intrinsic/extrinsic motivation. Items representing each of the dimensions were selected from scales developed by Iso-Ahola and Allen (1982), Unger and Kernman (1983), and Graefe (1980). The overall

alpha for the scale was .80. To measure innovativeness, a seven-item Likert scale was adapted from well-established scales developed by Hurt, Joseph, and Cook (1977) and Midgley and Dowling (1978). The alpha for this scale was .72. Kahle's (1983) list of values was used to assess participants' choice of the two most important values. Selected values were classified into one of three categories: first- and second-choice internal orientation, first- and second-choice external orientation, and a combination of internal and external choices, as suggested by Kahle (1983). A dummy variable was created for this variable and used in subsequent hypothesis testing. Level of involvement was measured by computing a total score for a twenty-item semantic differential scale developed and tested by Zaichowsky (1985). The alpha for this was .95.

Several environmental variables have also been found to impact use of a leisure service. Four of these variables which the literature suggested were likely to be most influential were incorporated into the second hypothesis:

Side bets, perceived constraints, price sensitivity, and perceived skill level will discriminate between high, spurious, latent, and low loyalty participants.

Side bets (Buchanan 1985) refers to investments made related to participation in an activity. Side bets were assessed by computing a total score for an eight-item Likert scale. The scale's alpha was .86. The items used to measure investment in side bets—related to equipment, friendship, magazine subscriptions, money spent on the game, and watching the game on television—were selected for this scale and were derived from scales developed by Bloch and Bruce (1984) and Bryan (1977). The twenty-one items used to assess constraints were drawn from a taxonomy of constraints developed by Crompton and Lamb (1986). These items reflected constraints related to product, price, promotion, and distribution. The alpha for this Likert scale was .94.

The level of price increase necessary to induce switching was the measure of price sensitivity first suggested by Pessemer (1959) and later used by Jarvis (1973) and Muncy (1983). Finally, perceived skill level was identified by asking participants to compare their skill level to that of other participants. Respondents were asked to indicate if they perceived their skill level to be: a) higher than that of their friends; b) lower than that of their friends; or c) about the same as that of their friends. A dummy variable was created for use in hypothesis testing.

## **Methodology**

### *The Sample*

A modified cluster approach was used to collect data from a sample of golfers and tennis players using public golf and tennis centers in Austin, Texas. Sample sizes drawn from each facility were based on the average number of rounds of golf or tennis matches at each of the city's facilities. The selected samples of 420 golfers and 210 tennis players were approached and requested to participate. Upon agreeing to participate, each was handed a prepaid return envelope and a questionnaire. To encourage individuals to return the questionnaire, nonrespondents were contacted three times.

When nonfunctioning addresses were excluded from the sample, the response rates were 71.5 percent (n=264) for golfers and 73 percent (n=134) response rate for tennis players. Results of chi-square tests used to test for differences in age and frequency of play between a random sample of nonrespondents and respondents revealed no significant differences within the golf or tennis samples.

### *Statistical Procedures*

Principal components factor analysis, followed by an oblique rotation, was used to reduce the twenty-one-item scale used to assess constraints and the fourteen-item motivation scale. Five constraint factors: individual, social, price and distribution, promotion, and miscellaneous; and four motivation factors: mastery, extrinsic rewards, personal competence, and intrinsic rewards; emerged for golf. Seven constraint factors: individual, interests, price and distribution, promotion, social, family, and miscellaneous; and four motivational factors: mastery, extrinsic rewards, personal competence, and intrinsic rewards; emerged for tennis. Factor scores were computed for each dimension and used in subsequent hypotheses testing.

Multiple discriminant analysis was used to determine if the predictor variables would discriminate between high, spurious, latent, and low types of loyalty among active participants in golf and tennis. The F ratio and probability associated with Wilks's lambda were used in interpreting the statistical significance of the functions. Only functions statistically significant at the .05 level were retained for interpretation.

The relative importance of the predictor variables used to form the discriminant function was assessed by inspection of the total structure coefficients (Tatsuoka 1988). To determine if the discriminant functions provided meaningful differentiation between the two groups, the predictive accuracy of the functions was examined. Respondents' actual group classification were compared to a predicted group classification based on a discriminant score computed using response on the predictor variables.

## **Results**

The primary challenge in assigning respondents to one of the four cells in the loyalty paradigm was deciding upon what criteria to use. In the absence of recognized norms to guide this decision, medians were used. Using this criterion, 40.9 percent of golfers were classified into the high loyalty group (Table 1A). Golfers classified as spuriously loyal comprised the next largest proportion of participants. Tennis players were more likely to exhibit low or high loyalty than either spurious or latent loyalty (Table 1B).

### *Testing of Hypothesis 1*

Multiple-group discriminant analysis was performed, using locus of control, motivation factor scores, degree of innovativeness, and level of involvement as the predictor variables. The criterion variables were based on the

respondent's type of service loyalty (high, spurious, latent, or low)

The results displayed in Table 2 suggest that only one discriminant function, Function 1, was statistically significant, and it explained 89 percent of the variance in the data set. As the squared canonical correlation shows, 44 percent of the variance in the function was attributable to true group variability.

**Table 1a**  
**Classification of Golfers into the Cells of the Loyalty Paradigm**

| Type of Loyalty  | Frequency | Percent     |
|------------------|-----------|-------------|
| High loyalty     | 100       | 40.9        |
| Spurious loyalty | 81        | 30.7        |
| Latent loyalty   | 26        | 9.8         |
| Low loyalty      | 49        | <u>18.6</u> |
| Total            | 264       | 100.0       |

**Table 1b**  
**Classification of Tennis Players into the Loyalty Paradigm**

| Type of Loyalty  | Frequency | Percent     |
|------------------|-----------|-------------|
| High loyalty     | 41        | 30.6        |
| Spurious loyalty | 19        | 14.2        |
| Latent loyalty   | 30        | 22.4        |
| Low loyalty      | <u>44</u> | <u>32.8</u> |
| Total            | 134       | 100.0       |

Table 2 shows the predictor variables, their total structure coefficients, their group means, and the results of univariate F tests. Using the total structure coefficients to judge the most important predictor variables, golfers' level of involvement was the most important predictor variable in discriminating among the four categories of service loyalty. Low loyalty golfers, as expected, had the lowest mean scores. The second most important predictor variable was the extrinsic rewards motivation factor. Golfers exhibiting high and latent loyalty perceived this dimension to be more important than did spurious or low loyalty golfers. The personal competence motivation factor was the third most important predictor variable. The structure coefficients for the remaining variables were below .30 and thus were not considered in the interpretation of the function.

The canonical variables indicated that the greatest difference is between latent and low loyalty golfers. The data suggest that the high and latent groups are alike with respect to the predictor variables, and spurious and low loyalty golfers also are alike with respect to predictor variables.

The diagonal in the confusion matrix (Table 2) represents the number and percent of cases classified correctly for each of the four loyalty categories. The total number of respondents classified correctly was obtained by summing the number of cases correctly classified in each of the four loyalty categories. The data show that  $(56 + 32 + 16 + 28)/190$  or 70.0 percent of respondents were correctly classified by the discriminant function. This is better than would have occurred by chance. The table shows that the discriminant function performed better for latent and low loyalty groups than for the other two groups.

A similar procedure was undertaken with the tennis sample. Table 3 shows that two statistically significant functions, Function 1 and Function 2, emerged from the analysis, explaining 79 percent and 16 percent of the variance in the tennis sample respectively. The squared canonical correlation for the first function reveals that 65 percent of the variance in Function 1, but only 29 percent of the variance in Function 2, was associated with true group variability.

Table 3 also shows the predictor variables, their structure coefficients, their group means, and results of the univariate F tests. For Function 1, tennis players' level of involvement with tennis was the most important predictor variable in discriminating among the four categories of service loyalty, followed by personal competence. The canonical variable scores suggest the greatest difference in Function 1 was between high and low loyalty tennis players and the two most important predictor variables. The negative scores for low loyalty tennis indicate an inverse relationship with the two most important predictor variables, level of involvement and personal competence.

Unlike golfers, for whom the latently loyal had the highest mean involvement scores, it was the highly loyal tennis players who reported the highest mean scores. Personal competence was the second most important predictor variable for Function 1. The high and latently loyal tennis groups perceived this motivation dimension to be more important than did spurious or low loyalty tennis players.

The mean group discriminant function scores for Function 2 indicate that this function discriminated between players with spurious loyalty and those with low loyalty. For Function 2, the most important predictor variables were respondents' level of innovativeness, locus of control, external value orientation, and internal value orientation. The group means on the personal canonical function displayed in Table 3 indicate that this function discriminated best between those exhibiting spurious and low loyalty. There was an inverse relationship between spurious loyalty and degree of innovativeness, internal choice values, and locus of control. This means that spuriously loyal tennis players had low innovativeness scores, chose fewer internal values, and were more likely to have an external locus of control than low loyalty tennis players. In contrast, the direct relationship between spurious loyalty and external rewards indicates that this motivation dimension is important to spuriously loyal tennis players, but not to low loyalty tennis players.

The confusion matrix indicates that the discriminant function correctly classified 66.6 percent of respondents. This is substantially higher than the 25 percent that would have been expected by chance. The discriminant function



TABLE 2  
Results of Discriminant Analysis, Using Personal Variables  
as Predictors of Loyalty to Golf

| Function | Wilks' Lambda | Approximate F | NDF | DDF   | Significance |
|----------|---------------|---------------|-----|-------|--------------|
| 1.       | .51           | 5.60          | 24  | 519.7 | .001         |
| 2.       | .91           | 1.13          | 14  | 360   | .32          |
| 3.       | .97           | .84           | 6   | 181   | .54          |

| Function | Canonical Correlation | Adjusted Canonical Correlation | Squared Canonical Correlation | Eigenvalue | Proportion | Cumulative |
|----------|-----------------------|--------------------------------|-------------------------------|------------|------------|------------|
| 1.       | .66                   | .64                            | .44                           | .78        | .89        | .89        |
| 2.       | .23                   | .14                            | .05                           | .06        | .06        | .95        |
| 3.       | .16                   | .11                            | .02                           | .02        | .05        | 1.00       |

| Predictor Variables  | Structure Coefficients | Group Means  |                  |                |             | Univariate F | Significance |
|----------------------|------------------------|--------------|------------------|----------------|-------------|--------------|--------------|
|                      |                        | High Loyalty | Spurious Loyalty | Latent Loyalty | Low Loyalty |              |              |
| Mastery              | .03                    | -.00         | .10              | -.11           | -.24        | 1.04         | .39          |
| Extrinsic Rewards    | .33                    | .12          | -.06             | .56            | .43         | 4.52         | .00          |
| Personal Competence  | .31                    | .10          | .11              | .17            | -.53        | 3.50         | .01          |
| Internal Rewards     | .09                    | .09          | -.04             | .27            | .09         | .65          | .57          |
| Level of Involvement | .98                    | 131.57       | 114.19           | 134.37         | 108.14      | 44.25        | .01          |
| Innovativeness       | -.07                   | 25.60        | 25.03            | 26.31          | 26.41       | 1.55         | .00          |
| Internal Choice      | -.18                   | .58          | .69              | .81            | .80         | 2.30         | .05          |
| External Choice      | .01                    | .01          | .02              | .26            | .34         | .02          | .89          |
| Locus of Control     | .12                    | 5.45         | 5.28             | 5.05           | 5.03        | .64          | .57          |

Group Means on Canonical Variable  
Canonical 1

|                  |       |
|------------------|-------|
| High Loyalty     | .80   |
| Spurious Loyalty | -.66  |
| Latent Loyalty   | 1.01  |
| Low Loyalty      | -1.26 |

Confusion Matrix

|                  | High Loyalty                         | Spurious Loyalty | Latent Loyalty | Low Loyalty | Total  |
|------------------|--------------------------------------|------------------|----------------|-------------|--|
| High Loyalty     | 56 <sup>a</sup><br>70.0 <sup>b</sup> | 8<br>10.0        | 14<br>17.5     | 2<br>2.5    | 80   |
| Spurious Loyalty | 12<br>19.0                           | 32<br>50.7       | 8<br>12.7      | 11<br>17.4  | 63   |
| Latent Loyalty   | 0<br>0                               | 0<br>0           | 16<br>100.0    | 0<br>0      | 16   |
| Low Loyalty      | 1<br>3.2                             | 2<br>6.4         | 0<br>0         | 28<br>90.3  | 31<br>132 <sup>c</sup><br>190<br>70.0 <sup>d</sup> |

<sup>a</sup>=frequency, <sup>b</sup>=percent, <sup>c</sup>=total number of cases classified correctly, <sup>d</sup>=total percent of cases classified correctly.

TABLE 3  
Results of Discriminant Analysis, Using Personal Variables  
as Predictors of Loyalty to Tennis

| Function | Wilks' Lambda | Approximate F | NDF | DDF   | Significance |
|----------|---------------|---------------|-----|-------|--------------|
| 1.       | .22           | 7.01          | 24  | 252.9 | .001         |
| 2.       | .65           | 2.72          | 14  | 176   | .001         |
| 3.       | .92           | 1.18          | 6   | 89    | .479         |

| Function | Canonical Correlation | Adjusted Canonical Correlation | Squared Canonical Correlation | Eigenvalue | Proportion | Cumulative |
|----------|-----------------------|--------------------------------|-------------------------------|------------|------------|------------|
| 1.       | .80                   | .78                            | .65                           | .86        | .79        | .79        |
| 2.       | .54                   | .47                            | .29                           | .42        | .16        | .95        |
| 3.       | .27                   | .14                            | .07                           | .07        | .05        | 1.00       |

| Predictor Variables  | Structure Coefficients |              | Group Means      |                |             | Univariate F | Significance |      |
|----------------------|------------------------|--------------|------------------|----------------|-------------|--------------|--------------|------|
|                      | First/Second Canonical | High Loyalty | Spurious Loyalty | Latent Loyalty | Low Loyalty |              |              |      |
| Mastery              | .14                    | -.18         | .29              | .31            | .03         | -.17         | 1.27         | .28  |
| Extrinsic Rewards    | .07                    | -.44         | .12              | .62            | -.02        | -.33         | 2.74         | .04  |
| Personal Competence  | .49                    | .08          | .30              | -.59           | .39         | -.39         | 6.56         | .001 |
| Internal Rewards     | .15                    | -.54         | -.03             | .45            | .37         | -.40         | 3.95         | .01  |
| Level of Involvement | .96                    | -.08         | 131.51           | 107.75         | 129.28      | 103.61       | 49.22        | .001 |
| Innovativeness       | .03                    | .53          | 25.51            | 21.66          | 25.84       | 26.80        | 3.63         | .01  |
| Internal Choice      | .23                    | .43          | .85              | .41            | .72         | .73          | 3.14         | .02  |
| External Choice      | .01                    | .06          | .83              | .82            | .80         | .78          | .03          | .98  |
| Locus of Control     | .09                    | .62          | 5.27             | 3.85           | 4.52        | 5.23         | 4.44         | .01  |

Group Means on Canonical Variable

|                  | Canonical 1 | Canonical 2 |
|------------------|-------------|-------------|
| High Loyalty     | 1.21        | .22         |
| Spurious Loyalty | -1.53       | -1.42       |
| Latent Loyalty   | .83         | -.30        |
| Low Loyalty      | -1.73       | .65         |

Confusion Matrix

|                  | High Loyalty                         | Spurious Loyalty | Latent Loyalty | Low Loyalty | Total             |
|------------------|--------------------------------------|------------------|----------------|-------------|-------------------|
| High Loyalty     | 24 <sup>a</sup><br>68.5 <sup>b</sup> | 0                | 10             | 1           | 35                |
| Spurious Loyalty | 2                                    | 9<br>16.7        | 0              | 1<br>8.3    | 12                |
| Latent Loyalty   | 9                                    | 2                | 14<br>56.0     | 0           | 25                |
| Low Loyalty      | 2                                    | 1                | 3              | 20<br>76.9  | 26                |
|                  |                                      |                  |                |             | 67 <sup>c</sup>   |
|                  |                                      |                  |                |             | 98                |
|                  |                                      |                  |                |             | 66.6 <sup>d</sup> |

<sup>a</sup>=frequency, <sup>b</sup>=percent, <sup>c</sup>=total number of cases classified correctly, <sup>d</sup>=total percent of cases classified correctly.

performed better for low loyalty and spurious loyalty groups than for the other two groups.

In conclusion, the results of the discriminant analyses revealed that, for both golf and tennis, personal variables could be used to distinguish between golfers' and tennis players' types of loyalty. In both cases, level of involvement was the most important predictor of group membership.

### *Testing of Hypothesis 2*

Multiple group discriminant analysis was performed using side bets, price sensitivity, perceived constraints, and perceived skill level as predictor variables. The criterion variables were based on the respondent's type of service loyalty (high, spurious, latent, or low).

The results displayed in Table 4 suggest that only Function 1 was statistically significant, explaining 86 percent of the variance in the data set. However, the squared canonical correlation indicates that only 19 percent of the variance can be attributed to true group variability.

The most important predictors for this function were side bets, a perceived high level of skill, a perceived skill level of about the same, miscellaneous constraints, promotion failings, pricing and distribution constraints, and social constraints. The group means on the canonical variable indicate that the greatest difference appears to be between low loyalty golfers and the three most important predictor variables. However, comparing group means on the canonical function for high loyalty golfers with the total structure coefficient revealed a direct relationship between the high loyalty group and the three most important predictor variables.

The confusion matrix results shown in Table 4 indicate that the discriminant function was accurate in classifying respondents into the loyalty paradigm (55 percent). It was expected that by chance the classification would be correct 25 percent of the time. The discriminant function performed best for the low loyalty and latent groups, and was least effective for the spuriously loyal group. The results suggest that the environmental variables can be used to discriminate among respondents' type of loyalty to golf.

The same procedure was undertaken with the tennis sample. The results in Table 5 suggest that only Function 1 was statistically significant, and that it explained 71 percent of the variance among tennis players. The squared canonical correlation indicates that only 29 percent of the variance is due to group variability.

Group means on the canonical variable suggest that the greatest difference was between high and low loyalty players (Table 5). The most important predictor for this function was side bets. The highest mean score for side bets was reported by high loyalty tennis players, and the lowest mean score by players with low loyalty.

The confusion matrix results indicate that the discriminant function was effective in classifying respondents into the loyalty paradigm (84.5 percent). It was least efficient in predicting membership in the low loyalty group. The alternative hypothesis was accepted because the environmental predictor variables did discriminate significantly among the types of loyalty for tennis players.

TABLE 4  
Results of Discriminant Analysis, Using Environmental Variables  
as Predictors of Loyalty to Golf

| Function | Wilks' Lambda | Approximate F | NDF | DDF   | Significance |
|----------|---------------|---------------|-----|-------|--------------|
| 1.       | .77           | 1.84          | 30  | 605.3 | .01          |
| 2.       | .96           | .43           | 18  | 414   | .96          |
| 3.       | .98           | .29           | 8   | 208   | .87          |

| Function | Canonical Correlation | Adjusted Canonical Correlation | Squared Canonical Correlation | Eigenvalue | Proportion | Cumulative |
|----------|-----------------------|--------------------------------|-------------------------------|------------|------------|------------|
| 1.       | .44                   | .39                            | .19                           | .24        | .86        | .86        |
| 2.       | .16                   | ---                            | .02                           | .02        | .09        | .95        |
| 3.       | .10                   | ---                            | .01                           | .01        | .05        | 1.00       |

| Predictor Variables                       | Structure Coefficients | Group Means  |                  |                |             | Univariate |              |
|---|------------------------|--------------|------------------|----------------|-------------|------------|--------------|
|   |                        | High Loyalty | Spurious Loyalty | Latent Loyalty | Low Loyalty | F          | Significance |
| Individual Constraints                    | -.23                   | -.09         | .12              | .01            | -.06        | .63        | .58          |
| Social Constraints                        | -.79                   | -.09         | .07              | .04            | .09         | .55        | .64          |
| Pricing and Distribution Constraints      | -.55                   | -.03         | .01              | .06            | .02         | .07        | .97          |
| Misc. Constraints                         | .95                    | .11          | -.00             | .24            | -.34        | 2.32       | .07          |
| Promotion Failings                        | .67                    | .01          | .03              | .30            | -.19        | 1.15       | .32          |
| Price Sensitivity (under \$3.00)          | .56                    | .27          | .29              | .47            | .18         | 1.83       | .14          |
| Price Sensitivity (from \$3.00 to \$5.00) | -.01                   | .35          | .36              | .19            | .32         | .81        | .48          |
| Perceived Skill Level (about the same)    | -.83                   | .55          | .57              | .52            | .59         | .11        | .95          |
| Perceived Skill Level (Higher)            | .99                    | .38          | .29              | .38            | .18         | 1.80       | .14          |
| Side Bets                                 | .99                    | 30.62        | 28.05            | 29.71          | 25.29       | 12.48      | .001         |

Group Means on Canonical Variable  
Canonical 1

|                  |      |
|------------------|------|
| High Loyalty     | .41  |
| Spurious Loyalty | -.11 |
| Latent Loyalty   | .31  |
| Low Loyalty      | -.96 |

Confusion Matrix

|                  | High Loyalty                         | Spurious Loyalty | Latent Loyalty | Low Loyalty | Total  |
|------------------|--------------------------------------|------------------|----------------|-------------|--|
| High Loyalty     | 50 <sup>a</sup><br>55.5 <sup>b</sup> | 18<br>20.0       | 17<br>18.8     | 5<br>5.5    | 90   |
| Spurious Loyalty | 17<br>23.9                           | 31<br>43.6       | 11<br>15.4     | 12<br>16.9  | 71   |
| Latent Loyalty   | 3<br>14.2                            | 1<br>4.7         | 13<br>61.9     | 4<br>19.5   | 21   |
| Low Loyalty      | 2<br>5.4                             | 5<br>13.5        | 3<br>8.1       | 27<br>72.9  | 37<br>121 <sup>c</sup><br>219<br>55.0 <sup>d</sup> |

<sup>a</sup>=frequency, <sup>b</sup>=percent, <sup>c</sup>=total number of cases classified correctly, <sup>d</sup>=total percent of cases classified correctly.

TABLE 5  
Results of Discriminant Analysis, Using Environmental Variables  
as Predictors of Loyalty to Tennis

| Function | Wilks'<br>Lambda | Approximate |     |       | Significance |
|----------|------------------|-------------|-----|-------|--------------|
|          |                  | F           | NDF | DDF   |              |
| 1.       | .61              | 1.42        | 36  | 281.4 | .04          |
| 2.       | .85              | .69         | 22  | 192   | .83          |
| 3.       | .93              | .69         | 10  | 97    | .72          |

| Function | Canonical<br>Correlation | Squared<br>Canonical |            |            | Cumulative |
|----------|--------------------------|----------------------|------------|------------|------------|
|          |                          | Correlation          | Eigenvalue | Proportion |            |
| 1.       | .54                      | .29                  | .40        | .71        | .71        |
| 2.       | .28                      | .10                  | .09        | .15        | .86        |
| 3.       | .25                      | .06                  | .07        | .14        | 1.00       |

| Predictor<br>Variables                       | Structure<br>Coefficients | Group Means     |                     |                   |                | Univariate<br>F | Significance |
|--|---------------------------|-----------------|---------------------|-------------------|----------------|-----------------|--------------|
|  |                           | High<br>Loyalty | Spurious<br>Loyalty | Latent<br>Loyalty | Low<br>Loyalty |                 |              |
| Individual Constrains                        | -.07                      | -.12            | .31                 | .11               | -.03           | .79             | .49          |
| Interest Constrains                          | .18                       | .09             | .38                 | -.21              | -.04           | 1.26            | .28          |
| Pricing Constrains                           | -.21                      | -.09            | -.25                | .06               | .17            | .77             | .51          |
| Promotion Constrains                         | .06                       | .08             | -.07                | .01               | -.01           | .10             | .95          |
| Social Constrains                            | .12                       | .07             | .10                 | -.09              | -.05           | .22             | .87          |
| Family Constrains                            | -.20                      | -.11            | -.09                | .00               | .17            | .54             | .65          |
| Friends Constrains                           | -.16                      | -.07            | -.06                | -.13              | .20            | .72             | .54          |
| Price Sensitivity<br>(under \$3.00)          | .03                       | .70             | .66                 | .55               | .73            | .80             | .49          |
| Price Sensitivity<br>(from \$3.00 to \$5.00) | .08                       | .11             | .20                 | .20               | .11            | .41             | .74          |
| Perceived Skill Level<br>(about the same)    | .34                       | .64             | .46                 | .40               | .50            | 1.26            | .29          |
| Perceived Skill<br>Level (Higher)            | -.17                      | .32             | .40                 | .48               | .41            | .52             | .66          |
| Side Bets                                    | .90                       | 30.71           | 27.41               | 25.5              | 22.8           | 11.22           | .001         |

Group Means on Canonical Variable

|                  | Canonical 1 |
|------------------|-------------|
| High Loyalty     | .84         |
| Spurious Loyalty | -.19        |
| Latent Loyalty   | .33         |
| Low Loyalty      | -.66        |

Confusion Matrix

|                  | High<br>Loyalty                       | Spurious<br>Loyalty | Latent<br>Loyalty | Low<br>Loyalty | Total   |
|------------------|---------------------------------------|---------------------|-------------------|----------------|---|
| High Loyalty     | 310 <sup>a</sup><br>91.2 <sup>b</sup> | 0                   | 0                 | 3              | 34  |
| Spurious Loyalty | 1<br>6.6                              | 13<br>86.6          | 0                 | 1<br>6.6       | 15  |
| Latent Loyalty   | 4<br>14.8                             | 1<br>3.7            | 21<br>77.7        | 1<br>3.7       | 27  |
| Low Loyalty      | 5<br>14.7                             | 0                   | 1<br>2.9          | 28<br>32.3     | 34<br>93 <sup>c</sup><br>110<br>84.5 <sup>d</sup> |

<sup>a</sup>=frequency, <sup>b</sup>=percent, <sup>c</sup>=total number of cases classified correctly, <sup>d</sup>=total percent of cases classified correctly.

### Concluding Comments

The purpose of this study was to explore the utility of personal and environmental variables in explaining participant loyalty to two recreation services. Based on a review of the literature, a conceptual paradigm was established to guide the study of loyalty in the context of two recreation services. Loyalty was conceptualized as two-dimensional, consisting of psychological attachment and behavioral consistency components. It was expected that personal and environmental variables would discriminate among respondents classified into the four loyalty categories: high, spurious, latent, and low.

The first hypothesis examined the discriminatory power of personal variables. Respondents classified into the four loyalty categories were hypothesized to be alike with respect to motivation factor scores, locus of control, level of involvement, value choices, and degree of innovativeness. Results from testing the first hypothesis revealed that the most important discriminating personal variables were level of involvement, the extrinsic rewards motivation factor, and personal competence. High levels of repeat participation can occur under conditions of both high and low involvement with a service. Respondents classified into high and spurious loyalty categories for golf or tennis reported the highest intensity of participation. However, highly loyal respondents reported substantially higher levels of involvement than did spuriously loyal consumers. Furthermore, those who were latently loyal also reported higher levels of involvement than did those who were spuriously loyal. These findings suggest that repeat participation rates do not reflect participants' levels of involvement with a service and support Assael's (1984) observation that a segment of repeat behavior can be attributed to inertia if the service is not highly involving to the consumer. Those exhibiting high and spurious loyalty may respond to elements in the marketing mix differently since their level of involvement was found to be higher.

The motivation of golfers and tennis players exhibiting high loyalty was associated with extrinsic rewards. It seems that highly loyal golfers and tennis players were motivated by the outcome, skill development, and their performance, whereas latently loyal golfers' and tennis players' motivations were most strongly associated with the dimension representing personal competence. Golfers and tennis players not displaying high levels of participation but possessing a positive attachment to the service were motivated by the challenge that the activity provided. Degree of innovativeness, locus of control, internal rewards, and internal value choices were also important discriminators of tennis players' types of service loyalty.

The second hypothesis concerned the discriminatory power of environmental variables in distinguishing among type of service loyalty to golf and tennis. Two variables, side bets and perceived skill levels, discriminated among high, spurious, latent, and low loyalty participants in both golf and tennis. Three variables, perceived constraints, perceived skill level, and price sensitivity, were important discriminators of golfers' type of loyalty, but they failed to discriminate among tennis players.

The findings provided strong empirical support for the relationship between side bets and type of service loyalty. In both golf and tennis, highly loyal respondents achieved the highest side bets scores, whereas low loyalty respondents achieved the lowest side bets scores. This suggests that side bets may encourage individuals to participate consistently in the service. Time, money, and effort spent on golf or tennis by highly loyal participants represent components of the participants' investments in the service. Although these items have been discussed as costs of participation, they may be viewed as investments in the service. Becker (1960) proposed that connections or investments will increase correspondingly with the level of importance attached to a service. The findings of this study generally support Becker's proposition.

Knowledge of differences among participants exhibiting high, spurious, latent, and low loyalty can be valuable in at least four ways. First, such knowledge can help guide administrators in making policy or program decisions. Administrators may choose to develop separate marketing strategies for each of the loyalty types that exhibit differences. For example, a promotion campaign developed to retain existing users may use different messages and media for participants exhibiting high, spurious, latent, and low loyalty. Second, participants may react differently to modification or changes related to the activity (e.g., price and time distribution) by type of loyalty. Knowledge of how participants may react to promotion messages or modifications would further the understanding of how different segments of user groups would be impacted by managerial decisions.

Third, the strength of loyalty revealed by the classification of participants into high, spurious, latent, and low loyalty categories is important information for managers concerned with maintaining or building market share. Retention of the agency's existing clientele is likely to become more difficult as competition increases. These two-dimensional data offer a much stronger indicator of the health of a program than the attendance data that currently prevail. Comparisons over time of the proportions in each of the four categories would show which of them were losing and gaining participants. If there is a decline in the proportion of high loyalty participants, but increases in those in the spurious or low loyalty groups, the program may be a candidate for a sudden decline even though the number of actual participants may be increasing. If management relies only on numbers of repeat users to measure loyalty, it is likely its assessment will be an overestimate.

Fourth, identification of high loyalty individuals is likely to provide managers with access to a group of opinion leaders. Opinion leaders are defined as persons within a group to whom other turn for information and advice (Crompton and Lamb 1986). Because they are committed, they are likely to be key resource people in encouraging others to join the program and should thus be carefully conserved by managers. They serve as gatekeepers because they are the medium through which the agency can access and communicate with a host of their associates. Opinion leaders are difficult to identify, but the loyalty paradigm appears to offer a useful mechanism for doing this.

Although the findings support the study's hypotheses, their generalizability

is limited, for at least three reasons. The first concern stems from the use of a sample of municipal golfers and tennis players. This cannot be reflective of private golfers and tennis players. The levels of loyalty exhibited by a sample drawn from private clubs may be different. Second, the sample was drawn from a single municipality in a particular area of the country which may not be representative of others. Third, only two activities were used and further research that includes a wider range of recreation activities needs to be undertaken. These findings do, however, provide a starting point for researchers interested in further investigating participants' loyalty to recreation services.

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