Advancing the Psychological Continuum Model: Dealing with Risk and Misclassification

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Marketing - Consumer Behavior (Professional Sport)
60-minute symposium, roundtable, or workshop

Thursday, June 7, 2018
2:10 PM
Room: Annapolis C

Abstract 2018-059

The Psychological Continuum Model (PCM) is a theoretical framework which provides an explanation of how and why an individual's mental connection with a sport object or activity initially forms and continues to develop (Funk & James, 2001; 2006). The PCM includes inputs, processes, and outputs through which we better understand the social-psychological mechanisms that account for movement in a stage-based progression along a vertical continuum. Scholars publishing in sport, leisure, tourism, hospitality, and marketing have drawn upon the framework to advance understanding of consumer attitudes, preferences, and behaviors. Since initial publication the PCM has undergone conceptual and empirical advancements, which have provided refinements and new insights into sport consumer psychology (Funk & James, 2016). The purpose of this symposium is to explore two potential areas for further advancement: (i) operationalizing risk and (ii) misclassification of respondents among the PCM stages. The topics will be presented focusing on the PCM's propositions and examining existing conceptual and methodological practices.

Background

Utilizing the PCM, an individual's psychological connection to a sport object is understood as a function of attitude formation that exists on a hierarchical continuum with four stages: Awareness, Attraction, Attachment, and Allegiance (Funk & James, 2001; 2006). Movement among the stages is based on social-cultural and psychological contingencies and processes that both reveal and influence the manner in which personal, psychological, and environmental determinants are experienced and evaluated. Empirical work to date has yielded initial guidance on how to operationalize as well as provide support for the PCM. Beaton, Funk, and Alexandris (2009) developed a staging mechanism to classify sport consumers into one of the four stages, allowing for examination of differences between and within stages. The staging mechanism and related algorithm utilize three facets of the multidimensional involvement construct: (i) pleasure which represents hedonic value, (ii) centrality which describes how important a sport object is to the individual’s lifestyle, and (iii) sign which reflects symbolic characteristics of the activity for a person’s self-concept. Scholars have provided conceptual and empirical support of the viability and practicality of the PCM and the staging tool's utility in various spectator and participant contexts. However, original propositions regarding the PCM included the involvement facet of risk as an element to better understand differences and similarities among stages (Funk & James, 2001), but it has yet to be conceptually developed or empirically tested. The first topic addresses operationalizing risk.

Topic 1: Operationalizing Risk

Risk, as a facet of consumer involvement, is viewed as the degree of uncertainty an individual associates with making a purchase decision (Dimanche, Havitz, & Howard, 1991; Laurent & Kapferer, 1985). Scholars have illustrated the impact risk has on the decision-making process and demonstrated that elements of risk modify involvement levels with sport and recreation objects (Brooker, 1984; Cheron & Ritchie, 1982; Havitz & Dimanche, 1990; Selin, 1986). In the initial presentation of the PCM, Funk and James (2001) discussed risk as a facet of involvement and provided observations about measuring perceived risk to differentiate among stages, specifically the potential of assessing risk probability and risk consequence, which were originally conceptualized in consumer behavior scholarship (Havitz & Dimanche, 1997; Laurent & Kapferer, 1985). Beaton et al. (2009) noted, however, there were problems with and lack of empirical support for the two facets resulting in the omission of risk when developing the staging tool. Recognizing risk was included in the development of the PCM (Funk & James, 2001) and is a relevant factor within sport and recreation contexts, we propose that five facets of risk-financial, performance, physical, social, and time-be considered as potential modifiers of an individuals’ involvement level and included in the staging process.
Financial risk is a measure of whether consumers perceive they are getting their ‘money’s worth’ (Selin, 1986). Performance risk is concerned with the performance of the self (participant) or purchased product (spectator). Physical risk is the possibility of physical danger or bodily harm. Social Risk concerns the perceptions that consumption will change the views others have of the consumer (Cheron & Ritchie, 1982). Time risk deals with the concern of wasting one’s time (Brooker, 1984). Collectively, the five facets capture unique elements of risk not adequately addressed through the two facets of Risk Probability and Risk Consequence. Operationalizing and including five facets of risk will increase the number of factors associated with and complexity of the measurement of an individual’s involvement with a sport object. Adding other factors will necessitate a change to the way individuals are staged within the PCM. One approach would be to modify Beaton et al.’s (2009) algorithm and staging matrix to include risk. Concerns with such an approach include the increasing complexity associated with staging individuals, and continuing to limit the PCM’s utility by transforming continuous data into categorical data. To avoid such concerns, the use of Latent Profile Analysis (LPA) is proposed.

Latent Profile Analysis (LPA) is a deductive statistical approach designed to segment individuals into theoretically sound and distinctive groups. Analogous to other Structural Equation Modeling analyses, the technique provides a series of fit indices and tests to determine the optimal number of latent groups and examination of the quality of membership classification based on theoretical justification, interpretability, intergroup heterogeneity, intragroup homogeneity, and statistical parsimony. Instead of using 27 (or more) combinations of involvement profiles based on selected cut-off points (e.g., 4.5 & 5.75), LPA utilizes an individual’s original scores for the involvement facets to calculate the probabilities associated with an individual being positioned among the PCM stages.

To test the inclusion of risk as a facet of involvement and to compare segmentation outcomes from the existing PCM staging mechanism with LPA, we will present two empirical illustrations. Data in the first study were obtained from spectators who follow a major league franchise in Atlanta, GA (n=525). In the second illustration, data were collected from participants in a bikepacking event in the southeastern U.S. (n=233). A battery of involvement items were adapted from Beaton et al. (2011) and tailored to the respective settings. Measures of risk were developed and assessed in the bikepacking study. Each study also included data collected on behavioral outcomes theoretically linked to the PCM stages. Psychometric properties of the involvement facets including risk were examined with Confirmatory Factor Analysis. The results provided evidence of adequate internal consistency and factorial (i.e., convergent and discriminant) validity. Preliminary results of Chi-square Goodness of Fit test combined with LPA, from testing both data sets, provided evidence of significant differences in the distribution of individuals among the stages, with LPA arguably producing a lower misclassification rate. The post-hoc Analysis of Covariance provided further evidence the LPA segmentation with risk provided better predictive quality, with a larger effect size (e.g., partial η2), in explaining the relationship between the PCM stages and examined behavioral outcomes.

**Topic 2: Stage Classification and Unique Fandom**

In addition to proposing the operationalization of risk, we will also discuss the occurrence of misclassified fans. Conceptual and empirical advancements of the PCM have been provided in various contexts. However, further refinement is warranted in the operationalization area to examine internal and external determinants that lead to preferences and behavior within and across stages. We examine the three-step procedure used to place sport consumers into one of the four stages to determine potential reasons for misclassification. Misclassification provides two interesting opportunities for research: (1) identify and study unique fans who behave counter to theory and/or intuition and (2) refine and improve the staging tool. To examine the occurrence of misclassification, data from spectators of a professional football team were analyzed.

Through an online survey, 5,853 responses were collected from paid members of an Australian Football League team. The participants were asked questions about their involvement with the club and classified within the PCM using the existing staging tool (Beaton et al., 2011). This resulted in 6% of respondents being staged in Awareness, 18% in Attraction, 32% in Attachment, and 44% in Allegiance. Having some respondents staged in Awareness raises concerns about the process since, according to the PCM stage definitions, individuals who have made an effort to purchase a club membership have developed a psychological connection beyond Awareness.

Support for misclassification of members into the Awareness stage was also apparent in responses to attitudinal, behavioral, and intention measures that should incrementally increase with each PCM stage. For example, after
examining a measure of self-reported fandom, on a scale of 1 (casual observer) to 7 (hardcore fanatic), we found that among those staged in Awareness, 35% responded with a six or seven indicating very high levels of fandom, thus appearing to be misclassified. To address this concern, a screening methodology could be developed to identify misclassified respondents by assigning various statistical thresholds at different stages on key outcome measures such as identification, commitment, and satisfaction. Once identified, this would provide researchers with the opportunity to analyze a unique segment of consumers that do not adhere to prescribed theory or propositions. As previously noted, use of a different staging approach, such as LPA, could also reduce concerns about misclassification.

The reasons for misclassification could also be linked to survey items used in the staging procedure. The staging process utilizes three items for each involvement facet of pleasure, centrality, and sign. In the AFL study, an additional item was included in the measure of sign to examine the impact of alternative measures on facet sensitivity. The item level mean scores for each sign item differed (4.98, 5.24, 5.51, and 6.22), which influenced the overall sign composite score, depending on which of the three questions were incorporated. The change in composite score in turn impacted stage classification. For example, 777 respondents, were specified as being part of a different stage when the sign item with the lowest average was substituted for the highest average item. Hence, a change in the composition of involvement by one item of the sign facet resulted in different staging for approximately 13% of respondents. These results provide evidence of sensitivity in the staging procedure to item selection. Taken together, this evidence highlights that the staging process can reveal new insight into unique consumers as well as provide direction for potential refinements to the staging tool. Implications and recommendations respective to both topics will be discussed.