Which Senses Matter More? The Impact of Our Senses on Team Identity and Team Loyalty

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Abstract

For the development of team identity and team loyalty, an understanding of how consumers experience the stadium through their senses is crucial, as the stadium is seen as the primary sensory space. The purpose of this study was to examine the relative impacts of the five senses on team identity and team loyalty. The study found that sight, sound, touch, and smell positively affected the team identity, while sight, touch, and smell positively affected the team loyalty. In addition, team identity positively affected team loyalty. This study provides the first empirical evidence of the effects of our senses on team identity and team loyalty. In order for marketers to maximize team identity and team loyalty, they need to develop specific sensory strategies that affect the game-day experience.

Introduction

Building strong brand commitment, such as brand identification and loyalty, has become a core challenge for modern businesses (Keller, 2012). In search of how brand commitment is built, research in consumer behavior has recognized the importance of consumers’ experiences with brands because such experiences provide consumers with memorable and personal meanings (Pine & Gilmore, 1999). Particularly, it is well recognized in branding research that brand experiences relate to human senses—sight, sound, touch, smell, and taste (Lee, 2010). It has also been found that sensory experiences are an important part of the overall brand experience (Gentile, Spiller, & Noci, 2007). A higher quality sensory experience that entertains and excites consumers is considered a key factor that can differentiate one brand experience from another (Gobé, 2001). Moreover, it has also been shown to influence a higher level of consumer satisfaction (Lindstrom, 2005; Schmitt, 1999). This is why the world’s most successful firms try to distinguish their brands by appealing to consumers’ five senses to construct competitive advantage. For example, Starbucks utilizes sensory marketing by providing a pleasant interior and lighting, relaxing music, the smell and taste of freshly ground coffee, and comfortable armchairs (Hultén, Broweus, & van Dijk, 2009).

Previous research in sport consumer behavior has mainly focused on physical surroundings (i.e., sportscape) as a primary driver of consumers’ experiences at sport venues and consumers’ cognitive evaluations of the venue, its amenities, and associated services (e.g., Wakefield, Blodgett, & Sloan, 1996; Wakefield & Sloan, 1995). While this is an important element in understanding sport consumer behavior, consumers tend to be driven more by the subconscious sensory aspects of the consumer experience than the functional features of products and services (Zaltman, 2003). For instance, negative cognitive evaluations that sport consumers have about the sport venue can be offset by a positive affective experience. This positive affective experience is often grounded in the sensory experiences at the stadium (cf. Brakus, Schmitt, & Zarantonello, 2009).

Recognizing the importance of the sport consumers’ sensory experience, Lee, Lee, Seo, and Green (2012) proposed “the sensyscape” model that extended the
scope of the conventional sportscape by taking a more multifaceted sensory perspective. Their study found that the overall sensoryscape construct (a combination of spectators’ stadium experiences through all five senses) had a significant and positive impact on stadium satisfaction in both major and minor league baseball settings. While this finding is valuable, it may be more useful to understand which dimensions of the sensory experiences are more predictive in consumer behavior. This would provide sport marketers with a starting point for experiential marketing that leverages each of the five senses.

In addition, although the sensory experience is predictive in stadium experience satisfaction, no study has examined the role of such sensory experience for its effect on more stable consumer behavior constructs, such as team identity or team loyalty. It is important to note that while sensory experience and subsequent stadium satisfaction may occur together in the sport venue, the effect of the sensory experience on team identity and team loyalty seems to be less direct. It has been recognized in organizational behavior that organizational commitment, such as identification with or loyalty to a particular organization, takes longer to develop and is seen as a more stable construct than satisfaction (Dougherty, Bluedorn, & Keon, 1985). This is the case in spectator sport in the sense that team identity and team loyalty tend to be constructed by more complex factors (e.g., team history, success, player attributes, stadium services) rather than by only stadium-related factors (e.g., facility aesthetics and parking, crowding) (Wann, 2006). While it is important for the sensoryscape to affect overall stadium satisfaction, unless it predicts more stable consumer behavior constructs, it is not a particularly useful construct. Consequently, it is necessary to examine the relationship between the sensoryscape and other important consumer behaviors.

The purpose of this study is to understand how our senses affect brand commitment to sport teams. To measure the five different senses of sport consumers, we implemented an instrument developed by Lee et al. (2012), which proposed a “sensoryscape” model containing all five senses. To measure the perception of the brand commitment, we relied on instrumentation to measure team identity and team loyalty.

The Sensoryscape

Human senses undoubtedly influence experience because people perceive and understand the world around them through the sensory system (Myers, 2004). It is well recognized in consumer research that consumers’ sensory experiences play a key role in their perceptions of the value of products or services that companies offer (Schmitt, 1999). Realizing the importance of human senses, a growing body of consumer behavior research has begun to pay close attention to consumers’ experiences via their five senses: sight, sound, touch, smell, and taste (Hultén et al., 2009; Lindstrom, 2005; Schmitt, 1999). Schmitt (1999) proposed a conceptualization of brand experiences that consist of five components: sense, feel, think, act, and relate. Specifically, the author emphasized the importance of consumers’ sensory experiences with brands in that such experiences can impress their senses, and gain access to the hearts and minds of the consumer. In a similar vein, Gentile et al. (2007) conceptually proposed six dimensions of the customer brand experience: sensorial, emotional, cognitive, pragmatic, lifestyle, and relational components. Their study found that the sensorial component is the most important one for experiential brands among the six brand experience components. Although both works proposed the conceptualization of sensory experience and emphasized its importance in consumer behavior, they did not develop scales to measure such an experience. More recently, Brakus et al. (2009) developed a brand experience scale that consists of four dimensions (i.e., sensory, affective, intellectual, and behavioral). Although this scale provides a subscale to measure consumers’ sensory experience with brands, it can measure only the overall sensory experience (e.g., “I find this brand interesting in a sensory way”), and not each of the five sense dimensions.

Realizing the importance of the sensory aspect of consumer experience, this study focuses on the role of the five senses of the sensory experiences in sport consumer behavior. Rather than focusing on the sensory experience as a whole, understanding what constitutes each dimension of the sensory experience is important because the sensory experience that appeals to only one or two senses may not ensure that the experience exists in a consumer’s mind. According to Schacter (1996), when people engage multiple senses with stimuli, they are more likely to remember the stimuli. In the context of brands, Lindstrom (2005) suggests that there are strong relationships between multi-sensory brands and the perceived value of a brand. In this sense, a sport venue might be regarded as a unique container that, by appealing to all five senses of spectators, produces memorable experiences. Spectators are able to appreciate the visual attractiveness of a stadium or an arena’s architecture, hear inspiring music, enjoy the physical proximity of other fans supporting the home team, take in the aromas from tailgate parties, and savor the tastes of concessions.

Realizing the importance of the sensory experience, Lee et al. (2012) developed the Sensoryscape scale to
measure spectators’ stadium experiences via the five senses. The Sensoryscape scale consists of five sense dimensions with 22 items. The sight dimension of the sensoryscape has six items: a stadium’s architecture, landscape, sightlines, scoreboards, decorations, and colors. The sound dimension has four items: the sound of cheering, the stadium’s sound system, the stadium’s announcer, and its music. The touch dimension has three items: physical contact with other spectators, comfortable seating, and the spatial arrangement of the aisles and seats. The smell dimension has five items: a stadium’s unique smells, past, pleasant memories evoked by the stadium smells, crowd smells, stadium food smells, and tailgate party smells. The taste dimension has four items: a wide range of food and beverage choices, the taste of stadium food, psychological taste (i.e., feeling of better taste at the stadium), and an escape from everyday life by eating at the stadium. The Sensoryscape scale was not strictly limited to physical senses of consumer experiences at the sport venues; rather, it took a broader view of sensory experiences that encompasses not only physical senses but also associated psychological senses and states (e.g., stadium’s foods taste better than those purchased outside, release from routine life by eating at the stadium). The authors found that the overall sensoryscape construct (a combination of spectators’ stadium experiences through all five senses) had a significant and positive impact on stadium satisfaction in both major and minor league baseball settings.

It is important to note here that this distinction in the perception from different senses does not necessarily mean that the five senses operate in isolation. It is widely recognized in cognitive psychology that there exists sensory interaction, suggesting that one sense influences another (Power, 1980). For example, the smell of stadium food may combine with its taste, and the entertaining scoreboards to watch may be closely related to the quality of the sound system. Deriving from the previous findings, the following hypothesis is proposed:

H1: Each of the sensory experience dimensions will be correlated with one another.

Impact of Our Senses on Team Identity and Team Loyalty

Team identity or team identification is defined as sport spectators or fans’ tendency to connect to their teams and as experiencing the teams’ successes and failures as their own (Ashforth & Mael, 1989). It is well recognized in sport consumer behavior that team identity influences a variety of consumer behaviors, such as basking in the reflected glory (BIRGing) or cutting off reflected failure (CORFing) tendencies (Wann & Branscombe, 1990), group-supportive behavior (Fisher & Wakefield, 1998), game attendance (Wakefield & Sloan, 1995), and merchandise consumption (Kwon & Armstrong, 2002).

Regarding the relationship between sensory experience and team identity, sport consumer researchers have paid little attention to the potential of sensory experience as a key antecedent of team identity. Rather, they have primarily regarded psychological (e.g., desire for belonging and affiliation), environmental (e.g., interactions with socialization agents), and team-related factors (e.g., team performance) as key antecedents of team identity (cf. Wann, 2006). However, considering the powerful impact of sensory experience on consumer behavior (Lindstrom, 2005), a more elaborated understanding of the relationship between sensory experience and team identity is required. Recent work in brand research found that consumers’ satisfaction with brands facilitates their identification with brands (Kuenzel & Halliday, 2008). Brakus et al. (2009) revealed that overall brand experience including sensory experience has a positive impact on consumer satisfaction. In the context of the stadium experience, Lee et al. (2012) found that sensory experience positively influences spectators’ satisfaction with the stadium. If sensory experience affects consumer satisfaction and the satisfaction influences brand identification, it is reasonable, by extension, to assume that the sensory experience is a potential antecedent of brand identification.

Heere and Dickson (2008) define team (attitudinal) loyalty as “the result of the interaction between negative external changes and the highly developed attitude of an individual, which is characterized by persistence, resistance to change, biasing in cognitive processing, and a guide to behavior based on the interaction between negative external changes and the individual’s attitude” (p. 233). Similar to team identity, team loyalty influences sport consumer behavior, especially future attendance intentions (Hill & Green, 2000; Wakefield & Sloan, 1995). Although both team identity and team loyalty represent the relational constructs between sport fans and sport teams, team loyalty seems to be a stronger construct in explaining sport consumer behavior. That is, team loyalty represents a more resistant, persistent, biased cognition associated with sport teams and is also more solid in the level of commitment to the teams (cf. Funk & James, 2006; Funk & Pastore, 2000). This explains why Chicago Cubs fans are renowned for loving their team despite the team’s scant success, current or past (Holt, 1995).

Previous studies in consumer behavior have suggested that sensory experience is a major predictor of brand loyalty (Brakus et al., 2009; Lindstrom, 2005). According
According to a study by Lindstrom (2005), sight is the most important sense in our evaluation, followed by smell, sound, taste, and touch. More specifically, 37% of his sample indicated sight as being the most important sense followed by 23% indicating smell to be the most important. All of this of course depends on the product category. For Coke and Pepsi, for example, taste is the most influential factor on brand loyalty, followed by smell and sight. For Sony and Panasonic in the home entertainment system category, sound is naturally the most important factor concerning brand loyalty (Lindstrom, 2005). Finally, previous studies in sport consumer behavior have demonstrated that team identity has a positive impact on team loyalty (Bodet & Bernache-Assollant, 2011; Wu, Tsai, & Hung, 2012). Based on these findings and logical extension, the following hypotheses are suggested:

- $H_2$: Each of the sensory experience dimensions will positively affect identity with the team.
- $H_3$: Each of the sensory experience dimensions will positively affect team loyalty.
- $H_4$: Team identity will positively affect team loyalty.

**Method**

**Sample and Procedure**

Data for the study were collected via classroom surveys, as the researchers could not obtain access to survey fans onsite. The participants in this study were 367 undergraduate students at two large public universities in the Southwestern United States. The use of a student sample was considered appropriate in that they are not only a captive, easily reached audience, but also represents a significant group of sport consumers (Ross, James, & Vargas, 2006). Along with the distribution of survey questionnaires, each participant was randomly assigned to one of the two versions of the survey questionnaires with different orders of the sensoriescape, team identity, and team loyalty questions in order to reduce order effects. Of the 367 surveys collected, 27 surveys were eliminated due to their incompleteness, and 30 surveys due to the lack of actual attendance of their favorite teams’ sport facilities. Therefore, 310 usable surveys in total were analyzed for the study. Female participants made up 42.3% ($n = 131$) and males 57.7% ($n = 179$) of the total sample. Participants ranged in age from 18 to 40 years ($M = 21.5, SD = 2.5$). Participants’ favorite teams consisted of professional teams from football (30.3%), baseball (29%), basketball (19.2%), soccer (11.4%), and ice hockey (10.1%).
<table>
<thead>
<tr>
<th>Constructs/Items</th>
<th>( \lambda )</th>
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<th>AVE</th>
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<tbody>
<tr>
<td><strong>Sight</strong></td>
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<tr>
<td>The stadium/arena’s architecture is attractive.</td>
<td>.77</td>
<td>.86</td>
<td>.51</td>
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<tr>
<td>The stadium/arena’s landscape is attractive.</td>
<td>.76</td>
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<tr>
<td>The stadium/arena provides good sightlines to watch the game.</td>
<td>.72</td>
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<tr>
<td>The stadium/arena’s scoreboards are entertaining to watch.</td>
<td>.59</td>
<td></td>
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<tr>
<td>The stadium/arena’s decorations are enjoyable.</td>
<td>.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The stadium/arena’s colors are attractive.</td>
<td>.72</td>
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<tr>
<td><strong>Sound</strong></td>
<td></td>
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<tr>
<td>The sound of cheering in the stadium/arena adds excitement.</td>
<td>.57</td>
<td>.88</td>
<td>.67</td>
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<tr>
<td>The stadium/arena has a quality sound system.</td>
<td>.88</td>
<td></td>
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<tr>
<td>The stadium/arena announcer is entertaining.</td>
<td>.89</td>
<td></td>
<td></td>
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<tr>
<td>The music at the stadium/arena is exciting.</td>
<td>.89</td>
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<tr>
<td><strong>Touch</strong></td>
<td></td>
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<tr>
<td>Physical contact with other spectators when cheering is exciting.</td>
<td>.56</td>
<td>.80</td>
<td>.61</td>
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<tr>
<td>The stadium/arena provides comfortable seating.</td>
<td>.85</td>
<td></td>
<td></td>
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<tr>
<td>The stadium/arena has appropriate spatial arrangement of the aisles and seats.</td>
<td>.89</td>
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<tr>
<td><strong>Smell</strong></td>
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<tr>
<td>The stadium/arena has a unique smell.</td>
<td>.81</td>
<td>.87</td>
<td>.58</td>
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<tr>
<td>The smells at the stadium/arena bring back pleasant memories.</td>
<td>.86</td>
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<tr>
<td>The smell of the crowd is exciting.</td>
<td>.75</td>
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<tr>
<td>I like the smell of stadium/arena foods.</td>
<td>.76</td>
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<tr>
<td>The smell of the tailgate parties is exciting.</td>
<td>.60</td>
<td></td>
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<tr>
<td><strong>Taste</strong></td>
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<td></td>
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<tr>
<td>The stadium/arena offers a wide range of food and beverage.</td>
<td>.78</td>
<td>.88</td>
<td>.64</td>
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<tr>
<td>When eating at this stadium/arena, I feel like I am released from everyday life.</td>
<td>.76</td>
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<tr>
<td>It feels like foods purchased inside the stadium/arena taste better than foods purchased outside.</td>
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<tr>
<td>The stadium/arena provides good tasting food.</td>
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<tr>
<td><strong>Team Identity</strong></td>
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<tr>
<td>I consider myself to be a “real” fan of my favorite team.</td>
<td>.92</td>
<td>.94</td>
<td>.85</td>
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<tr>
<td>I would experience a loss if I had to stop being a fan of my favorite team.</td>
<td>.90</td>
<td></td>
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<tr>
<td>Being a fan of my favorite team is very important to me.</td>
<td>.93</td>
<td></td>
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<td><strong>Team Loyalty</strong></td>
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<tr>
<td>I would still be committed to my favorite team regardless of the lack of any star players.</td>
<td>.88</td>
<td>.91</td>
<td>.72</td>
</tr>
<tr>
<td>I could never switch my loyalty from my favorite team even if my close friends were fans of another team.</td>
<td>.90</td>
<td></td>
<td></td>
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<tr>
<td>I would still be committed to my favorite team regardless of the lack of physical skill among the players.</td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It would be difficult to change my beliefs about my favorite team.</td>
<td>.79</td>
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Measure
Participants were first asked to write down the name of their favorite professional sport team. Since some of the participants may not have actually attended their favorite team’s games, the screening question was asked, “Have you ever attended your favorite team’s game(s) before?” Consequently, as stated above, 30 responses were eliminated due to the lack of actual attendance of their favorite teams’ sport facilities. Participants’ sensory experience with their favorite team’s facilities was measured with the Sensoryscape scale (5 dimensions-22 items) developed by Lee et al. (2012). Since the Sensoryscape scale was developed in the context of professional baseball, this study used a term, “stadium/arena” instead of “stadium” to measure sport consumers’ sensory experience across different professional sports. Participants rated each item of the Sensoryscape scale on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Team identity was measured with Trail and James’ (2001) three items using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Team loyalty was measured by Heere and Dickson’s (2008) four items using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The demographic question asked for the participants’ gender and age.

Data Analysis
The measurement model was assessed through a first order confirmatory factor analysis with the seven latent constructs (i.e., sight, sound, touch, smell, taste, team identity, and team loyalty) using AMOS. Structural equation modeling (SEM) was performed to measure the structural model—the relationships among the seven constructs. The study tested convergent validity for the seven constructs with average variance extracted (AVE). Fornell and Larcker (1981) consider a construct to show convergent validity if AVE is at least .50. The study also examined discriminant validity with Kline’s (2005) suggestion that construct correlations lower than .85 indicate the discriminant validity. Reliability of the study was examined via Cronbach’s alphas greater than .80 (cf. Lance, Butts, & Michels, 2006). Hu and Bentler (1999) recommend utilizing a combination of indicators to evaluate model fit. Thus, cut-off criteria used in this study were: Comparative Fit Index (CFI) greater than .95, Root Mean Square Error of Approximation (RMSEA) less than .06, Standardized Root Mean Square Residual (SRMR) less than .08, and chi square/degree of freedom ratio ($\chi^2/df$) less than 2.

Results
Measurement Model
The measurement model posits no unidirectional paths between latent factors. Instead it allows correlations between latent factors by connecting each latent factor with every other latent factor. Overall, the measurement model shows a good fit to the data ($\chi^2/df = 1.921$; CFI = .943; RMSEA = .055; SRMR = .048; Hu & Bentler, 1999). Cronbach’s alphas for all factors were greater than that of the suggested cut-off value of .80 therefore suggesting that all the measures used in this study are internally consistent (Lance et al., 2006). In addition, all factors revealed AVE greater than .50 (Fornell & Larcker, 1981). All items loaded significantly on their respective factors ($p < .01$) ranging from .56 for Touch 1 to .93 for Team Identity 3. These results provided support for evidence of convergent validity of the measurement model. The factor loadings, Cronbach’s alphas, and AVE are shown in Table 1. Further, the measurement model satisfied the discriminant validity suggested by Kline (2005), which means that the correlations between the latent factors are lower than .85. The correlations between the factors are shown in Table 2.

Structural Model
Once the measurement model was confirmed using CFA, the structural model was proposed. The hypothe-
sized relationships among the five dimensions of the sensoryscape, team identity, and team loyalty were tested through SEM using AMOS. The structural model shows an acceptable fit to the data across different professional sport contexts ($\chi^2/df = 2.296$; CFI = .920; RMSEA = .065; SRMR = .076; Hu & Bentler, 1999). All correlations among the five dimensions of the sensoryscape were significant (.30 < $r$ < .57, $p$ < .01). Therefore, $H_1$ was supported. Four (sight, sound, touch, and smell) of the five dimensions of the sensoryscape had a positive impact on team identity. Consequently, $H_2$ was partially supported. Three (sight, touch, and smell) of the five dimensions of the sensoryscape had a positive impact on team loyalty. Therefore, $H_3$ was partially supported. Lastly, the path between team identity and team loyalty was significant. Thus, $H_4$ was supported. The structural model indicated that the five dimensions of the sensoryscape explained 38.8% of the variance in team identity and that the five senses and team identity predicted 57% of the variance in team loyalty.

**Discussion**

The authors extended Lee et al.’s (2012) work by testing the relative impacts of the sensoryscape dimensions on team identity and team loyalty across five different professional sports (e.g., baseball, basketball, football, hockey, and soccer) rather than the overall impact of the sensoryscape. The proposed model is a powerful one, with the sensoryscape predicting over 38% of the variance in team identity. Together, they explained 57% of the variance in team loyalty. As expected, all five dimensions were correlated with one another. This implies that while sport consumers, to some extent, holistically experience the sport venues through their five senses, these senses individually contribute to the team identity and team loyalty among fans. More importantly, each of these senses has a different level of effect on outcomes such as team identity and loyalty.

Past research on team identity has mainly focused on psychological (e.g., desire for belonging and affiliation), environmental (e.g., interactions with socialization agents), and team-related factors (e.g., team performance or player attractiveness) as antecedents of team identity rather than spectators’ experience at the sport venue (cf. Wann, 2006). This study revealed the possibility that sport venue experience through consumers’ senses can be an antecedent of team identity. The study found that sight explained for the most variance in team identity, followed by the smell, touch, and sound dimensions. It is interesting that the effect of smell dimension on team identity was almost as powerful as that of sight dimension (see Figure 2). Although traditional sport facility research suggests the

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![Figure 2. Results of structural equation modeling](image)
importance of the sight element (e.g., facility aesthetics, scoreboard quality) as a major determinant of sport consumer behavior (e.g., Wakefield & Blodgett, 1996; Wakefield et al., 1996), this finding suggests that the smell can also be a key antecedent in the creation of team identity. Little attention has been paid to smells at sport venues, but smells are a powerful stimulator of past memories (Willander & Larsson, 2006). Therefore, smells can evoke spectators’ previous associations with the sport venues or teams and provide even a “sense of place” (Davies, Kooijman, & Warda, 2003). In this sense, smells can be a strong trigger of team identity. In a study of consumer decision making, Mitchell, Kahn, and Knasko (1995) found that when smells were congruent with the product class, “subjects spent more time processing the data, were more holistic in their processing, and were more likely to go beyond the information given, relying more on inferences and self-references” (p. 236). However, we still know little about what kind of smells at sport venues sport consumers like. Future research should identify experimentally the smell that sport consumers prefer and explore the impact of the identified smells on the breadth and depth of consumers’ behavior.

It is also interesting that the touch dimension is the third most influential factor on team identity when considering that touch is the least important sense when people evaluate environmental stimuli (cf. Lindstrom, 2005). This is in line with Wakefield et al.’s (1996) finding that seating comfort and spatial arrangement of the aisles and seats are important factors for consumer behavior, such as perceived crowding and satisfaction. However, this study extended the effect of the physical environment as the touch dimension by incorporating “physical contact among spectators when cheering.” In fact, sport venues have been widely recognized as an important outlet for social interaction in a society (Westerbeek & Shilbury, 1999), and experiencing the spectator-induced stimuli (e.g., fans’ supporting behavior for their home team) enhances the stadium atmosphere (Uhrich & Benkenstein, 2010). In this regard, the challenge in leveraging the touch dimension is not merely a matter of the spatial arrangement of sport venues, but also depends on the ways that spectator participation in creating an exciting sport venue atmosphere is facilitated, designed, and implemented. Future research should identify the tactile activities that fans may want to engage in during games and examine the effect of the identified tactile activities on their behavior.

The sound dimension is the fourth influential factor on team identity. Stadium experiences are only half as fun without the auditory excitement—the stadium music playing, the announcer’s voice resonating, and the overwhelming sound of cheering echoing throughout the stadium. These sound experiences would boost spectators’ stadium experience. However, we still know little about what kind of stadium music and what type of in-game tone of stadium announcers can lead to more exciting fan experiences and the antecedents to crowd cheering. Consequently, more research is needed to identify the types of stadium music and announcer’s tone and the key antecedents to crowd cheering.

The study found that the taste dimension did not contribute to team identity. Intriguingly, while most people consume some kind of food or drinks during a sport event, this was not associated with team identity. While we can only hypothesize why taste did not contribute to team identity, one of the most likely reasons might be that students are less likely to purchase food or drinks during the sport event, because of their limited budget. Second, traditionally, sport teams have been extremely isomorphic when it comes to their menu offerings, and most teams outsource their food and drinks services. In that regard, while each team might have a unique sight, sound, touch, and smell that separates them from other teams and thus contributes to the team identity, taste is more associated with the overall experience of attending a sport event and does not help towards setting the team apart from its competitors. Future research should examine the concept of taste more closely, and explore other sport settings in which taste might be a significant predictor of team identity.

This study also revealed that the sight, touch, and smell dimensions had a positive impact on team loyalty while the sound and taste dimensions did not. The sight dimension was the most important predictor of team loyalty followed by smell and touch. This finding is in line with Lindstrom’s (2005) finding that a multi-sensory appeal directly influences brand loyalty, but in general, three sensory dimensions play a key role in loyalty. Compared with team identity, the sight dimension had a much greater impact on team loyalty than the smell dimension. However, the smell dimension still was the second most influential predictor of team loyalty.

As expected, the study found that team identity had a positive impact on team loyalty. This implies that the sound dimension only has an indirect impact on team loyalty via team identity while the sight, touch, and smell dimensions had a direct and indirect impact on team loyalty. In summary, team loyalty is a function of the four dimensions of the sensoryscape and team identity.

As with all research, research limitations should be acknowledged. A primary limitation comes from the
sampling procedure employed in this study. Although the classroom sampling used a screening procedure to obtain actual game attendees, the classroom survey may constrain the ability of respondents to recall their sport venue experiences, compared to an on-field survey. Future research should seek to confirm the proposed model via an on-site method.

**Managerial Implications**

Each of the five senses can be leveraged to enhance team identity and team loyalty. The study found that the visual dimension of the sensoryscape was the most significant predictor in both team identity and team loyalty, being in line with Lindstrom’s (2005) work that showed that sight is the most important sense in our evaluation. This finding suggests that from a sport marketing point of view, sport teams can build a stronger and longer-lasting connection with sport fans by maximizing the visual aspects of fan experiences. First, the visual aesthetics of a sport venue can appeal to sport consumers’ behavior (Wakefield et al., 1996). One of the ways for creating a visually attractive sport venue is to represent its locality with the architectural appearance or interior design. Heere and James (2007) proposed that a major reason people identify with a sport team is the community it represents. In that sense, inserting symbols for the overall community within the facility could increase the sense of community for the fans as fodder for team identity and team loyalty. For example, the Houston Astros incorporated the left-field train into Minute Maid Park as a symbol of early industrial Houston, and the venue was decorated with giant Texas boots (Rein, Kotler, & Shields, 2006). Therefore, spectators and visitors can experience the spirit of Houston as a city and Texas as a state. Second, as sightlines are an important factor in a fan’s experience (Dethlefs, 2007), sport teams need to ensure that the fan’s views are not obstructed. Although the conventional sportscape has primarily emphasized the importance of facilities’ visual aesthetics, without good sightlines some of the vital elements of the visual experience could be missed by the sport consumers (Gaffney & Bale, 2004; Lee et al., 2012). In this regard, good sightlines should be given priority when sport teams design and build new stadia and arenas or renovate old facilities.

The collective cheering, songs, and chants not only are a key part of the game experience but can also heighten the sporting event atmosphere (Rein et al., 2006). Many of these sounds at sport venues tend to be spectator generated and spontaneous. The challenge to sport teams is to facilitate spectators to develop their own sounds, songs, and chants. Once these spontaneous sounds are established by fans or by cooperation between fans and teams, sport teams can use cheerleaders or announcers to prompt spectators to engage in those activities. This would make the game atmosphere and experience more exciting. Many sport teams have been over-playing similar songs at their venues over time, and, therefore, some fans may think that these stadium songs are cliché (Banks, 2011). Therefore, sport teams should pay more attention to having or developing their own unique stadium music or cheering songs that can appeal to sport consumers.

In addition, sport teams need to provide comfortable and quality seats with appropriate aisle space that can optimize spectators’ tactile evaluations of the sport venue. However, this is not necessarily limited to seating areas. Rather, quality surfaces throughout the stadium can also augment fans’ tactile assessments of the sport venue. Further, in terms of cross-leverage between sight, sound, and touch, sport teams can use scoreboards with stimulating music to encourage physical contact with other fans during a seventh inning stretch of a baseball game or during fan rituals such as the Wave. These activities may motivate the fans who already experienced the sense of immersion in the activities to continually attend future games. Furthermore, as sport consumers engage in these multiple sensory experiences, they would have a more memorable stadium experience (Schacter, 1996).

As noted earlier, the smell of sport venues was the second most influential factor in team identity and team loyalty. One way to create unique smells is to integrate smell and locality. AT&T Park, the home of the San Francisco Giants, built a reputation by bringing the views and the smells of the San Francisco Bay into the ballpark through its location and architecture. Another way to create unique smells is to maintain the consistency of smells at the sport venue as such consistency can contribute to powerful olfactory triggers to memories. For example, the smells of tasty food and beverage around spectators may evoke positive memories of attending a game with friends or family.

Lastly, smell is strongly related to the fifth sense; taste. Food is a very powerful way to service both smell and taste, and surprisingly enough our results show that taste did not have a significant effect on identity and loyalty. Increasingly, professional sport teams have endeavored to offer a wide range of good tasting food. For instance, Citi Field, home of the New York Mets, opened a Shake Shack concession stand and is serving up its locally famous burgers, dogs, and shakes to their fans (Collins, 2009). Nevertheless, our sample of sport consumers does not seem to recognize stadium food services as a point of differentiation that can contribute to the formation of team identity and team loyalty. This is not to suggest that taste is not an important fac-
tor in sport consumer behavior. In fact, it has been reported that food service quality had a positive effect on spectators’ desire to stay at the sport venue (Wakefield & Sloan, 1995). In this regard, particular sport teams could undergo a more elaborated effort to develop and provide various stadium menus that can reflect sport fans’ needs by working together with their food and beverage services partners. At the practical level, they can provide locally famous dishes or special dishes only available at their stadia through cooperating with their food providers. If this effort is successful, sport teams may be able to use food and beverage as a competitive advantage to differentiate them from their competitors.

Conclusions

A sport venue serves as a key sensory space in which sport consumers obtain entertainment through the visual, auditory, tactile, olfactory, and gustatory experiences. A positive, sensory experience of the sport venue plays a substantial role in the formation of team identity and team loyalty among fans. This sensory approach to understanding the team identity and team loyalty provides a significant counterbalance to an overreliance on team success and provides a new perspective by creating a facility experience that is more encompassing than the performance on the field. By creating a more enjoyable sensory experience, sport teams can cultivate more stable fan base through enhanced team identity and team loyalty.

References


