Taken back by the ballpark: The role of nostalgia in the Minor League Baseball spectator experience

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TAKEN BACK BY THE BALLPARK: THE ROLE OF NOSTALGIA IN THE MINOR LEAGUE BASEBALL SPECTATOR EXPERIENCE

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University

by

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Virginia Commonwealth University
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Acknowledgment

I understand this section is typically reserved for acknowledging the contributions of others to your dissertation; however, while admittedly not unique, this project was just the final, or latest, in my research education journey. Therefore, I feel I would be doing myself a disservice if I did not acknowledge those who provided invaluable support during my complete experience at VCU. And if I am breaking some sort of rule with this, then just get over it. Unless this nullifies my degree, in which case I can edit.

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Dedication

This dissertation is dedicated to my parents – Glen and Diana Slavich. Since beginning my educational journey, they have supported me mentally, emotionally, spiritually, and financially. I would not be where I am today without their support. Mom and Dad, I thank you for the much undeserved favor you have shown me.
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Abstract

TAKEN BACK BY THE BALLPARK: THE ROLE OF NOSTALGIA IN THE MINOR LEAGUE BASEBALL SPECTATOR EXPERIENCE

By Mark A. Slavich, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University

Virginia Commonwealth University, 2017

Major Director: Dr. Brendan Dwyer, Director of Research and Distance Learning; Associate Professor, Center for Sport Leadership

The use of nostalgia has become a common occurrence among marketers in recent years. Restaurants, theme parks, television, and social media have turned to nostalgia as a marketing strategy, which has been shown to enhance consumer attitudes toward brands and increase purchase intentions. Such techniques are also present in baseball, with research showcasing the prevalence of nostalgic stimuli including bricks, steel beams, and old-fashioned scoreboards popular in the past. However, the impact of such stimuli on spectators’ emotions and behavior had yet to be explored. Therefore, the purpose of the current study was to investigate the impact of nostalgia on sport spectator emotional and behavioral responses.

Data collection occurred at three minor league baseball games during June 2017. Utilizing the SOR framework (Mehrabian & Russell, 1974) as the theoretical foundation, a 39-
item instrument was constructed by adapting items from previously-constructed surveys in the contexts of sport and general consumer behavior. Using systematic random sampling, a total of 232 completed and usable surveys were collected.

To investigate the impact of nostalgia on spectators’ emotional responses, structural equation modeling was utilized. The study sought to specifically examine whether nostalgia evoked through spectators’ senses (sight, smell, sound, taste, and touch) and social interaction impacted their pleasure. Results showed that only social interaction was a significant positive predictor of pleasure, with sight a significant negative predictor of pleasure. A significant, positive relationship between pleasure and spectator’s behavioral intentions was also found. Finally, the study explored whether spectators’ arousal moderated the relationship between pleasure and arousal. The results displayed that arousal did not significantly moderate this relationship, with pleasure and arousal maintaining a strong correlation.

The key findings of the current study were that spectators experienced nostalgia through each of their senses, but that their nostalgia did not lead to pleasure. This contradicts much previous research of nostalgia, which showed an overall positive emotional response from nostalgia. These results provide intriguing theoretical and practical implications within the marketing and sport disciplines, and serve as a foundation for future research to continue to explore nostalgia within the spectator sport experience.
CHAPTER I
INTRODUCTION

A fundamental objective of marketing is eliciting a response in consumers concerning a product, service, organization, person, place, or idea (Kotler, 1972). Marketers attempt to influence customers through elements such as packaging, advertising, and the sights, sounds, and smells of a retail environment (Peter & Olson, 2001). Marketers have found success in influencing consumer behavior through the use of themes including humor, violence, sex, and emotion in television commercials (Bushman, 2005; Kneer, Hemme, & Bente, 2011; Skalski, Tamborini, Glazer, & Smith, 2009; Stone, 2014). Other research displayed that product packaging color, material, and design influence consumers (Orth & Malkewitz, 2008; Raheem, Vishnu, & Ahmed, 2014).

In the retail environment, marketers have turned to engaging people’s senses in order to influence consumers’ emotions and behaviors. For example, Starbucks utilizes pleasant lighting, relaxing music, and the smell of freshly ground coffee to create a complete sensory experience for customers. Abercrombie & Fitch meanwhile employs dim lighting, fast-tempo music, and smells that are prone to bring back shoppers’ memories in creating its sensory experience (Hultén, Broweus, & Van Dijk, 2009). Gobé (2001) reinforced the importance of engaging the senses, stating, “The nuance of an image, the delight of an unfamiliar taste, the memory of a familiar sound, the gentle caress of a soft fabric, the associations of an ancient smell – these are the cues which form indelible imprints on our emotional memories” (p. 68).
With consumers not merely satisfied with the utilitarian value of products, looking for a hedonic consumption experience (Holbrook & Hirschman, 1982), marketers have also turned to another tactic to engage consumer emotions: nostalgia. Nostalgia is defined as “a preference (general liking, positive attitude, or favorable affect) toward objects (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger (in early adulthood, in adolescence, in childhood, or even before birth)” (Holbrook & Schindler, 1991, p. 330). While nostalgia is described as a bittersweet emotion, it is considered to be more positive than negative, capable of eliciting the affective response of pleasure (Holak & Havlena, 1998; Reid, Green, Wildschut, & Sedikides, 2015; Sedikides et al., 2015b; Wildschut, Sedikides, Arndt, & Routledge, 2006).

The experience of nostalgia is strongly connected to our five senses, and marketers have utilized this relationship to evoke nostalgia through food, music, television shows, movies, and other forms of entertainment, which have all been shown to trigger nostalgia (Davis, 1979; Holbrook, 1993; Holak & Havlena, 1992). Consumer behavior research displayed nostalgia as a way to influence purchase intentions (Loveland, Smeesters, & Mandel, 2010; Sierra & McQuitty, 2007) and build brand attachment (Fournier, 1998). Other literature displayed nostalgic advertising’s role in producing positive attitudes toward brands (Marchegiani & Phau, 2010; Merchant & Rose, 2013; Pascal, Sprott, & Muehling, 2002) as well as influencing purchase intentions (Ju, Kim, Chang, & Bluck, 2016). As a result, nostalgia is now seen everywhere from one’s local Starbucks to television commercials. For example, the popularity of the Pumpkin Spice latte is due in part to the feelings of nostalgia brought on by the beverage (Lewis, 2015). Nostalgia is also the source for Geico’s use of former music icons Salt-N-Pepa and their hit song “Push it” (Stanley, 2015). Nostalgia is at play in shows including Mad Men (Potter, 2015) and
Fuller House (Tucker, 2016) and it is even seen in social media such as Facebook’s display of users’ pictures and posts from years past (Sedikides et al., 2015b). Marketers have recognized the influence of nostalgia on consumers’ emotions and behaviors, and therefore, its use has become widespread in society.

In the sport context, nostalgia can be seen employed through throwback jerseys, bobblehead doll giveaways, and promotional materials. Specifically regarding baseball, nostalgia is utilized in the architecture of many new facilities. Seifried and Meyer (2010) conducted a facility audit of Major League Baseball (MLB) ballparks to showcase how facilities employ nostalgia and displayed nostalgia’s use in ballparks including Baltimore’s Oriole Park at Camden Yards, Cleveland’s Progressive Field, and PNC Park in Pittsburgh. These facilities utilize design characteristics such as visible support beams that were common architectural features in the early 1900s as well as incorporating elements of the surrounding area into their design – most notably Baltimore’s use of the B&O warehouse beyond right field. Other stadiums incorporate their city’s identity through landscapes including fans’ view of the bay at San Francisco’s AT&T Park (Ritzer & Stillman, 2001). Minor League Baseball (MiLB), the context of the current study, also incorporates nostalgia at its facilities. Regions Field in Birmingham “utilizes brick and steel, paying homage to Birmingham’s industrial past and blending the ballpark with the surrounding neighborhood” (Birmingham Barons, 2017, para. 2). Other MiLB parks such as Nat Bailey Stadium in Vancouver feature manually-operated scoreboards, further connecting people to the past (Minor League Baseball, 2009).

In addition to facility architecture and design, nostalgia is also prevalent in sensory elements including music and food experienced at baseball games. “Take me out to the Ballgame” as well as other songs including “Centerfield” and “Cheap Seats” are played at many
baseball games – all of which date back to decades past. When it comes to food, eating a hot dog can bring oneself back to when they attended games as a child (National Hot Dog and Sausage Council, 2014). In addition to hot dogs, many ballparks through MLB and MiLB now feature local delicacies that are tied to the home city’s identity. For example, fans at Biloxi Shuckers games can partake in shrimp poboys while Nashville hot chicken is served at the Sounds’ games. Comfort food items have also grown in popularity such as the Sweet-n-Salty Grilled Cheese at Greensboro Grasshoppers games and the Frisco Roughriders’ macaroni and cheese barbecue sandwich (Minor League Baseball, 2016). With local and comfort foods shown to serve as triggers of nostalgia (Duruz, 1999; Locher, Yoels, Maurer, & van Ells, 2005), these items are fit to evoke nostalgia among spectators.

Social interactions are also a common characteristic of nostalgia, with family and friends often part of the original experiences that later engender nostalgia (Davis, 1979; Havlena & Holak, 1996; Wildschut et al., 2006). Baseball games are often common components of children’s relationships with their father, and baseball is seen as a game that connects generations (Stride, Thomas, & Ramshaw, 2015). Of course, people also attend baseball games with siblings, grandparents, friends, and other companions. In a study of sport nostalgia, Snyder (1991) noted that sport fans mentioned who they were with and where they were for specific sporting events, exhibiting the connection between sporting events and interpersonal relationships, and the memories we have of these events. Given the social nature of sport consumption (Branscombe & Wann, 1991; Crawford, 2004; Holt, 1995; Wann, Grieve, Zapalac, & Pease, 2008), people may also serve as nostalgic stimuli. Each of these examples exhibits the prevalence of nostalgic stimuli in the baseball, and specifically, the MiLB context.
Problem Statement

The North American sport industry has seen tremendous growth in recent years. For example, a recent study by PricewaterhouseCoopers estimated the North American sports market was worth $60.4 billion in 2014 and is projected to reach $73.5 billion by 2019 (Broughton, 2015). Much of the economic growth of the sport industry, however, is due to the increase in media rights revenue. In 2008, media rights accounted for just 16.4% of total revenue of North American professional and collegiate sports, generating roughly half the income as ticket sales and merchandising. Media rights have since surpassed merchandising, and in 2019, is expected to be the leading source of revenue among the four major segments (ticket sales, sponsorship, media rights, and merchandising; Broughton, 2015).

While major professional and popular collegiate sports can rely upon media rights to generate a significant portion of their revenue, the same cannot be said for minor league sports. For example, the Sacramento River Cats, the most valuable MiLB team in 2016, generated more than 50% of their revenue from ticket sales in 2015 (Klebnikov, 2016). MiLB teams do not have lucrative media rights contracts, and thus they greatly rely upon attracting fans to their facilities. Not only does this increase ticket revenue, but with each ticket sold, organizations are also able to make money from ancillary revenue sources such as parking, concessions, and merchandise sales (McDonald & Rascher, 2000). These organizations are also in competition with other forms of consumer entertainment including movies, concerts, museums, water parks, restaurants, microbreweries, and other sporting events, as well as fans choosing to stay home for the evening (Fetchko, Roy, & Clow, 2016; Mullin, Hardy, & Sutton, 2014; Pozner, DeSoucey, & Sikavica, 2014). Like these other entertainment attractions, MiLB organizations also strive to not only attract fans for one game, but to create an environment that prompts fans to desire to return for
future games. With the larger costs associated in continually attempting to attract new fans rather than retain current fans (Berry, 2002; Mullin et al., 2014), organizations are compelled to learn what influences fan decision making regarding attending games versus other forms of entertainment. In addition, the more games attended – even at the MiLB level – the more likely fans will develop loyalty toward the organization and provide financial support to the organization through merchandise purchases and concession sales, and indirectly through sponsorships and advertising (Funk & James, 2006). Thus, in order to consistently generate revenue, MiLB organizations must first learn what impacts spectator attendance decisions, which is crucial to a sport’s current and long-term success (Kim, Greenwell, Andrew, Lee, & Mahony, 2008).

With the practical marketing implications of nostalgia shown in recent literature, more research is needed on the subject of nostalgia – especially in the context of sporting events. Much of the sport research on nostalgia centered on sport tourism (Fairley, 2003; Fairley & Gammon, 2006; Gammon, 2002; Mason, Duquette, & Scherer, 2005; Snyder, 1991). Nostalgia was shown to be a core component of sport tourist experiences, even serving as a motive to engage in sport tourism. Fairley and Gammon (2006) even noted that spectator sporting events have long been acknowledged as triggers of nostalgia. Seifried and Meyer (2010) deduced that MLB organizations use specific strategies to evoke spectator nostalgia through facility architecture, displaying of historical team memorabilia, manual scoreboards, and even the use of natural grass. Furthermore, Lee and colleagues (2012) suggested that the smells, sounds, and tastes experienced in a stadium can trigger nostalgic memories of previous visits and even the people with whom one experienced these memories (Lee, Lee, Seo, & Green, 2012).
With the exhibited effects of nostalgia in consumer behavior literature as well as the sport tourism context, investigation of nostalgia on consumer behavior at sporting events was warranted, specifically examination of the emotional and behavioral impact of nostalgia on sport spectators. To address this matter, the current study hypothesized a model based off the Stimulus – Organism – Response (SOR) framework (Mehrabian & Russell, 1974). The framework proposes that an environment’s stimuli produce an emotional response in individuals, leading to a behavioral response. The model is seen in Figure 1 below, and a more detailed review of the SOR framework is provided in a following section.

![Figure 1. SOR framework (Mehrabian & Russell, 1974)](image)

Two recent studies utilized the SOR framework to examine the influence of nostalgia on consumer behavior. Lu et al. (2015) discovered that a nostalgic atmosphere positively impacted Taiwanese bakery shoppers’ purchasing behavior. Hwang and Hyun (2013) meanwhile investigated luxury restaurant patrons’ nostalgia for a recent restaurant experience. These authors discovered that nostalgia evoked through sensory inputs, social aspects, and memorable events (identified as restaurant staff, food, environment, and event) significantly impacted customer pleasure, which was a significant predictor of customer behavioral intentions. However, the study investigated aspects of the experience in which consumers experienced nostalgia more than 60 days after their restaurant visit.
The current study sought to build off this framework, exploring the impact of nostalgia on MiLB sport spectators’ emotions and behavioral intentions during their consumption experience. The following research questions formed the basis of the current study:

**Research Questions**

Q1 What is the impact of nostalgia evoked through spectators’ senses on spectators’ pleasure?

Q2 What is the impact of nostalgia evoked through spectators’ social interaction on spectators’ pleasure?

Q3 What is the impact of spectators’ pleasure on behavioral intentions?

Q4 To what extent does arousal moderate the relationship between spectators’ pleasure and behavioral intentions?

The model hypothesized that nostalgia evoked through spectators’ five senses (sight, sound, smell, touch, and taste) and social interaction significantly impact spectator pleasure, which significantly impacts spectator behavioral intentions. Such nostalgia evoked from these stimuli does not have to be for an experience at a previous baseball game; evoked memories can be of a concert attended in college or cotton candy eaten at the Iowa State Fair. The model also hypothesized that spectator arousal (or level of excitement) moderates the relationship between pleasure and behavioral intentions. Therefore, the research aimed to investigate whether nostalgia for a previous experience evoked as a result of stimuli experienced through elements such as the sight of the ballpark, the smell of ballpark foods, and the sound of songs played during the game impacts spectators’ pleasure, which then impacts their behavioral intentions. The full model can be seen in *Figure 2* below.
Figure 2. Hypothesized Model

**Study Implications**

The results of this study provide both theoretical and practical implications. Marketing scholars have recently turned to investigation of the five senses in the study of consumer behavior (Hultén, 2011; Lindstrom, 2005; Schmitt, 1999). Research exhibited the impact of sensory marketing on consumer pleasure, satisfaction, brand attitude, and image (Gobé, 2001; Hultén et al., 2009). Gobé (2001) presented the case of Coca Cola’s glass bottles appealing to the tactile senses that is pleasurable to touch and hold. He suggested that Coke translates the identity of the brand to handheld touch, and that they incorporate touch, vision, and taste together. As
mentioned, companies including Starbucks and Abercrombie & Fitch incorporate sensory elements throughout their retail environments (Hultén et al., 2009). Other literature showed that the sound and smell of an environment impacted shoppers’ satisfaction and behavior (Morrison, Gan, Dubelaar, & Oppewal, 2011). With scant research conducted on the role of nostalgia evoked through the senses in contributing to consumer behavioral outcomes, the results of this study exhibit the impact of nostalgia in the consumption experience. The experience of nostalgia comprises an emotional response to stimuli; therefore, the results of this study contribute to the sensory and hedonic experience literature. This allows for further research of not only nostalgia, but also other emotional outcomes accruing from sensory marketing.

This study’s results also assist marketers in determining how they can utilize sensory elements to evoke consumer nostalgia. This could be accomplished through both advertising as well as retail atmospherics. As mentioned, many companies are already utilizing nostalgia in commercial advertising. With television advertisements appealing to the sense of sight as well as sound through the playing of songs from previous eras, the results of this study are beneficial to companies’ advertising strategies, allowing them to determine what types of appeals to use in television commercials. Marketers can also utilize this information in constructing their retail environments. For example, retailers could turn to aromas, music, and visual elements that are likely to evoke shopper nostalgia. Restaurants could also highlight menu items that connect to consumer’s identity and memories from their past. With limited budgets, television advertisers and marketers must determine how to properly allocate their financial resources. Therefore, the information gleaned from this study may assist advertisers and marketers in making decisions regarding their strategies to market to consumers.
In the sports context, this study yields results that assist MiLB organizations in determining the impact of nostalgic themes in their facilities. Organizations looking to build or renovate ballparks must discern what elements of the facility generate value in order to create ballparks that will satisfy current fans and potentially attract new spectators. For example, how much do the design and aesthetics of facilities influence the level of nostalgia experienced by spectators? Also, what role do food and beverages and music play in evoking spectator nostalgia? Many of the nostalgic features presented by Seifried and Meyer (2010) and Ritzer and Stillman (2001) are within the control of team management. Therefore, this study’s results provides very practical implications.

**Delimitations**

The purpose of this study was to determine whether nostalgia evoked through spectator senses and social interaction predicts pleasure and behavioral intentions. One MiLB team was chosen for this study, with participants surveyed at three games during the team’s 2017 season. This method excludes fans who did not attend any of these three games or who were unable to complete a survey due to the sampling method employed. This study’s generalizability is also limited due to the specific facility utilized. With facilities differing from team to team, the results of this study do not apply to each MiLB ballpark. In addition, game elements including music and promotional activities that feature movies, television shows, or other nostalgic stimuli may vary by game. Theme nights including 90’s Night or other popular culture promotions are expected to positively impact the nostalgia elicited at the park. This study selected three games that do not feature such theme nights; thus, these findings are most similar to a game with no such promotions.
Limitations

The current study surveyed a sample of spectators attending one of three games of one MiLB organization; therefore, these results cannot be generalized to other levels of baseball as well as other sports. Non-response is also a limitation as those who do not complete the survey may differ from those who do respond. Another limitation is the potential of multiple responses from the same participant. While participants were limited to accessing the online version of the survey one time, the potential existed for participants to complete both an online version as well and a paper copy, or multiple paper copies. Meanwhile, the self-administration of the survey also served as a limitation. While the author of the current study took steps to attempt to ensure participant comprehension of each section of the survey, lack of comprehension was still a possibility. The quantitative nature of the instrument also served as a limitation as the researcher was not able to collect thorough responses that may accrue from a qualitative study. The instrument utilized is another limitation. Based upon previous literature of the effect of nostalgia on consumers, this study adopted five factors from the Sensoryscape (Lee et al., 2012) and one social interaction factor from the Scale of Event Quality in Spectator Sports (SEQSS; Ko, Zhang, Cattani, & Pastore, 2011) to measure nostalgia evoked by spectators. Spectators may have experienced nostalgia for a variety of stimuli not measured in this study. Also, ballpark stimuli may have evoked nostalgia through multiple senses. For example, food is shown to shown to be multisensory (Amerine, Pangborn, & Roessler, 1965; Spence & Piqueras-Fiszman, 2014). Thus, the individual role of specific stimuli such as food evoking nostalgia may be indistinguishable through investigation of the senses.
Definition of Terms

Arousal – the level to which one feels stimulated, excited, and alert (Mehrabian & Russell, 1974)

Ballpark – a stadium that is only used for the purpose of baseball

Behavioral Intention – a spectator’s intention to attend games and/or recommend games to another person (Yoshida & James, 2010)

Collective Nostalgia – yearning for the past represented through a generation, culture, or nation (Baker & Kennedy, 1994)

Memory – a cognitive recollection from one’s past (Werman, 1977)


Nostalgia – “a preference (general liking, positive attitude, or favorable affect) toward objects (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger (in early adulthood, in adolescence, in childhood, or even before birth)” (Holbrook & Schindler, 1991, p. 330)

Nostalgia Trigger – any stimulus (e.g., music, movies, friends) that evokes nostalgia (Batcho, 1995). The current study categorizes nostalgic triggers into six groups: individuals’ five senses (sight, smell, sound, taste, and touch) and social interaction

Organism – the recipient of the environmental stimuli in the SOR framework

Personal Nostalgia – yearning for a time experienced in one’s own life (Wildschut et al., 2006)

Pleasure – the degree to which an individual feels happy, pleased, satisfied, content, and comfortable (Mehrabian & Russell, 1974)
Response – a reaction of a living being (“Response”, 2017). In the SOR framework, responses include approach and avoidance behaviors specific to an environment (Mehrabian & Russell, 1974)

Senses – the human faculties of sight, sound, touch, smell, and taste

Sight – the act of looking at or beholding (“Sight”, 2017). For the current study, sight is operationalized as the visual appeal of the facility’s colors, the visual appeal of the facility’s decorations, the visual appeal of the facility’s architecture, the visual appeal of the facility’s landscape, the sight of the facility’s scoreboard, and the stadium’s sightlines to watch the game.

Smell – to perceive the odor or scent of through stimuli affecting the olfactory nerves (“Smell”, 2017). For the current study, smell is operationalized as the smell in the air at the facility, the smell of the crowd, and the smell of the facility’s food.

Simulated Nostalgia – yearning for one’s indirectly-experienced past, but not personally experienced (Goulding, 2002)

Social Interaction – the manner in which people talk to and interact with each other (“Social interaction”, 2017). For the current study, it refers to spectators’ socializing with friends and family at the game and the sense of family among fans felt by spectators (Ko et al., 2011)

Sound – a particular auditory impression (“Sound”, 2017). For the current study, sound is operationalized as the sound of cheering in the facility, the sound of the facility’s music, the sound of the facility’s sound system, and the sound of the facility’s public address announcer.

Spectator – a person who attends a sporting event

Stimulus – an agent that directly influences the activity of a living organism (“Stimulus”, 2017). In the SOR framework, stimuli include noise, temperature, color, and other environmental attributes (Mehrabian & Russell, 1974)
Taste – to ascertain the flavor of (“Taste”, 2017). For the current study, taste is operationalized as the flavor of food and beverages consumed.

Touch – to bring a bodily part into contact with, especially so as to perceive through the tactile sense (“Touch”, 2017). For the current study, touch is operationalized as the physical comfort of the facility’s seating, the spatial arrangements of the aisles and seats, and the physical contact with other spectators while cheering.
CHAPTER II
REVIEW OF LITERATURE

Marketing

Originating out of the field of applied economics, marketing became recognized as a behavioral science that focuses on consumers (Grönroos, 2006; Kotler, 1972). The American Marketing Association defines marketing as “the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large” (American Marketing Association, 2017). While it is a broad concept, comprising topic areas including consumer behavior, pricing, purchasing, sales management, and marketing communications (Hunt, 1976), at its core, marketing seeks to provide value to customers while offering businesses the opportunity to maximize their profits (Anderson, 1982; Kotler, 1972). Thus, marketing is described as an exchange process, with organizations providing a product or service to consumers in exchange for money (Kotler & Zaltman, 1971).

A pre-requisite for the exchange process to occur is organizations’ understanding the desires and needs of their customers. This requires the understanding of consumer behavior, defined as “the dynamic interaction of affect and cognition, behavior, and the environment by which human beings conduct the exchange aspects of their lives” (Peter & Olson, 2001, p. 6). Colbert (2003) offered three questions organizations should ask concerning consumers: Who is the consumer? Why is he/she making a purchase? How does he/she go about making a purchase?
The more organizations know about the various factors that influence consumers’ decision making, the better organizations can satisfy consumers. Consumers experience various thoughts and feelings in the consumption process, which ultimately influences their decision making. Factors including the design of a package, the price of a product, and information received from other consumers play a part in this decision-making process. In order to best present products or services to consumers, marketers engage in what is known as the marketing mix.

McCarthy (1964) proposed the marketing mix, often referred to as the “4Ps,” as a conceptual framework that identifies the decisions that organizations make when positioning their products to meet the needs of their consumers (Goi, 2009). Product includes the features and benefits of the product or service. Price refers to the amount of money consumers pay for a product, which often takes into account the perceived consumer value of the product. Promotion comprises marketing communications such as advertising, personal selling, sales promotion, and public relations. Finally, place entails the location, distribution channels, and logistics in order to provide convenient access to the consumer (Kotler & Armstrong, 2016). While marketing scholars have since critiqued and added additional items to the marketing mix, the “4Ps” is the traditional classification of the marketing mix, designed to allow organizations to meet the needs of their consumers, and ultimately, meet the financial goals of organizations.

**Sport Marketing**

While many of the same marketing principles can be applied to sport, sport marketing offers a distinct discipline itself. Sport marketing includes two components: marketing *through* sport and marketing *of* sport. Marketing *through* sport is the use of sport by non-sport businesses for promotion (Mullin et al., 2014). An example is Coca-Cola’s sponsorship of the Olympics (Fullerton & Merz, 2008). Marketing *of* sport are the strategies employed by sport organizations
to market their teams to sport fans (Mullin et al., 2014). With the current study investigating the latter type of sport marketing, it will be further explored in the sections to come.

“Sport marketing consists of all activities designed to meet the needs and wants of sport consumers through exchange processes” (Mullin et al., 2014, p. 13). Like other types of businesses, sport marketers must offer products and services of value to fans. While marketing plans differ based upon organizations’ goals and objectives, and fanbases, Mullin et al. (2014) suggested that sport organizations begin with an emphasis on a ticket marketing, sales, and service plan based upon the fact that attendance also generates revenue from sponsorships, concessions, and merchandise. These authors also recommended marketing to fans based upon attendance frequency, or the escalator concept. Based upon this, sport organizations have three primary goals: (1) retain avid fans, (2) grow casual fans to higher levels of attendance or participation, and (3) acquire new fans. Organizations can then develop products, prices, promotions, and sponsorship programs that meets the needs and desires of fans.

The task of sport marketing is especially difficult considering the unique nature of sports. Sports differ from other sources of entertainment through evoking high levels of emotional attachment and identification that other forms of entertainment are lacking, placing sports in a special place in the lives of many fans (McDonald & Milne, 1997; Mullin et al., 2014). Sports are inconsistent, intangible, unpredictable, experiential, and subjective, forcing sports to be marketed differently than other products and services (Mullin et al., 2014). Sport organizations rely upon the psychological and emotional connection that many fans have with sport teams, which enables organizations to withstand inconsistencies from game-to-game and season-to-season. At the same time, though, many other fans do not have a strong psychological connection to sport organizations. These fans care more about their experience when attending games, which
forces sport organizations to prioritize various service elements of the game experience (Mason, 1999). Factors such as high food quality and easy access to parking can improve one’s experience while having beer spilled on one’s children and dealing with an annoying usher can negatively impact a fan’s experience (Mullin et al., 2014). Thus, both psychological and external variables play a role in fan attendance and enjoyment at sporting events.

Funk and James (2001) synthesized social-psychological research of sport fans, creating the Psychological Continuum Model (PCM), a comprehensive framework of the psychological process of sport fan development. The model includes four levels: awareness, attraction, attachment, and allegiance. Awareness is when a fan first learns of the existence of a sport team. This occurs through such socializing agents including family and friends, the media, and team advertising and promotions. An individual may then move to the second stage, attraction. Funk and James (2001) suggested that fans become attracted by factors that comprise four categories: (1) hedonic motives including entertainment, escape, and excitement, (2) psychological features of a social situation including acceptance and achievement, (3) physical features such as a stadium’s sportscape, and (4) situational factors including special events, give-away promotions, and special discounts. When fans are attracted, they exhibit behaviors including attending games, watching games on television, and wearing team apparel.

Attachment is the model’s third stage and is the strengthening of fans’ physical and psychological connections with a team, which are linked to one’s attitudes, beliefs, and values. Direct experience with a team through attending games and meeting players as well as teams providing more information about players to fans can foster attachment. Finally, allegiance is where an individual becomes a loyal, committed fan. This term is synonymous with fan loyalty, previously used in other sport consumer research (Gladden & Funk, 2001; Hill & Green, 2000).
Allegiant fans maintain a consistent, unwavering attitude toward a team, are biased in their opinions of the team, and more likely to engage in behavior including reading about, watching, and attending teams’ games.

The goal of all sport organizations is to cultivate allegiant fans. Therefore, organizations must develop fans who are first aware, and then are attracted to the team. Funk and James (2001) stated that research on fan attraction focused on one of three areas: (1) sport spectator motivation, (2) service quality, and (3) fan involvement. The level of fan involvement is distinguished between attraction and attachment. Essentially, involvement is a bridge between the second and third stages of the PCM. Shank and Beasley (1998) suggested that sports involvement is not exhibited through participation (or attendance), but rather the perceived interest or importance of the team to a fan. Fans who maintain a low level of involvement are likely attracted to games based upon the entertainment, social, and escape motives (Gwinner & Swanson, 2003). As will be reviewed in greater detail in a following section, these are popular motives among MiLB fans (Bernthal & Graham, 2003; James & Ross, 2002; Lee & Won, 2012).

Fans who are less involved also display less identification with a team (Gwinner & Swanson, 2003). Sport fan identification is defined as “the personal commitment and emotional involvement customers have with a sport organization” (Sutton, McDonald, Milne, & Cimperman, 1997, p. 15). Previous research exhibited minor league fans are less identified and do not maintain a psychological connection with a team (Greenwell, Fink, & Pastore, 2002; James & Ross, 2002). Thus, with fan involvement of less practical importance to MiLB organizations, the current research reviews previous research investigating sport fan attraction. A review of sport fan attendance research is presented first.
Sport Fan Attendance

Zhang et al. (1997) identified four categories of variables affecting sport fan attendance: (1) home team attractiveness, (2) opposing team attractiveness, (3) economic consideration such as ticket price, promotions, and advertising, and (4) convenience including schedule and weather. Home team attractiveness, opposing team attractiveness, and promotion were previously shown to be positively associated with attendance while ticket price and other forms of entertainment were negatively associated with attendance (Zhang, Pease, Hui, & Michaud, 1995). Examination of attendance research across sports exhibits these assertions. For example, Marcum and Greenstein (1985) found that day of the week, promotions, and the opponent significantly impacted attendance of the St. Louis Cardinals and Texas Rangers during the 1982 season. An examination of the 1977 MLB season found that quality of the game, home team starting pitcher, opposing team starting pitcher, and date and time of game all affected attendance (Hill, Madura, & Zuber, 1982). A later study investigating attendance of MLB games from 1979 to 2004 also found month, day, and time of the game and team performance to play a significant role in attendance (Denaux, Denaux, & Yalcin, 2011).

Investigation of factors affecting NBA attendance also showed that the home team, opposing team, schedule convenience, and promotions were important factors (Zhang et al., 1995). At the MiLB level, an examination of attendance among 27 MiLB teams during five 1970s seasons found that quality and excitement of the game and promotions positively impacted attendance while price was a negative factor (Siegfried & Eisenberg, 1980). Zhang et al.’s (1997) study of minor league hockey fans revealed that game attributes including speed of the game, player appeal, love of hockey, home team, and economic consideration were most important factors affecting these fans’ attendance. Game convenience meanwhile was a major factor in fans
attending games, but did not predict attendance levels. Aside from promotions, these variables displayed uncontrollable factors of sporting events to be most important to fans. Also, Trail and James (2001) noted that attendance research focuses on factors affecting short-term decision making. Sport organizations at all levels strive to not only attract, but also cultivate fans who desire to return in the future. Therefore, while variables that impact short-term behavior are not inconsequential, sport organizations desire to understand what affects fans’ behavior over the long run. To address this, research turned to the study of the psychological motives that affect sport consumption.

**Sport Fan Motivation**

Sloan (1989) reviewed classifications of motivation theories that encapsulate sport fan motivation. These include salubrious effects theories, stress and simulation-seeking theories, catharsis and aggression theories, entertainment theories, and achievement-seeking theories. Most, if not all, of the theories fall within the Somatopsychic Theory (Harris, 1973). This theory demonstrates the relationship between mind and body, and Harris (1973) noted that many of the reasons individuals are drawn to sports is the interplay between one’s mind and body. Salubrious effects theories suggest that people are drawn to sports because of the pleasure and physical and mental well-being they offer. Stress and simulation-seeking theories contend that people desire a certain amount of stress, and when they do not attain this level, they seek to attain it in other ways. Catharsis and aggression theories posit that people are driven by innate aggressive energies that constantly grow and periodically must be relieved. Entertainment theories suggest that people are attracted to things based upon the pleasure they offer. Finally, achievement-seeking theories propose that humans have a need to achieve, which are based off Maslow’s Hierarchy of Needs (1943). From these theories came research of specific sport fan motivations.
Wann (1995) developed the first instrument to measure sport fan motivations. The instrument contained the eight factors aesthetics, economic, entertainment, escape, eustress, family, group affiliation, and self-esteem. The aesthetics motive is spectators’ desire for an artistic display by the athletes. The economic motive provides fans the opportunity for financial gain while entertainment is the desire to be entertained. Escape is fans’ seeking of a break from their normal routine, and the eustress motive is the thrill fans seek from the sporting event. The family motive is the desire to spend time with one’s family while group affiliation is the need to affiliate with other people. Finally, self-esteem meets the need for achievement. A later scale constructed by Trail and James (2001) added the motives knowledge and physical attraction. Knowledge is one’s desire to gain knowledge from attending the sporting event while physical attraction is fans’ motivation to attend due to athletes’ physical appeal (Trail & James, 2001).

Other sport spectator motivation instruments include Milne and McDonald’s (1999) Motivations of the Sport Consumer (MSC), which measures motivation of sport spectators and participants and includes the motives stress reduction, affiliation, social facilitation, and aesthetics. Kahle, Kambara, and Rose (1996) constructed the Fan Attendance Model (FAM), comprising internalization, compliance, obligation, identification with team’s win, and self-definition. The lack of applicability in many contexts limited the use of Milne and McDonald’s (1999) and Kahle et al.’s (1996) scales. For example, Kahle et al. (1996) utilized college students in the context of college football for their study. They also focused on psychological connection with a team as motives, rather than simple attendance motives. Milne and McDonald (1999) meanwhile examined both sport spectators and participants, so some of the motives are not applicable to sport spectators. As a result, much of the sport fan motivation research utilized Wann’s (1995) and Trail and James’ (2001) instruments, comprising motives such as
achievement, aesthetics, entertainment, escape, and family (e.g., James & Ridinger, 2002; James & Ross, 2002; Robinson & Trail, 2005).

Previous investigation of sport fan motivation examined differences according to factors including gender, age, race, and sport type. Regarding gender, Wann (1995) found differences between males and females as females scored higher on the family motive across all sports examined. Another study found males scoring higher than females on the eustress and aesthetic motives (Wann et al., 2008). James and Ridinger (2002) meanwhile found that males and females differed concerning their connection to sports, connection to a team, and the motives achievement, empathy, and knowledge in their study of men’s and women’s college basketball fans. Research of potential differences in fan motives concerning age yielded inconclusive results. However, despite no relationships found between motivation and age (Wann, 1995; Wann, Bilyeu, Brennan, Osborn, & Gambouras, 1999), consumption community differences displayed that spectators may vary according to age-related factors. For instance, James and Ross (2004) suggested that college students may attend sporting events based upon their low cost to attend. Therefore, fans at different life stages may differ in sport attendance based upon other factors.

In examining motivation differences according to race, an exploratory investigation by Wann and colleagues showed Caucasians displayed overall higher ratings on motives than African-Americans. However, with previous research finding that African-Americans are just as likely as Caucasians to be sport fans, the authors suggested that more research was warranted to learn African-American motives, which were not found in their study (Wann et al., 1999). Armstrong (2002) developed the Black Consumers’ Sport Motivation Scale (BCSMS) to address this gap, and found cultural affiliation to be a motive of African-Americans that previously had
not been examined. Overall, African-Americans were most motivated by entertainment and least motivated by the economic factor. Three additional motives were displayed by Bilyeu and Wann (2002): representation, similarity, and support/perceived greater equality. Thus, evidence supports that Caucasians and African-Americans differ to some extent in their motives to attend sporting events.

Wann et al. (2008) showed differences regarding type of sport as the aesthetic motivation was found to be more common for fans of individual, stylistic, and non-aggressive sports than spectators of team, aggressive, and non-stylistic sports. James and Ross’ (2004) examination of differences in motives to attend college baseball, softball, and wrestling revealed that fans who attended each of the three sports in their study rated sport-related motives (entertainment, skill, drama, and team effort) higher than self-definition and personal benefit motives such as achievement, team affiliation, and social interaction. However, each of these sports are non-revenue generating sports, so it should not be surprising that fans were not motivated by the achievement and affiliation motives. Kahle et al.’s (1996) study of college football fan motives revealed camaraderie and internalization (attachment to the game) to be primary motives. Therefore, one can surmise differences in types of sports at the college level.

Literature also displays differences in fan motives of different levels of the same sport. Bernthal and Graham (2003) examined MiLB and college baseball fans and found that MiLB fans placed greater importance on entertainment-added elements of service such as promotions while the community aspect was more important to college baseball fans. Meanwhile entertainment, escape, and family were the primary motives of MiLB fans in a study by Lee and Won (2012). Also, Wakefield (1995) noted MiLB fans’ social acceptance affecting their attendance. A study comparing MiLB and MLB fans learned that both groups of fans were
highly motivated by entertainment. Social interaction, escape, family, and drama were highly-rated by both groups of fans. The most significant difference between MLB and MiLB was their psychological connection to the team. The vast majority of MiLB fans felt no psychological connection to their team while many MLB fans did maintain a psychological connection.

These investigations exhibit the differences in sport fan motivation based upon factors including gender, age, race, and sport. With motives such as entertainment, family, and social interaction greatly influenced by external variables within the sporting event environment, organizations are forced to determine what impacts fans’ experience at sporting events, which influences their decision to return in the future. Based upon this, much sport marketing research investigated factors of the sport service environment. A review of sport service quality literature is provided next.

Service Quality

Investigation of service quality allows sport marketers to determine which aspects of the experience are of most importance to fans (Koo et al., 2009). The foundation of the study of service quality is its relationship with satisfaction and consumer behavioral intentions. Previous marketing literature displays customer satisfaction mediates the relationship between perceived service quality and behavioral intentions (e.g., Anderson & Sullivan, 1993; Brady, Voorhees, Cronin, & Bourdeau, 2006; Cronin, Brady, & Hult, 2000). Perceived service quality is an attitude that results from one’s comparison of expectations with performance (Cronin & Taylor, 1992; Parasuraman, Zeithaml, & Berry, 1988). Satisfaction meanwhile is defined as a “desirable end state of consumption or patronization” (p. 8), meaning that it occurs at the conclusion of one’s consumption experience, and that it is “the consumer’s fulfillment response” (p. 8). The clearest distinction between service quality and satisfaction is that while perceived service quality is the
consumer’s attitude and overall judgement of a service, satisfaction is a transaction-specific evaluation (Bitner, 1990; Oliver, 1981; Parasuraman et al., 1988).

Understanding the importance of service quality, research examined the composition of the construct, which has evolved over time. Parasuraman et al. (1988) developed the SERVQUAL instrument, a 22-item scale comprising the following five factors: tangibles, reliability, responsiveness, assurance, and empathy. McDonald, Sutton, and Milne (1995) modified the SERVQUAL in creating the sports-specific TEAMQUAL, a 39-item instrument measuring elements of the service environment such as ticket takers, ushers, concessionaires, merchandisers, and customer service representatives. Theodorakis, Kambitsis, and Laios (2001) later developed the SPORTSERV scale, which classified service into five categories – reliability, access, tangibles, security, and responsiveness. However, each of these instruments lacked the component of the core attribute of the actual service delivered.

To improve upon these frameworks, Grönroos (1984) included the technical (or core) along with the functional component in his model of service quality, which is the process of service delivery. Grönroos (1984) also referred to the components as the “what” and “how.” This model still was lacking, though, as it did not account for the physical environment. Bitner (1992) was the first to construct an instrument examining the physical surroundings in the service experience, providing another dimension to the service landscape. She constructed the Servicescape in the retail context, which divided the service environment into three dimensions: (1) ambient, (2) space, and (3) signs, symbols, and artifacts. Ambient conditions include elements such as lighting, music, and scent. The space dimension comprises the layout of the environment as well as equipment and furnishings while signs, symbols, and artifacts are items that communicate symbolic meaning and create an overall impression. These dimensions
engender cognitive, emotional, and physiological responses of both customers and employees which lead to approach or avoidance behaviors including staying longer, spending more money, and returning to the environment.

Based off the work of Bitner (1992) and Grönroos (1984), Koo et al. (2009) developed a model comprising the technical, functional, and environmental components of sport service quality. The technical attribute comprised game-specific aspects such as the competitiveness of the game, performance and effort of the teams, and level of play. The environmental component consisted of the appearance, comfort, convenience, and location of the facility while the functional attribute included entertainment, gameday promotions, contests, merchandise, concessions, and service.

The core product was previously shown to play a significant role in spectator satisfaction, especially among major professional sports (e.g., Biscaia, Correia, Yoshida, Rosado, & Marôco, 2013; Sarstedt, Ringle, Raithel, & Gudergan, 2014; Theodorakis, Alexandris, Tsigilis, & Karyounis, 2013). However, with the core product out of the control of sport managers, much research specifically examined the role of the physical environment and other ancillary factors in evoking spectator satisfaction. Based upon Bitner’s (1992) framework, Wakefield and Sloan (1995) developed the Sportscape, which included the following seven facility-related factors: stadium access, facility aesthetics, scoreboard quality, seating comfort, layout accessibility, space allocation, and signage. The instrument measured spectators’ pleasure evoked from the environmental factors and behavioral consequences of the pleasure, which included spectators’ desire to stay and repatronage intentions. Surveying college football spectators, Wakefield and Sloan (1995) discovered that stadium cleanliness, fan control (or behavior of the crowd), parking, crowding (how close fans are to each other), and food service predicted spectators’
desire to stay and consequent future attendance intentions. Wakefield, Blodgett, and Sloan (1996) utilized the Sportscape in the context of both college football and MiLB and found that stadium aesthetics, scoreboard quality, and perceived lack of crowding elicited spectator pleasure which in turn impacted spectators’ repatronage intentions. The authors noted that aesthetics of stadiums including architectural design, interior design and décor, and colors of the stadium, facades, and seats may all impact spectators. Even signs and banners of team championships and retired players can evoke spectators’ responses.

Wakefield and Blodgett (1999) utilized the Servicescape in a study of college football and MiLB spectators and casino patrons. The authors added perceived quality of the Servicescape to the model as a mediator between the environmental factors and individuals’ satisfaction and consequent behavioral intentions. Facility layout, aesthetics, seating, and cleanliness were all significant predictors of perceived quality in both sport settings while electronics (scoreboards and other graphic displays) was significant in the college football setting, but not among MiLB spectators. Perceived service quality was shown to positively predict satisfaction, which predicted both desire to stay and behavioral intentions. Hill and Green (2000) also demonstrated the effect of the environmental attribute of sporting events, applying the Sportscape in the context of Australian rugby and found the instrument’s factors helped predict fans’ future attendance intentions.

With the importance of the environmental factor shown, researchers turned to incorporating functional attributes in studies of sport service quality. Kelley and Turley (2001) constructed an instrument that comprised nine factors: (1) employees, (2) price, (3) facility access, (4) concessions, (5) fan comfort, (6) game experience, (7) showtime, (8) convenience, and (9) smoking. In the context of men’s and women’s college basketball, the authors found that
the attributes ranked in the order of importance of employees, price, facility access, concessions, fan comfort, game experience, showtime, convenience, and smoking. In a service quality study of minor league hockey spectators, Greenwell et al. (2002) examined the scoreboard, facility aesthetics, comfort, access, layout, and staff and found that perceptions of the physical facility as well as service staff contributed to customer satisfaction more than the core product of the game. Thus, both environmental and functional components were shown to maintain importance.

Ko et al. (2011) later constructed a model and instrument based upon Ko and Pastore’s (2004) model in the context of recreational sports. It structured service quality into five dimensions and 12 sub-dimensions in creating the SEQSS. The higher-order constructs included game, augmented services, interaction, outcome, and physical environment. Game quality comprised skill performance, operating time, and information, and is similar to the core product of the three-factor service quality studies (Koo et al., 2009). Physical environment included facility ambience, design, and signage. Augmented service quality comprised entertainment and concessions. Interaction quality included employee and fan interaction while outcome quality assessed the positive experiences of being with others and the post-consumption evaluation of the overall outcome. The point of differentiation for the SEQSS from the aforementioned sport service quality instruments is its five dimensions and 12 sub-dimensions.

Other measurement instruments of service quality include Tsuji, Bennett, and Zhang’s (2007) scale measuring service quality in action sports, Ko and Pastore’s (2004) recreational sport scale, and Westerbeek and Shilbury’s (2003) model incorporating service quality, value, and satisfaction. The research on sport service quality displayed that environmental factors such as stadium layout, access, aesthetics, and scoreboards as well as functional aspects such as service employees and entertainment also contributed to spectator satisfaction. In the context of
MiLB, Koo et al.’s (2009) study found the functional component – which comprised food and beverages, merchandise, entertainment, and promotions – was the strongest predictor of service quality while facility-related aspects of the environmental component were also strong predictors of perceived service quality and consequent spectator satisfaction.

While the aforementioned measurements of service quality examined environmental and functional attributes of sporting events, many of these studies lacked investigation of another critical component of sporting events: socialization. The social component of sports is well-displayed in previous literature (e.g., Bale, 1994; Eastman & Land, 1997; Melnick, 1993). Many people are first introduced to sports due to the influence of family and friends (Wann, Tucker, & Schrader, 1996). Socialization was shown to motivate fans to attend games (James & Ross, 2002; Wakefield, 1995), travel to games (Smith & Stewart, 2007), and strengthen people’s connection to teams (Funk & James, 2001). Zhang et al. (2004) stated that socialization enhances the excitement level of a sporting event. Sport facilities are especially prone to socialization. Melnick (1993) pointed to sports serving as a pivotal channel for socialization given changes in society, and that sporting events serve as grounds for casual sociability. Sport facilities serve as “third places,” providing a place for people to interact. Therefore, previous research investigated the role other spectators play in contributing to the satisfaction of sporting events. With the current study’s focus on sport organizations’ attempt to cultivate a pleasurable experience that leads to fans’ desire to attend in the future, and specifically the social environment evoking nostalgia among spectators, a review of the atmosphere of sporting events is now presented.

**Sport Stadium Atmosphere**

Originating out of the field of environmental psychology, many studies investigated the concept of the atmosphere in various contexts including retail stores (Borges, Babin, &
Spielmann, 2013), supermarkets (Vida, Obadia, & Kunz, 2007), coffee shops (Jeon & Jo, 2011), book stores (Wirtz, Mattila, & Tan, 2007), restaurants (Sulek & Hensley, 2004), and casinos (Mayer & Johnson, 2003). Based off Mehrabian and Russell’s (1974) SOR model, a number of scholars (e.g., Baker, 1986; Bitner, 1992; Turley & Milliman, 2000; Tombs & McColl-Kennedy, 2003) constructed models investigating the atmosphere. For example, Tombs and McColl-Kennedy (2003) created the Social Servicescape model which focused on the role that customers play in influencing the emotional and behavioral response of others. Each of these models included both physical and social elements of the environment.

With the importance of other fans in contributing to the sporting event experience, Uhrich and Koenigstorfer (2009) developed a framework comprising a comprehensive set of environmental stimuli unique to sporting events, which produced spectator affective responses and behavioral outcomes. Constructed in the context of professional soccer, the model comprised stimuli elicited from the event organizers, spectators, and the game. Organizer-caused stimuli included lighting, music, and event activities. Stimuli created by spectators included spectator chants while the game-produced stimuli included elements such as a team scoring a goal, a referee’s whistle, and an unexpected outcome of the game. Spectator responses were pleasure, arousal, and dominance, based off the original Mehrabian and Russell (1974) model. Behavioral outcomes included staying longer at the facility, increased food and beverage consumption, revisit intention, and positive word-of-mouth intention.

Extending upon this model, Uhrich and Benkenstein (2010) constructed the first scale to measure sport stadium atmosphere (SSA), adding the stadium’s architecture as a component of SSA. Items included the music and public address announcer inside the stadium, the appearance and action of spectators, team morale, and the sound and appearance of the stadium.
architecture’s contribution to the environment. Uhrich and Benkenstein utilized their instrument in a 2012 study of German professional soccer fans and found that spectator density, appearance, and behavioral patterns engendered high levels of spectator pleasure and arousal. In addition, the social dimension was found to be more important than the physical element of the environment.

The importance of SSA is exhibited in previous studies throughout the world. In a study of baseball, football, and basketball fans, Tomlinson, Buttle, and Moores (1995) found that the general atmosphere at the game was the single most important factor to fans. Also, in Greenwell, Lee, and Naeger’s (2007) study of MiLB and arena football spectators, the atmosphere garnered the second-most positive comments and just one negative comment of all environment elements rated by both groups of fans. Furthermore, a study of the role of SSA in Taiwanese semi-professional basketball displayed that SSA explained 10% of the variance in spectator satisfaction in the event while the combination of SSA and satisfaction accounted for 44% of the variance of spectators’ behavioral intentions (Chen, Lin, & Chiu, 2013). Yoshida and James (2010) meanwhile discovered that atmosphere was a strong positive predictor of both spectator satisfaction and behavioral intentions in both contexts of college football and Japanese professional baseball. In their 2011 study, Yoshida and James found crowd experience, entertainment, and game atmosphere maintained the highest mean scores of the 10 factors of the model. Other studies of soccer fans further exhibited the importance of SSA to spectators (Biscaia, Correia, Rosado, Marôco, & Ross, 2012; Sarstedt et al., 2014).

These studies demonstrate the holistic nature of sporting events, going beyond the game to include the facility architecture, lighting, music, and crowd. The evolution of sporting events parallels marketers outside of sports’ attempts to capture consumers. Joseph (2010) stated that to successfully engage consumers, brands need to fulfill their needs, wants, and desires both
rationally and emotionally. With the relationship between individuals’ senses, emotions, and memory, brands have turned to sensory marketing with the goal of tapping into consumers’ emotions and influence their behavior.

**Sport Sensory Experience**

With the increased focus on sensory marketing (Gobé, 2001; Lindstrom, 2005; Schmitt, 1999), Lee et al. (2012) conducted an investigation of sporting events from the sensory experience perspective. Sporting events comprise a variety of stimuli that are taken in through individuals’ senses. However, much of the previous research also primarily focused on the sight, touch, and taste components of sporting events. Therefore, Lee et al. (2012) constructed the Sensoryscape instrument to provide a more comprehensive assessment of the sensual, social, and psychological elements of the sport stadium experience. The Sensoryscape captures the sound and smell as well as the visual, taste, and touch factors of the sport experience. The visual components of a stadium include its architecture, characteristics, design, color, landscape, decoration, scoreboards, and sightlines. The auditory element includes sound systems, music, public address announcers, and the sound of the crowd. Physical touch is experienced through comfortable seats, spatial arrangements of seats and aisles, and the crowd density. The smells and tastes experienced includes that of food and beverages.

In the context of MLB and MiLB, Lee et al. (2012) found that the five sensory factors of the Sensoryscape along with the social interaction and sense of home factors all contributed to spectator satisfaction, which in turn predicted future behavior. The Sensoryscape solely explained more than 50% of the variance in spectator satisfaction in both the MLB and MiLB contexts. Social interaction meanwhile explained 22% of the variance in the MLB setting and 40% of the variance in the MiLB setting, demonstrating the social nature of MiLB games. Lee,
Heere, and Chung (2013) later utilized the Sensoryscape to examine the impact of spectators’ five senses on team identity and loyalty. The Sensoryscape was shown to explain 38% of the variance in team identity and the combination of the Sensoryscape and team identity explained 57% of the variance in team loyalty. Sight, smell, touch and sound also were positive predictors of team identity while all but sound and taste predicted team loyalty. The authors noted, though, that the use of the student sample could have affected the insignificant contributions of taste as college students may not spend money on concessions. In addition, the sample consisted of a myriad of sports, some of which have limited options and may have no local food items. While this study examined sport fan identification and loyalty and not spectators’ cognitive or emotional response to the sport stadium experience, it still displays the effectiveness of the use of sensory marketing to study sport consumers.

The preceding review of sport marketing literature exhibits the evolution of research of the sport fan experience. Once focused on factors such as home team attractiveness, convenience, and ticket price, recent research turned to exploring sensory and psychological elements of the sport experience. One such psychological element is nostalgia. Ramshaw (2005) noted that while sport organizations have long sought to create an experience for fans, nostalgia just recently became part of this experience. The following sections review nostalgia, beginning with a historical overview of nostalgia.

**Overview of Nostalgia**

The concept of nostalgia was introduced by Johnnes Hofer, a Swiss medical student who defined the term in his medical dissertation as “the sad mood originating from the desire for the return to one’s native land” (1934, p. 381). The term is a combination of two Greek words: *Nostros*, meaning return home, and *Algos*, meaning pain (Peters, 1985). Nostalgia has roots in a
variety of literature contexts including Hippocrates, Caesar, and the Bible (Batcho, 2013; Sedikides, Wildschut, & Baden, 2004). Nostalgia was also a theme in Homer’s *Odyssey*, in which Odysseus is gone from his home of Ithaca for 20 years, all while maintaining a yearning to return. This pain resulting from one’s missing home originated strictly as a physical illness caused by recurring thoughts and memories of home, which resulted in symptoms including sadness, insomnia, fever, weakness, loss of appetite, and cardiac palpitations. Nostalgia later became viewed as a mental illness, thought of as a form of melancholia (Batcho, 2013).

By the mid-20th Century, nostalgia had become a psychoanalytic concept, considered a process of individuation through one’s childhood and adolescence (Peters, 1985). Previously thought of as a desire to return to a physical homeland, nostalgia became viewed as a desire to return to an idealized version of a previous time. Thus, individuals do not only experience nostalgia for places, but also people, symbols, and points in time (Batcho, 2013). Nostalgia’s evolution continued as scholars recognized it as not just a negative mental state, but a combination of both positive and negative emotions – a bittersweet feeling (Kaplan, 1987; Kleiner, 1970; Werman, 1977). Pleasure is derived from the recalling of a memory while sadness accrues from the knowledge that one cannot return to the idealized setting (Batcho, 2013). This combination of both positive and negative elements became widely accepted by scholars as the end of the 20th century approached (e.g., Baker & Kennedy, 1994; Davis, 1979; Holak & Havlena, 1998; Holbrook & Schindler, 1991; Sedikides, Wildschut, Routledge, & Arndt, 2015; Stern, 1992).

Merchant and Ford (2008) reviewed scholars’ definitions and noted that definitions featured one or more of three components: time, emotions, and antecedents. For example, Davis (1979) included both time and emotions in his definition of nostalgia as “a positively toned
evocation of a lived past in the context of some negative feeling toward present or impending circumstances” (p. 18). Stern (1992) similarly defined nostalgia as “an emotional state in which an individual yearns for an idealized or sanitized version of an earlier time period” (p. 11). Belk (1990) included antecedents of nostalgia in her definition, referring to nostalgia as “a wistful mood that may be prompted by an object, a scene, a smell, or a strain of music” (p. 670).

Holbrook and Schindler (1991) meanwhile provided a comprehensive definition of nostalgia, incorporating all three components of time, emotions, and antecedents. Other scholars including Baker and Kennedy (1994) and Holak and Havlena (1998) also offered complete definitions of nostalgia. Table 1 below displays scholars’ definitions of nostalgia.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Baker &amp; Kennedy</td>
<td>“a sentimental or bittersweet yearning for an experience, product or service from the past” (p. 169)</td>
</tr>
<tr>
<td>Belk (1990)</td>
<td>“a wistful mood that may be prompted by an object, a scene, a smell, or a strain of music” (p. 670)</td>
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<tr>
<td>Davis (1979)</td>
<td>“a positively toned evocation of a lived past in the context of some negative feeling toward present or impending circumstances” (p. 18)</td>
</tr>
<tr>
<td>Holak &amp; Havlena</td>
<td>“a positively valanced complex feeling, emotion, or mood produced by reflection on things (objects, persons, experiences, ideas) associated with the past” (p. 218)</td>
</tr>
<tr>
<td>Holbrook &amp; Schindler</td>
<td>“a preference (general liking, positive attitude, or favorable affect) toward objects (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger (in early adulthood, in adolescence, in childhood, or even before birth)” (p. 330)</td>
</tr>
<tr>
<td>Stern (1992)</td>
<td>“an emotional state in which an individual yearns for an idealized or sanitized version of an earlier time period” (p. 11)</td>
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Nostalgia and Memory

Understanding the components of nostalgia is critical to its comprehension. Nostalgia is a cognitive-affective experience comprising of a memory and an emotional response to the
memory (Cavanaugh, 1989). The memory is of a particular place at a particular time, and 
Werman (1977) suggested that the place can be anywhere one has experienced in reality, or in 
one’s imagination, and can occur at any point in life, or even before one’s life. It is important to 
ote that nostalgia differs from simple reminiscence, as reminiscing is one thinking about the 
past while nostalgia is one experiencing emotions based upon this remembering (Castelnuovo- 
Tedesco, 1980). As Cavanaugh (1989) stated, “reminiscence is a process and nostalgia is an 
emotion” (p. 603). Batcho (2007) noted that “one can remember without being nostalgic, but one 
cannot be nostalgic without remembering,” and she also described nostalgia as “the emotional 
force that enables certain types of reminiscence to serve distinct psychological functions” (p. 
362).

Our memory is comprised of both personal and collective components (Halbwachs, 1980; 
Wilson, 2005). While individuals can maintain memories that are solely personal, virtually all 
memories are collective as they involve other people (Halbwachs, 1980). Vromen (1986) also 
noted that personal memory is not solely an individual construct because individuals’ memories 
come in the form of group membership. Memories of meaningful and consequential experiences 
as well as memories of experiences during times of transition are most remembered (Healey, 
1991). Emotion also plays a critical role in one’s memory. In an investigation of Opera cast 
members’ memory of performances, Sehulster (1989) found that performances that were more 
intense and emotional were captured in vivid memories. These vivid memories then lead to a 
greater emotional reaction (Rubin & Kozin, 1984). Baumgartner (1992) also displayed the role 
of emotion in a study of the memories evoked through music, with most of the original 
experiences characterized as emotional experiences, and the recollection of these memories 
bringing back these emotions. Previous literature also shows that novel events are more likely to
be remembered (Rubin, Rahhal, & Poon, 1998). Cialdini (2001) stated that scarcity of events increases their ability to be remembered. Thus, holidays and other special events are more likely to be remembered.

Davis (1979) expressed that nostalgia eliminates or at least mutes from memory the unpleasant and unhappy thoughts. It simplifies and romanticizes the past. Hertz (1990) examined Holocaust survivors’ memories of their experiences and found that many had pleasant memories as they screened out negative memories. Hirsch (1992) suggested that nostalgia is a yearning for an idealized past, termed screen memory, which is the combination of many different memories, with negative emotions filtered out. The negative emotions are still present, though, as while people yearn to return to an idealized past, they know it is not possible since it never truly existed. With negative emotions not greatly affecting one’s memory, the presence of nostalgia exhibits one’s drawing upon positive memories (Cho, 2014).

**Formation of Nostalgia**

Many of one’s memories originate during one’s adolescent and early adulthood, which was shown to be a fundamental time for memories that are later drawn upon through the evoking of nostalgia (Schuman & Scott, 1989). Holbrook and Schindler (1994) displayed that consumers develop enduring preferences for things such as movies and music during sensitive periods of their lives. Previous studies discovered that individuals’ music preferences peaked during one’s early adulthood (Holbrook & Schindler, 1989, 1994). Batcho (1995) discovered that nostalgia for music steadily increased from one’s childhood through late adulthood. Schuman and Scott (1989) meanwhile found that people remember and give great importance to political and social events occurring between the ages of 17 and 25 while other literature showed that important personal events that are most remembered occur between 18 and 35 (Rubin et al., 1998).
Holbrook and Schindler (1996) discovered that consumers’ peak preferences for Academy-Award winning movies occurred at 26 or 27 years old. This was compared to earlier studies which found that consumers’ age preferences peaked at 33 years old for fashion models (Schindler & Holbrook, 1993) and 14 years old for movie stars (Holbrook & Schindler, 1994). Holbrook and Schindler (1996) noted that people may have stronger preferences for popular movies, and hence develop a preference for movie stars when they are adolescents, but as they mature, their preference shifts toward movies of better quality. Nonetheless, the results provide evidence that the period from adolescence to young adulthood is pivotal in establishing one’s preferences for media. Overall, the period from 10 to 30 produces the most important memories, with favorite movies, music, and books coming from this age range while other popular cultural events such as the Academy Awards and World Series are also remembered (Rubin et al., 1998).

Also, Davis (1979) stated that there is no minimum amount of time that must pass for the memory of an experience to trigger nostalgia. It is not the amount of time that passes that matters, but the way events, moods, and circumstances contrast with the past. Any major change that alters one’s mood can create a precipitate nostalgia. An example is a college student moving away for the first time can be nostalgic for events just experienced prior to moving. Therefore, while many MLB and MiLB spectators are still within the age range in which important memories are created, these spectators may still experience nostalgia due to life transitions such as moving from home to college and from college to career.

**Dimensions of Nostalgia**

Nostalgia is generally classified as one of three types: personal, simulated, and collective (Spaid, 2013). Personal nostalgia is evoked based upon an event experienced in one’s own life. This is a direct, individual experience held in one’s memory (Sedikides et al., 2004; Stern, 1992).
An example of personal nostalgia is eating Easter Sunday dinner with one’s family (Havlena & Holak, 1996). Products such as Oreos and Coca-Cola’s green bottles evoke personal nostalgia as they were consumed in one’s youth. Deriving from one’s personal experiences, personal nostalgia allows one to alter images and relationships of one’s past, even if they were negative, to form an idyllic creation of the past (Stern, 1992). Individuals romanticize previous experiences, wishing things today would be as they were in the past (Merchant & Ford, 2008). Spaid (2013) suggested that personal nostalgia is the strongest form of nostalgia due to it being a personal experience.

Simulated nostalgia, also referred to as interpersonal (Havlena & Holak, 1996), historic (Stern, 1992), vicarious (Goulding, 2002; Merchant & Ford, 2008), and intergenerational (Davis, 1979), is the yearning for the indirectly-experienced past. Information can be gained through stories passed through a family member or through nonverbal communication such as movies, television, and other media (Havlena & Holak, 1996). An example is nostalgia one experiences when visiting a museum, as an individual may experience nostalgia from events occurring before they were born (Baker & Kennedy, 1994). Stern (1992) defined this type of nostalgia as “the desire to retreat from contemporary life by returning to a time in the distant past viewed as superior to the present” (p. 13). No matter how the previous time is presented, it is rendered as an escape from the present. Merchant and Ford (2008) highlighted the transformative nature of this type of nostalgia, as when one attends an Opera or visits a museum, it feels as if the person is leaving the present world and visiting the past.

Collective, or cultural nostalgia, is the yearning for the past represented through a generation, culture, or nation (Baker & Kennedy, 1994), and is based upon shared symbols (Havlena & Holak, 1996). Baker and Kennedy (1994) suggested that symbols such as baseball
and the American flag and foods including hot dogs can be part of collective nostalgia. Also, while nostalgia can be a private experience, affecting one person while not affecting others, members of the same generation may maintain nostalgic sentiments, part of a collective identity, toward certain experiences (Davis, 1979). Therefore, the playing of songs or clips of movies can trigger nostalgic responses from a large group of people. Collective nostalgia occurs during uncertain times at the societal level such as following wars, economic recessions, and revolutions. Such nostalgia occurred in the United States as a result of the Great Depression, 1960s social turmoil, and 1990s following the fall of Communism around the world (Brown, Kozinets, & Sherry, 2003). Brown et al. (2003) suggested that in times of sociocultural and economic turmoil, nostalgia provides a sense of comfort and community.

Some experiences can comprise both personal and collective nostalgia. For example, music can evoke both personal and collective nostalgia (Havlena & Holak, 1991; Van Dijck, 2006). Hearing a song that was very popular when one was younger may elicit collective nostalgia of people of a certain generation while personal nostalgia may arise from specific memories one has when hearing the song. Meyer (2010) posited that hearing “Take Me Out to the Ballgame” can evoke both personal and collective nostalgia. Therefore, many experiences comprise both the personal and collective dimensions.

**Nostalgia Antecedents**

Nostalgia is evoked as a result of numerous factors including one’s identity, age, gender, and sensory and social triggers. The following sections review each of these factors contributing to the nostalgic experience.
Identity

Holak and Havlena (1992) noted that with nostalgia playing a role in one’s life transitions, it makes sense that memories from one’s adolescence are remembered. Batcho (1995) discovered that the college years was a time period in which individuals exhibited a peak of nostalgia toward many objects, and that this could be due to the fact that college is a time of transition in which individuals experience homesickness. Based upon this, much research was done on the role of nostalgia in maintaining one’s identity (e.g., Brown & Humphreys, 2002; Cavanaugh, 1989; Sierra & McQuitty, 2007). This identity relates back to nostalgia’s original idea of homesickness, an aspect of loyalty and allegiance to one’s social group (Batcho, 2013).

Previous literature emphasized the role of nostalgia in providing a link to one’s homeland (Brown & Humphreys, 2002; Volkan, 1999). Other literature highlighted the importance of nostalgia throughout one’s life, such as Sierra and McQuitty (2007) stating, “Nostalgia is used to develop, sustain, and recreate individuals' identities” (p. 100). Other scholars also conveyed nostalgia’s ability to bring a sense of continuity of identity, connectedness, and meaning (Cavanaugh, 1989; Mills & Coleman, 1994; Sedikides et al., 2004). Brown and Humphreys (2002) suggested that nostalgia also allows us to construct unique identities at both the personal and group level, serving as a point of distinction compared to other people.

Much maintenance of one’s identity is done both personally and collectively. For example, Batcho and colleagues (2008) posited that personal nostalgia may strengthen one’s social bonds while combatting alienation and assist in the maintenance of the continuity of oneself in times of change (Batcho, DaRin, Nave, & Yaworsky, 2008). Belk (1990) meanwhile stated that we define ourselves in personal as well as group history. With the importance of
group history, nostalgia can be a shared experience that strengthens a group’s identity as we are a collection of our family, organizations in which we belong, city, and nation (Belk, 1988).

Davis (1979) conveyed that nostalgia allows individuals to maintain their sense of identity while going through major life changes. This idea became known as the Discontinuity Hypothesis. Davis (1979) suggested that nostalgia helps bring continuity of identity in the face of new demands, new relationships, and changes in career and family status. When faced with major life changes and difficult events, individuals rely upon nostalgia and its precipitation of positive past memories to counteract their unpleasant present condition. He also asserted that discontinuity can evoke nostalgia at the societal level through wars, depressions, natural disasters, and other events.

**Discontinuity Hypothesis**

Best and Nelson (1985) tested Davis’ (1979) Discontinuity Hypothesis through a secondary analysis of four national surveys: The National Senior Citizens Survey (1968), a National Council on Aging study (1974), a mental health survey (1976), and the General Social Survey (1980). Each of the four surveys contained either one or two items assessing participants’ nostalgia such as “You are as happy now as you were when you were younger” and “People had it better in the old days,” which was contained on the 1968 survey. The results found that while African-Americans were shown to be more nostalgic than white people, other hypotheses of differences regarding gender, geographic and occupational mobility, and work interruption were not confirmed. However, other scholars questioned whether the methodology employed captured the full extent of individuals’ discontinuity and nostalgia, and hence question the results of the study (Routledge, 2016).
Batcho (1995) also investigated the Hypothesis and found weak support as individuals had a positive view of the past but were not necessarily displeased with the present nor maintained a negative outlook on the future. Also, differences in nostalgic sentiment based upon age, gender, and generations were not found. Batcho followed with two more studies in 1998. The first assessed participants’ views of the past, present, and future. Individuals who scored high on the Nostalgia Inventory viewed the past better than those scoring low on the instrument; however, ratings of the present or future did not differ. The second part of the study examined individuals concerning a number of traits. Results showed that high-scoring individuals were more emotional, maintained stronger memories, had a higher need for achievement, and preferred engaging in activities with other people but no differences were found concerning traits including happiness or thrill-seeking. Bassett (2006) also failed to find support for the Discontinuity Hypothesis in a study utilizing the mortality salience paradigm. The results exhibited contradictory findings as participants rated the past as better than the present, but also expected the future to be worse than the present.

Milligan (2003), however, examined the hypothesis through the lens of physical displacement and found support for nostalgia serving as a mechanism to reestablish identity continuity. Coffee shop employees turned to nostalgia when the business moved to a new location, causing identity discontinuity among employees. Sedikides et al. (2015a) also found support for discontinuity evoking nostalgia. These authors found that the more disruptive life events individuals had experienced, the more they experienced nostalgia. Life events included change in living conditions, change in residence, change in sleeping habits, and change in eating habits. Positive life events such as the addition of a family member and a personal achievement meanwhile were not related to nostalgia. Sedikides and colleagues (2015a) further investigated
the discontinuity hypothesis and discovered that individuals who encounter negative discontinuity experience more nostalgia than those who have positive discontinuity or self-continuity.

Other factors that contribute to the experience of nostalgia include negative affect (Barrett et al., 2010; Wildschut et al., 2006), loneliness (Wildschut et al., 2006; Zhou, Sedikides, Wildschut, & Gao, 2008), personal meaninglessness (Routledge et al., 2011), boredom (Van Tilburg, Igou, & Sedikides, 2013), and social disconnectedness (Sedikides et al., 2015b). Other scholars suggested that people’s perceived quality of life leads them to experience nostalgia (Baker & Kennedy, 1994; Hirsch, 1992). Nawas and Platt (1965) stated that nostalgia occurs when one is anxious or afraid of the future. These studies exhibit the fact that nostalgia is experienced as a result of negative life events.

Age Differences

Another factor that contributes to the experience of nostalgia is people’s age. Davis (1979) suggested that older people are more prone to experience nostalgia. This is due to life transitions including retirement, children having left home, and family and friends’ deaths. The more life experiences one holds, the more likely they will be to experience nostalgia. Batcho (1995) also regarded nostalgia as a function of age, believing that nostalgia may be just part of the normal aging process. Previous literature suggested that adults reaching the age of 50 and beginning to face morality – most recently the case for Baby Boomers – are more likely to be nostalgic for previous times (Merchant & Ford, 2008; Stern, 1992). Other research showed that both old as well as young adults are comparatively more prone to nostalgia than other age groups. One study found that adults age 76-91 as well as individuals age 18-30 experience nostalgia twice a week while people between the ages of 31-75 experience nostalgia once a week.
(Hepper, Robertson, Wildschut, Sedikides, & Wildschut., 2015). Wildschut et al. (2006) also discovered that 79% of undergraduate college students experience nostalgia at least once each week. Thus, these studies exhibit that nostalgia is experienced by people of all ages, but that younger and older adults are most prone to nostalgia.

**Gender Differences**

Previous research exhibits mixed findings regarding whether men and women differ based upon evoked nostalgia. Early studies suggested that men are more nostalgic than women (Davis, 1979). However, Davis (1979) noted that reasoning for these findings is greater discontinuity in males’ lives as a result of occupation choice, husband and father roles, and breaks in work career. With greater equality in the workplace today, the suggested impetus for these early results likely would not apply today. More recent studies found no gender differences. For example, Best and Nelson (1985) found no differences between men and women when testing Davis’ (1979) Discontinuity Hypothesis. Also, when asking participants how much they missed each of 20 items from their youth including family, friends, music, and television shows, Batcho (1995) found no differences based upon gender. Meyer (2010) also found no difference in male and females’ levels of evoked nostalgia or intended behaviors. Other literature examined differences between men and women concerning specific objects. For example, Schindler and Holbrook (2003) found men to be more nostalgic of cars than women. Sherman and Newman (1978) meanwhile showed that women place greater importance on photographs than men. Similar findings were also found with men exhibiting nostalgia toward vehicles and televisions while women prefer objects such as artwork and photographs (Csikszentmihalyi & Rochberg-Halton, 1981).
Triggers of Nostalgia

Beginning with Davis (1979), a number of scholars investigated triggers of nostalgia (e.g., Batcho, 1995; Belk, 1988, 1990; Hirsch, 1992; Holak & Havlena, 1992; Holbrook, 1993). Such antecedents include personal objects (Belk, 1988, 1990; Hepper, Ritchie, Sedikides, & Wildschut, 2002), food (Havlena & Holak, 1996; Mannur, 2007; Stern, 1992), music (Batcho, 1995; Baumgartner, 1992; Holak & Havlena, 1992), television shows and movies (Batcho, 1995; Holak & Havlena, 1992), family and friends (Batcho, 1995; Davis, 1979; Havlena & Holak, 1996; Holak & Havlena, 1992), and holidays (Batcho, 1995; Havlena & Holak, 1996; Holak & Havlena, 1992). Batcho (1995) was the first to measure nostalgic triggers. She identified 20 items including television shows and movies, music, school, places, family, friends, and holidays. With these triggers covering an expanse of people’s activities, Hwang and Hyun (2013) developed a 16-item instrument specific to the restaurant context. Originally comprising the three factors social aspects, sensory inputs, and memorable events, exploratory factor analysis yielded four factors: (1) restaurant staff (based upon the social dimension), (2) food, (3) environment (both food and environment based off the sensory dimension), and (4) the event. Hwang and Hyun’s (2013) investigation gives credence to the role of the senses, social aspects, and memorable events surrounding nostalgic experiences. The following sections review each of these groups of nostalgic triggers. With the close relation between social aspects and memorable events, these categories are combined in the following section.

Senses

The sense of smell has the most powerful impact upon emotions due to the nose’s connection to the olfactory lobe in the limbic system – the part of the brain responsible for emotions (Hirsch, 1992). Thus, many smells have a strong association with emotional memories.
(Reid et al., 2015). Herz (2000) articulated the strong link between memory, emotion, and smell, stating that memories evoked by smells are more emotional than memories drawn from other senses. The strong connection between smell and memory is known as the Proust Phenomenon. This phenomenon is based off Proust’s (1960) emotional memories associated with tasting and smelling a tea-soaked cake. Food maintains a strong connection to our memory through both smell and taste (Holtzman, 1996). For example, Atwood (1986) stated that the smell of yeast reminded her of her kitchens. Baker and Kennedy (1994) meanwhile suggested that the smell of certain foods like freshly-baked cinnamon rolls may bring back memories of one’s grandmother. Similarly, Hirsch (1992) gave the example of the smell of chocolate chip cookies baking in the oven, which bring back childhood memories. Holbrook and Schindler (2003) also demonstrated the role of the taste of food in evoking memories, with one woman stating that Campbell’s Chicken Noodle Soup reminded her of when she was sick as a child and her grandmother would serve her the soup. Food is unique as it is consumed through the sight, smell, taste, and touch senses (Amerine et al., 1965). Other literature exhibited nostalgia’s role in food preferences (Wright, Nancarrow, & Kwok, 2001). In addition to food, the sense of smell is evoked in other contexts such as the new car scent, which serves as a stimulus to purchase a new car (Hirsch, 1992). Holbrook and Schindler (2003) detailed a young woman who associated the smell of a certain perfume with her first romantic relationships as an adolescent. The woman noted that the smell specifically took her back to her bedroom and high school. In the context of sports, Cho (2014) posited that fans may evoke nostalgia through the smell of the venue while Lee et al. (2012) suggested that the smells inside a ballpark can trigger previous such experiences. Thus, the smell of hot dogs, popcorn, and beer as well as the unique smell of a facility may trigger nostalgia among sport spectators.
Due to the ubiquity of music in society – played in contexts such as retail stores, restaurants, and television commercials – it is likely to be tied to past experiences (Janata, Tomic, & Rakowski, 2007). Called “the language of emotion” (Baumgartner, 1992, p. 613), Gabrielsson (2001) discovered that music was shown to evoke memories of people, places, and events. Other research showed that people associate certain songs with periods of their lives (Schulkind, Hennis, & Rubin, 1999). Thus, hearing songs of a previous time may evoke memories from that time (Chou & Lien, 2014). Janata et al. (2007) surveyed participants regarding autobiographical memories experienced from listening to excerpts of songs. The results displayed the power of music in evoking one’s memories and consequent nostalgic feeling as 30% of songs triggered autobiographical memories, triggering emotions including happiness, youthfulness, and nostalgia. Another study also displayed music triggering happiness, relaxation, pleasure, love, and nostalgia (Juslin & Laukka, 2004) while Zentner, Grandjean, and Scherer (2008) found that nostalgia was a very common feeling induced by music at a music festival.

Baumgartner (1992) meanwhile showcased music-evoked experiences involving past or present romantic relationships and experiences with family and friends. Music can evoke both personal and collective nostalgia. Hearing a song that was very popular when one was younger may elicit collective nostalgia of people of a certain generation while personal nostalgia may arise from specific memories one has when hearing the song. One may even recall smells, sounds, and sights from this specific memory, which exhibits the conjoining of the senses in the nostalgic experience (Havlena & Holak, 1991).

Nostalgia evoked through sight and touch received little attention in previous literature. Spaid (2013) suggested that this may be due to citing nostalgia for specific objects rather than the
senses in which they are consumed. For example, the nostalgic elements such as the B&O Warehouse at Camden Yards and use of visible beams in facility design are cases of nostalgia evoked through sight. Nostalgia evoked through touch, however, is more difficult to discern. Mementos, souvenirs, and other personal objects that were shown to evoke nostalgia (Belk, 1990) may exude nostalgia through the sense of touch. Gobé (2001) presented the case of Coca Cola’s glass bottles appealing to the tactile senses that is pleasurable to touch and hold. Thus, a fan may experience nostalgia from holding a baseball they caught as a child. The role that touch plays in this hypothetical example is unknown, though.

Social Interaction

With nostalgia closely connected with one’s identity, it should not come as a surprise that many of the previous experiences in which individuals maintain nostalgia involve family and friends. Nostalgia is described as both a personal and social emotion (Davis, 1979; Sedikides, Wildschut, Arndt, & Routledge, 2008; Wildschut et al., 2006). Family and friends are often part of the original experiences that later engender nostalgia (Holak & Havlena, 1992, 1998; Wildschut et al., 2006). For example, one individual in Goulding’s (2002) study stated that while he was nostalgic for music, movies, and books from earlier in his life, all of these memories involve other people. Holbrook and Schindler (2003) meanwhile identified 10 themes associated with individuals’ nostalgic collections including friendships and loved ones, homeland, gifts of love, and sensory experiences. Photographs, class rings, and even one individual’s cheerleading shoes were associated with family and friends. Many sensory experiences involve family and friends as well, as exemplified by the individual who associated Campbell’s Chicken Noodle Soup with her grandmother. A similar study by Havlena and Holak (1996) exhibited the presence of family in events in which people maintain nostalgia. In addition to family and friends,
classmates, coaches, teachers, and co-workers are common in our nostalgic reflections (Holak & Havlena, 1992). Simple conversations with others can also trigger nostalgia (Wildschut et al., 2006). In addition to the everyday experiences that involve others, important social occasions such as birthdays, graduations, class reunions, and weddings as well as traditional holidays including Thanksgiving, Christmas, Easter, and New Year’s trigger nostalgia (Holak & Havlena, 1992). Merchant and Ford (2008) stated that events occurring as part of our life scripts such as birthdays, graduations, and marriages are remembered better and often maintain much nostalgic sentiment. Wildschut et al. (2006) also displayed special occasions as nostalgic triggers.

**Consumer Behavior Nostalgia**

The use of nostalgia in marketing and advertising became more prevalent in the late 20th and early 21st centuries (Chronis, 2005). Advertisers began using nostalgia as a way to attempt to break through the clutter of advertising, providing people an escape back to a previous, “better” time (Unger, McConocha, & Faier, 1991). Marketing and advertising outcomes of the use of nostalgia include enhanced attitudes toward brands (Marchegiani & Phau, 2010; Merchant & Rose, 2013; Pascal et al., 2002), increased purchase intentions (Loveland et al., 2010; Lu et al., 2015; Sierra & McQuitty, 2007), and enhanced brand attachment (Fournier, 1998). One recent study found that consumers were more likely to spend money as a result of the social connectedness generated by nostalgia (Lasaleta, Sedikides, & Vohs, 2014). Huang, Huang, and Wyer (2016) discovered that the use of nostalgia can increase people’s patience such as when waiting for a webpage to download or a product to be delivered. Also, one’s exposure to stimuli that evoke a sense of nostalgia of previous good experiences can generate positive emotions and lead to the purchase of the stimuli (Holak & Havlena, 1998; Sierra & McQuitty, 2007). Thus, in
the context of baseball, when someone smells hot dogs and it reminds them of attending baseball games with their family, they may be inclined to purchase a hot dog.

Spaid (2013) identified a typology of nostalgic triggers according to the four “P’s” of marketing. The author identified retroscape, a retro serviescape, as a nostalgic trigger businesses could employ in their environment. For example, Disneyland’s Main Street USA is designed to evoke nostalgia by simulating small-town America. Johnny Rocket’s is another business that creates a service environment that is designed to look like a previous time. Sierra and McQuitty (2007) pointed to Cracker Barrel as a business that evokes consumers’ real and simulated nostalgia through the environment and products they offer. Retroscape can evoke both personal and vicarious nostalgia depending upon the customer’s age (Spaid, 2013). Another study demonstrated a supermarket’s elicitation of nostalgia through its physical layout (Kauppinen-Räisänen, Rindell, & Åberg, 2014). A study of nostalgia-themed Taiwanese restaurants meanwhile displayed patrons’ nostalgic emotions experienced impacting their future consumption intention (Chen, Yeh, & Huan, 2014). Shin and Parker (2017) discovered that individuals including family and friends, merchandise, and store servicescapes were the most recalled aspects of individuals’ nostalgic retail experiences. Thus, service environments that intentionally employ nostalgia may accrue positive consumer behavior outcomes. The impact of the place is also seen through memories experienced. Just as Seifried and Meyer (2010) noted a sport facility’s role in producing memories, the pleasure that is experienced as a result of nostalgic positive memories can be transferred to the place of consumption, resulting in increased purchasing behavior (Hirsch, 1992).

Brands such as Coca-Cola, Pepsi, and Mountain Dew also utilize nostalgia in their packaging (Kessous & Roux, 2008; Loveland et al., 2010; Spaid, 2013). Other products
including Jiffy Pop popcorn, Ovaltine, and the RadioFlyer wagon evoke nostalgia simply based upon their classic nature (Havlena & Holak, 1991; Spaid, 2013). Resurrected brands such as Coca-Cola’s 2015 reintroduction of the beverage, Surge, also elicit consumer nostalgia (Dua, 2015). Star Wars and the Volkswagen Beetle also fall into this category, as both maintain a following of people that maintain a sense of nostalgia connected to the brands (Brown et al., 2003). Spaid (2013) also cited homeland products as a nostalgic trigger. In the sports context, this would include crab cake sandwiches served at Baltimore Orioles games and cheesesteak sandwiches in Philadelphia (Ritzer & Stillman, 2001; Tewfik, 2016). Other marketing strategies employed to evoke nostalgia include through the use of pricing. For example, Philippe’s restaurant in Los Angeles offered its coffee at nine cents for more than 35 years. Companies also employ sentimental promotions, such as a grocery store’s holiday aisle promotion, drawing on people’s connection to the past (Spaid, 2013).

Havlena and Holak (1991) detailed use of nostalgia in media. For example, television shows such as Happy Days and The Wonder Years are set 20 years prior to the time of their showing, attempting to capitalize on the nostalgia. More recent television shows that utilize nostalgia include That 70’s Show, Downton Abbey, Mad Men, and Fuller House (De Groot, 2011; Marchegiani & Phau, 2013; Tucker, 2016). Holbrook and Schindler (1994) also suggested that television shows, commercials, and restaurants would do well in playing music that was popular during this time of its target demographic. Nostalgic jingles such as the iconic “I can’t believe it’s not butter” are also commonplace on television (Havlena & Holak, 1991; Loveland et al., 2010).

A psychological construct, consumer behavior nostalgia is primarily studied using experimental methodologies (e.g., Ford & Merchant, 2010; Huang et al., 2016; Lu et al., 2015;
Lasaleta et al., 2014; Loveland et al., 2010). Recently, marketers began engaging people’s senses in order to evoke nostalgia. Eating familiar food, listening to old music, and visiting cities in which one used to live allow people to mentally return to a past experience, evoking nostalgia. As previously mentioned, Lu et al. (2015) placed nostalgic marketing within the framework of experiential marketing, which focuses on the holistic experience, generating an emotional response. The authors conducted an experimental study in three Taiwanese bakeries to determine if a nostalgic atmosphere influenced customer purchasing through their sensory experience. They found that shops with high levels of nostalgic atmosphere significantly influenced customers’ experiential value of their visit to the shop and also greatly impacted their purchase behavior.

Investigation of the vision and taste senses revealed that both induced high levels of nostalgia which influenced customers’ experiential value and purchase behaviors. In comparison, vision was shown to be a stronger predictor of both experiential value and purchase intentions than taste. While the context of bakeries should be considered when interpreting these results, this study exhibits the role that consumer senses play in evoking nostalgia and the potential marketing outcomes accruing from these experiences. Hwang and Hyun’s (2013) study in the luxury restaurant context discovered that nostalgia evoked through all four triggers of restaurant staff, food, environment, and event significantly impacted customer pleasure, which predicted behavioral intentions.

These studies exhibit marketers’ use of nostalgia, which provides justification for the exploration of nostalgia in the sport spectator experience. As previously noted, nostalgia was previously studied in the sport context through the lenses of sport tourism and facility audits. Other scholars examined nostalgia’s role in sport fans’ relationship with teams. The following
sections review previous research of nostalgia in the sport context, beginning with the function of nostalgia in sport tourism.

**Nostalgia Sport Tourism**

Nostalgia sport tourism is divided into two types: nostalgia for sport place or artifact and nostalgia for social experience. Nostalgia for sport place or artifact includes museums, halls of fame, and other historical settings (Fairley & Gammon, 2006). The first type was displayed in Snyder’s (1991) examination of fans visiting sport halls of fame. These fans were shown to experience both personal and collective nostalgia while visiting these museums. For example, personal nostalgia was displayed through people’s reflections upon their own sport life history while visiting the museum. One such person recalled his own playing days when seeing a picture of an athlete. An example of collective nostalgia was exhibited through one participant looking at pictures of a team’s old uniforms, which made them feel proud of the sport’s history. With many teams throughout sports now wearing throwback uniforms, this is a collective nostalgic trigger that may engender positive feelings.

Nostalgia for social experience was shown in a 2003 study by Fairley who analyzed the experience of an Australian Football League traveling fan group. Fairley (2003) identified five nostalgic themes comprising the experience: nostalgia as a motive, norms and rituals as objects of nostalgia, best experience as object of nostalgia, nostalgia as a basis for trip suggestions, and nostalgia through socialization. Many of the memories associated with the trip had little to do with the actual game, instead coming from other elements of the experience, particularly the social element. Traveling by bus, for example, was viewed as a ritual, which aided in development of camaraderie amongst the group. Camaraderie was also displayed in the group’s game experience. The memories cultivated during the group’s experience then served as
motivation for future trips, showcasing the role of nostalgia as a motive for sport tourism. Fairley (2003) also noted how experienced members of the group passed along stories to those who were making the trip for the first time, an example of vicarious nostalgia.

In the context of college football tourism, Cho (2014) developed an instrument and conceptual model of factors comprising nostalgia sport tourism. The four factors of the model included nostalgia as experience (sport team and environment), nostalgia as socialization, nostalgia as fan identity, and nostalgia as group identity. Utilizing the theory of planned behavior, Cho (2014) discovered that each factor of nostalgia induces positive attitudes which lead to behavioral intentions at both the individual and group levels. Thus, individuals and groups who have positive memories of their tourist experiences will maintain positive attitudes which lead to behavioral intentions including attending games in the future, purchasing merchandise, and word-of-mouth promotion of the experiences.

Gammon (2002) highlighted sport fantasy camps’ use of nostalgia through such factors as the facility, event, sport, team, and coaches. These camps allow fans to recall memories associated with their favorite players and teams, employing both personal and collective nostalgia. Gammon (2002) stated that, “Like the media, the tourism industry feeds off the past in order to profit in the present” (p. 69). This assertion is exhibited by the popularity of sport museums and halls of fame throughout the United States.

**Sport Facility Nostalgia**

The wave of postmodern ballparks that swept through MLB and MiLB in the 1990s and 2000 incorporated nostalgia through a variety of methods. Ritzer and Stillman (2001) stated that postmodern ballparks evoke nostalgia through a process called simulation. This process utilizes inauthentic objects to imitate authentic objects. For example, Houston’s Minute Maid Park
utilizes its proximity to Union Station with the use of a faux train track beyond left field. Camden Yards employs simulation through its utilization of B&O warehouse, which is no longer in use. These features are designed to evoke nostalgia among spectators as they emulate objects from a previous time. Another use of nostalgia is through the design of facilities mimicking classic ballparks, such as Fenway Park, through their quirkiness. For example, AT&T Park in San Francisco features a tall right field wall, reminiscent of Fenway Park.

Ritzer and Stillman (2001) also suggested that the architecture of postmodern ballparks is not only intended to model early modern parks, but also exhibit regional individuality. This is accomplished through the views of city skyline at Baltimore as well as the bay in San Francisco. Local food and beverages offered at these ballparks serves as another point of differentiation. Fans have the option of crab cake sandwiches at Camden Yards and Philly cheesesteaks at the Phillies’ Citizens Bank Park (Ritzer & Stillman, 2001; Tewfik, 2016). With nostalgia strongly connected to one’s identity, these features may evoke nostalgia based upon their incorporation of local themes.

Statues are another nostalgic feature of ballparks. Stride et al. (2015) reviewed the presence of statues at MLB and MiLB ballparks. Types of statues include those showcasing a player with children, which exhibits the accessibility of players to fans, a core aspect of MiLB. These statues promote nostalgia as adults recall when they met players as a child, hoping to pass these experiences on to their children. Another type of statue is that of children. Toledo’s Fifth Third Park features children peeking and attempting to sneak into a stadium without paying. These are designed to evoke nostalgia for one’s childhood. Finally, family statues are also present at MiLB ballparks including Hadlock Field in Portland, Maine. The importance of this type of statue is the promotion of the family, a target market of MiLB. The intergenerational
appeal of baseball is also exhibited, with the father holding the tickets and the boy dressed in baseball clothes and carrying baseball equipment, highlighting their generational roles. Thus, the statue attempts to display MiLB as a traditional American form of entertainment. Stride et al. (2015) suggested that the appeal of these statues to gameday fans is critical to the economic success of MiLB.

Seifried and Meyer (2010) also expressed that organizations can utilize historical artifacts to promote their culture and identity as well as the use of technology to highlight significant moments and events in the organization’s history. They also found that facilities employ “future nostalgia,” which evokes a desire among spectators for a new facility trend. Pajoutan and Seifried (2014) later proposed a flowchart demonstrating how sport organizations can utilize information technology (IT) to support the employment of nostalgia at sport facilities. They suggested that the use of IT to enhance nostalgia would be especially beneficial because of its flexibility and ability to appeal to spectators’ senses.

Facilities’ names were also suggested as a possible nostalgic trigger. Between 1923 and 1990, 24 of 25 baseball facilities utilized the term “stadium” or “dome.” In contrast, from 1991 through 2006, none of the 18 facilities built used the word “stadium,” instead using “field,” “park,” or “ballpark” (Hahl, 2016). Thus, simply seeing and hearing a stadium’s name may induce nostalgia. Mason et al. (2005) reviewed the facility construction trend in major junior hockey in Canada in the late 1990s and early 2000s and questioned why the sport did not utilize facility nostalgia like baseball in America had. The authors suggested that Canadian hockey fans maintain nostalgia for the social and ritual experience, not for the facility. Going out to dinner, being with friends and family, and wearing a hockey jersey were part of the nostalgic experience. This finding displays the unique role of nostalgia for American professional baseball ballparks.
One such ballpark, Wrigley Field, was the site of Wilson’s (2004) investigation of the motives of tour participants. Novelty was the most important motive, followed by prestige, facilitation of social interaction, and relaxation. While not one of the primary motives, though, participant responses on the open-ended section of the surveys exhibited nostalgia as an important part of the tour experience. Family and friends were also important reasons for people touring, displaying the importance of both nostalgia and the social experience for many baseball fans.

**Baseball Nostalgia**

While many sports feature elements of nostalgia, baseball, especially, maintains a strong presence of nostalgia. “America is so swamped in baseball nostalgia that the game threatens to be obscured by a cloud of kitsch,” stated sportswriter Nicholas Dawidoff (Aden, 1995, p. 22). Hahl (2016) suggested that a critical factor in baseball becoming America’s pastime was the media’s portrayal of players as intrinsically motivated, not focused on the economic benefits accrued from playing the game. Historically, baseball players came from neighborhoods and workplaces, and even well into the twentieth century, working class America could easily identify with professional baseball players (Aden, 1995; Rader, 2002). Today, however, professional baseball players are more economically-driven. As a result, people are drawn to baseball of the past, presented in films such as *The Natural*, *Field of Dreams*, and *A League of Their Own* (Aden, 1995). Ramshaw (2005) highlighted *Field of Dreams*’ character Terence Mann discussing the continuity of baseball despite social, economic, and physical changes.

Such societal changes are also cited as a reason for people’s connection between nostalgia and baseball. Nauright (1997) stated, “As immigration and crime rates have arisen, white middle-class Americans, who left the cities and the farms for the suburbs decades ago,
appear to be searching for an America of the past where they feel ‘safe’ such as on Main Street USA at Walt Disney World or in Cooperstown, ‘mythical’ home of baseball” (pp. 91-92). Therefore, people turn to baseball to escape their present realities, a key component of nostalgia.

The number of grown men who grew up playing the game also contributes to baseball’s nostalgia presence (Guttmann, 1978). A number of the participants in Healey’s (1991) study mentioned playing baseball as a child or adolescent being a primary sports memory. This provides reasoning for the many ballparks throughout MiLB that turned to statues incorporating children as a way to evoke nostalgia (Stride et al., 2015). In addition, many of the identities that fans maintain with their favorite MLB team are formed at an early age when people grow up playing baseball and dreaming of playing at the MLB level. Baseball itself brings identity, community, continuity, therapy, and self-discovery (Trujillo & Krizek, 1994). These authors highlighted the importance of ballparks in people’s identities as many fans’ childhood, adolescent, and adult memories occurred at a ballpark.

**Sport Nostalgia Psychological Constructs**

With nostalgia strongly linked to individual and collective identity, Volkov, Morgan, and Summers (2008) proposed a conceptual model investigating the relationship of nostalgia and sport team identification. Utilizing Funk and James’ (2006) Revised PCM comprising awareness, attraction, attachment, and allegiance, they hypothesized that personal and vicarious nostalgia play a role in determining a fan’s level of identification with a team. Factors that were suggested to play a role in this proposed relationship included fans’ nostalgia proneness, emotional importance of past experiences with the sport team, discontinuity, alienation, aging, and search for authenticity. While the model was never tested, its conceptualization offered other avenues for the study of sport nostalgia. Gladden and Funk (2002) meanwhile identified nostalgia as a fan
benefit in their sport brand equity scale. The authors suggested that fans may have memories of former players playing in old stadiums which are associated with the brand. These investigations of nostalgia as contributing to team identification and brand equity display the potential importance of sport fan nostalgia, further establishing the need for further research into the topic.

The current study built off the preceding review of sport consumer behavior and nostalgia literature. With this study exploring the impact of nostalgia in the sport spectator experience, the SOR framework was employed to examine the impact of nostalgia on spectators’ pleasure and behavioral intentions. The following section reviews the components and previous application of the framework.

**SOR Framework**

The SOR framework suggests that emotional responses mediate the relationship between environmental stimuli and human behavior. Mehrabian and Russell (1974) posited that a general level of environmental stimulation (S) across various types of environments causes an emotional response by the organism (O), which then leads to behavioral responses (R). The amount of stimuli present in an environment is known as the “load” of an environment. In order to assess the load, researchers utilize the “information rate,” which is the amount of information present per unit of time. The more information present, the higher the load. The load is a combination of an environment’s degree of novelty or complexity. Novelty is how new or unfamiliar an environment is to a person while complexity is the number of elements within an environment and the degree in which they change.

Upon being exposed to the stimuli, organisms have an emotional response. Mehrabian and Russell (1974) proposed three independent emotional responses: pleasure, arousal, and dominance. This is commonly referred to as the PAD framework. Pleasure is the degree to which
an individual feels good, happy, joyful, or content. Arousal is the level to which one feels excited, active, alert, and stimulated while dominance is the extent to which one feels in control of a situation. Upon being exposed to stimuli and experiencing an emotional reaction, individuals will then have some type of behavioral response. These responses include (1) an individual’s desire to approach or avoid the environment, (2) a desire to explore the environment or remain static in the environment, (3) a desire to communicate or avoid communication with others in an environment, and (4) the degree of approach and avoidance and satisfaction with these experiences.

While pleasure and arousal are independent of each other, Mehrabian and Russell (1974) suggested that there is an interaction between the two constructs. In a neutral environment, mild arousal enhances approach behaviors while high or low arousal causes avoidance. In a pleasant environment, the higher the arousal, the more likely the individual will respond with approach behaviors. In an unpleasant environment, the higher the arousal, the greater the likelihood of avoidance. Environments vary greatly in the amount of pleasure and arousal individuals may experience. For example, a baseball game is slow-paced, and thus offers mostly low levels of arousal. There are also moments of baseball games (such as when a team loads the bases) when arousal momentarily increases. In contrast, sports like basketball feature a consistently high rate of arousal. Another factor that contributes to the amount of arousal experienced is the uncertainty of the outcome. A close game will therefore feature a high level of arousal. Seat location will also affect fans’ arousal as fans sitting closer to the action will be exposed to more stimuli and consequently maintain a higher level of arousal. Pleasure meanwhile differs according to situation. Fans will experience pleasure when their team succeeds and alternatively experience displeasure when their team fails (Mehrabian, 1976).
Not all consumers desire a high level of arousal, though. Wirtz and colleagues (2000) introduced the concept of target-arousal. The notion suggests that consumers possess desired levels of arousal based upon the environment. This desired level of arousal is based upon the consumer’s purpose for being in the environment. For example, patrons of a fine-dining restaurant likely seek a low-arousal environment while theme park visitors likely would rather high arousal (Wirtz et al., 2000). In a later study, Mattila & Wirtz (2006) found individuals’ target arousal level to impact the pleasure-arousal interaction. The amount of pleasure and the outcome variable of satisfaction consumers experienced was dependent upon the congruency between their desired levels of arousal and the levels of the service environment. Lin (2010) tested the moderating effect of arousal based upon type of bar (dynamic versus tranquil). Differences in individuals’ satisfaction were exhibited as people maintaining a low level of arousal were more satisfied than those with a high level of arousal in the context of a tranquil bar. Concerning the dynamic bar, higher levels of arousal exhibited greater satisfaction. Thus, when individuals are highly aroused, they prefer a more stimulating environment as opposed to a non-stimulating environment. Based upon this, in the context of baseball, individuals may actually prefer to maintain low levels of arousal.

These results also align with differences in emotional response based upon personality and temporary internal states exhibited by Mehrabian and Russell (1974). Individuals’ traits such as arousal-seeking tendency, affiliative tendency, extroversion, and neuroticism influence how people respond to the environment. Individuals also differ based upon the amount of stimuli in which they encounter. Mehrabian (1976) termed this “stimulus screening.” Screeners only respond to selective stimuli, which reduces their level of arousal. Non-screeners are less selective in what they respond to and experience greater arousal.
While the original SOR model contained pleasure, arousal, and dominance, Russell (1979) proposed a model with only pleasure and arousal, as dominance was shown to not have an effect in consumer behavior studies. Later studies found support for the removal of dominance as it did not have an effect on approach or avoidance (e.g., Donovan & Rossiter, 1982; Russell, 1980; Russell & Pratt, 1980). Pleasure and arousal previously were both found to affect customers’ purchasing behavior (e.g., Donovan, Rossiter, Marcoolyn, & Nesdale, 1994; Sherman, Mathur, & Smith, 1997; Sweeney & Wyber, 2002). In the retail context, previous literature exhibited lighting and music impacting pleasure while social cues (number/friendliness of employees) impacted arousal. Both pleasure and arousal had a positive relationship with patrons’ willingness to buy (Baker, Levy, & Grewal, 1992). Donovan and Rossiter (1982) found that pleasure increased customers’ willingness to spend time in the store and intentions to spend more money than they had originally planned. Other retail literature showed that pleasure and arousal affected customers’ shopping enjoyment, purchasing behavior, and revisit intentions (Yüksel, 2007).

**Conclusion**

Marketers recently turned to nostalgia as a method to influence consumers’ attitudes and purchase behaviors (Loveland et al., 2010; Marchegiani & Phau, 2010; Merchant & Rose, 2013; Pascal et al., 2002; Sierra & McQuitty, 2007). Research exhibits the effectiveness of nostalgia in advertising, television, and retail environments (Brown et al., 2003; Loveland et al., 2010; Marchegiani & Phau, 2013; Pascal et al., 2002; Spaid, 2013). In the sport context, previous literature displays the positive impact of nostalgia in sport tourism (Fairley, 2003; Fairley & Gammon, 2006; Snyder, 1991). Other research exhibited the prevalence of nostalgia in sport facilities (Ritzer & Stillman, 2001; Seifried & Meyer, 2010; Stride et al., 2015). With the
positive marketing outcomes of nostalgia displayed, research was warranted on the emotional and behavioral responses of sporting event spectators. Therefore, the current study sought to determine the role of nostalgia in MiLB spectators’ stadium experience.

The current study assists both the sport marketing and marketing disciplines. With this study taking place in the context of MiLB, the results display the impact of nostalgia on MiLB spectators. This is especially important for MiLB, which greatly relies upon ticket and other facility-related revenue. Knowledge gained from this study also provides practical and theoretical contributions to assist in future research of nostalgia in the sport context. Furthermore, with sensory marketing continuing to grow as a theoretical construct, the results extend understanding of the potential application of consumers’ senses in marketing research. These implications provide further justification for the administration of this study.
CHAPTER III
METHODOLOGY

The primary purpose of this study was to investigate the impact of nostalgia on MiLB spectators’ emotional and behavioral responses. To address this, the study examined the relationships among five sensory factors and one social factor and the outcome variables of Pleasure, Arousal, and Behavioral Intentions. Previous research demonstrated marketers’ use of nostalgia to influence consumer purchase intentions (Lasaleta et al., 2014; Loveland et al., 2010; Sierra & McQuitty, 2007). In the sport context, nostalgia was shown to play a role in fans’ travel experiences (Cho, 2014; Fairley & Gammon, 2006; Snyder, 1991), even serving as a motive to engage in sport tourism (Fairley, 2003). The prevalence of nostalgic themes was also well-displayed in sport facilities (Hahl, 2016; Ritzer & Stillman, 2001; Seifried & Meyer, 2010; Stride et al., 2015). For example, Seifried and Meyer (2010) conducted an audit of MLB and NFL facilities and exhibited the utilization of nostalgia through facility features including architecture, manual scoreboards, and statues. The current study sought to build upon this research by assessing the impact of these features on spectators’ emotional and behavioral responses.

The methodology employed in the current study is divided into the following sections: (1) sample, (2) instrumentation, (3) design and procedures, and (4) statistical techniques and data analysis. The sample section includes the sample population, sample design, and sample size. The instrumentation section includes a detailed review of the factors comprising the instrument. The design and procedures section discusses the composition of the variables included in the
study and the process of data collection. Finally, the statistical techniques and analysis section details the statistical procedures utilized to answer the research questions.

Sample

Population

The target population for the current study was spectators of one Double-A MiLB team. More than 41 million fans attended MiLB games in 2016 (Norris, 2016), with more than 400,000 fans attending games of this team (Southern League, 2017). Any fan who attended a home game of this team in 2017 was a potential participant for this study. Access to these fans was limited to interpersonal contact when they attended a game. With 70 home games taking place from April through early September, access to each of these fans was not logistically possible. Thus, in order to create a workable survey population, a sample frame was created. A sample frame is “the materials or devices which delimit, identify, and allow access to the elements of the target population” (Sarndal, Swensson, & Wretman, 2003, p. 9). The sampling frame for this study was spectators of this team who attended a game on one select Wednesday, Thursday, or Friday in June 2017. These dates were chosen as a result of their convenience for the investigator.

Conversations with a team representative yielded support for the belief that the inclusion of three games on different nights of the week would provide an accurate representation of the team’s fanbase no matter the time of season. The selected dates (Wednesday, Thursday, and Friday) were also chosen based upon these games not featuring a promotion that may influence the level of nostalgia experienced by spectators. For example, the team gave away a collectible 3-D model of the team’s former ballpark at one game during the 2017 season. Another game featured a bobblehead giveaway featuring the team’s former manager. Also, the team was scheduled to play a game at a historic ballpark for another game during the season. Thus, while
most MiLB games feature some type of promotion, the current study paid close attention to not select games in which fans may experience nostalgia that was not representative of most MiLB games and could bias the results of this study.

Sample Size

Sample size for the current study was based upon meeting the requirements of the statistical analyses employed: Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). Muthén and Muthén (2002) determined that when employing the Monte Carlo method, sample sizes as small as 150 could be used for a CFA. While sample size requirements differ based upon missing data and non-normal distributions, the general minimum sample size is 200 (Kline, 2016). As will be explained in greater detail in a following section, to address the first three research questions, the model comprised six exogenous variables and two endogenous variables. To examine the fourth research question, the model contained three exogenous variables and one endogenous variable. An online sample size calculator was utilized to determine the minimum sample size to address all four research questions. The model comprising the first three research questions included paths from the sensory factors and Sociability to the outcome variable, Pleasure, as well as a path from Pleasure to Behavioral Intentions. The second model comprised paths from Pleasure, Arousal, and the interaction term to Behavioral Intentions. Each of the models included an alpha of .05, desired power of .80, and a null RMSEA of .07 and alternative RMSEA of .10. The estimated sample size for both models was fewer than 200 participants. Based upon the general rule for both CFA and SEM models to maintain a sample size of at least 200 (Kline, 2016), this was the desired number of complete and usable surveys to collect. With survey response rate differing according to method (Dillman, Smyth, & Christian, 2014), the current study installed a rate of 50%. This response rate was
chosen based upon the research team engaging in face-to-face contact with potential participants from survey distribution to survey collection. With data collection occurring from the end of either the second or third inning through the final half inning of the game, each member of the research team sought to collect 25 surveys. Thus, at the conclusion of the three games, the research team anticipated a total sample of 375 surveys, with 250 completed and usable for analyses.

**Instrumentation**

The survey for the current study comprised five sections: (1) nostalgia evoked through spectators’ senses and social interaction, (2) pleasure, (3) arousal, (4) behavioral intentions, and (5) demographics. Prior to the start of the survey, a definition of nostalgia and examples of nostalgic experiences were provided in order to ensure that participants maintain comprehension of nostalgia. In addition, two items were included among the sensory and sociability factors as manipulation checks. This is discussed in further detail in a later section. The following sections review the factors utilized to assess each part of the survey.

*Nostalgia Stimuli*

sensory stimuli, (2) social interaction, and (3) memorable events. The current study used this research foundation while accommodating for the sport context (thus, not investigating memorable events), categorizing stimuli into six factors: the five senses (sight, smell, sound, touch, and taste) and social interaction.

In order to assess these stimuli, the five sensory factors were adapted from Lee et al.’s (2012) Sensoryscape. Each of the five sensory factors were constructed and validated by Lee et al. (2012) in the context of MLB and MiLB. The instrument exhibited sufficient reliability in its initial use, with Cronbach’s alpha values ranging from .74 for the Touch factor to .87 for Sight. Content validity was achieved through its review by a panel of experts. In addition, the five factors of the Sensoryscape demonstrated convergent validity with significant correlations ($p < .01$), and predictive validity was exhibited through the five factors’ significant impact on spectator satisfaction. The instrument’s construction and validation in the baseball context as well as its use in a later study by Lee et al. (2013) demonstrated its aptness for the current study. The original instrument measured spectator satisfaction of the stadium experience, and therefore items were measured using a 7-point Likert-type scale ranging from 1 (Strongly disagree) to 7 (Strongly agree). With the current study investigating the level of nostalgia evoked from each item, the scale ranged from 1 (None at all) to 7 (Very much).

The Sensoryscape’s items include “The music at the stadium is exciting” and “The stadium provides good tasting food.” With the current study investigating spectators’ nostalgia evoked through these stimuli, these items were modified to become neutral assessments of the stimuli. Thus, modified items included “The sound of the music at the stadium” and “The taste of the stadium’s food.” Also, the following item from Lee et al.’s (2012) smell scale was not included in the current study’s instrument: “The smell of the tailgate parties is exciting.” The
item was excluded as MiLB games do not often feature tailgate parties. Lee et al.’s (2012) taste factor also includes two items not included in the current study, which are as follows: “The stadium offers a wide range of food and beverage” and “It feels like foods purchased inside the stadium taste better than foods purchased outside.” With these items measuring spectators’ level of satisfaction/agreement, they do not align with the current study’s instrument assessing each stimulus experienced in the ballpark. Adapted versions of these items would assess the food, which is assessed using two other items in the current study’s taste factor. Also, in order to examine nostalgia evoked by the taste of beverages, two of the taste items assessing food were duplicated to measure beverages. These items include, “The beverages I am drinking at the game” and “The taste of the stadium’s beverages.”

Social interaction was measured using the Sociability factor from Ko et al.’s (2011) SEQSS. Items were measured using a 7-point Likert-type scale ranging from 1 (Strongly disagree) to 7 (Strongly agree). The factor exhibited adequate reliability (Cronbach’s alpha = .82) and convergent validity was displayed with factor loadings no lower than .86 and the average variance explained (AVE) of .61. Discriminant validity was also shown through moderate correlations between factors. The factor was later used in a study investigating professional soccer fans (Foroughi, Shah, Nikbin, & Hyun, 2014). The factor was preferred rather than Lee et al.’s (2012) Social Interaction factor and other instruments comprising factors measuring the social aspect of sporting events (Trail & James, 2001; Wann, 1995) due to its items’ focus on family and friends, which are shown to be antecedents of nostalgia (Holak & Havlena, 1992, 1998; Wildschut et al., 2006).
Pleasure

Pleasure is the degree to which an individual feels happy, pleased, satisfied, content, and comfortable (Mehrabian & Russell, 1974). Mehrabian and Russell (1974) first measured pleasure using a semantic differential scale. Scholars followed employing differential scales with various items. For example, Hwang and Hyun (2013), Ladhari (2007) and Mehrabian and Russell (1974) measured pleasure using a 5-point Likert-type scale with the items: pleased-annoyed, contented-melancholic, hopeful-despairing, relaxed-bored, and happy-unhappy. Other studies employed the items pleased-annoyed, contented-melancholic, satisfied-unsatisfied, and happy-unhappy (Hanzaee & Javanbakht, 2013; Yüksel, 2007). The current study adapted the differential scale originally utilized by Bigné, Andreu, and Gnoth (2005), and later used by other scholars (e.g., Rey-Moreno, Medina-Molina, & Rufin-Moreno, 2014; Lee, Xiong, & Hu, 2012; Rufin, Medina, & Rey, 2012). Bigné et al. (2005) and Rey-Moreno et al. (2014) used a 5-point scale while Lee, Xiong et al. (2012) and Rufin et al. (2012) employed a 7-point scale. Both Lee, Xiong et al. (2012; Cronbach’s alpha = .88) and Rufin et al. (2012; Cronbach’s alpha = .83) displayed sufficient reliability. The current study used the following items on a 7-point differential scale: angry-satisfied, unhappy-happy, dissatisfied-very pleased, sad-joyful, disappointed-delighted, and bored-entertained.

Arousal

Similar to Pleasure, Arousal was also measured on a differential scale. The factor was utilized in previous research (Bigné et al., 2005; Rey-Moreno et al., 2014; Rufin et al., 2012) with the following items: depressed-cheerful, calm-enthusiastic, passive-active, and indifferent-surprised. This construct was validated when utilized in these previous studies and exhibited
sufficient reliability (e.g., Cronbach’s alpha = .88; Rufin et al., 2012). These items were also measured on a 7-point Likert-type scale.

**Behavioral Intentions**

Previous research of sport consumption research examined outcome behaviors including behavioral intentions (e.g., Hill & Green, 2000; Theodorakis, Koustitios, Robinson, & Barlas, 2009; Wakefield et al., 1996), intentions to recommend (Brady et al., 2006; Clemes, Brush, & Collins, 2011), and loyalty (Fink, Trail, & Anderson, 2002; Trail, Anderson, & Fink, 2005). The current study employed three items adapted from Yoshida and James (2010). This measurement of future behavior is originally based off the work of Cronin et al. (2000), and assesses spectators’ behavioral intentions, intentions to recommend, and loyalty. The items are “The probability that you will attend another (team name) game is …,” “The likelihood that you would recommend (team name) game to a friend is …,” and “If you had the choice to attend this game again, the probability you would make the same choice is …. ” Items were measured on a 7-point Likert-type scale ranging from Very low (1) to Very high (7). The construct exhibited sufficient convergent and divergent validity in their use by Yoshida and James (2010), and the factor maintained good reliability with both Japanese and American spectators (Cronbach’s alpha = .87; .86). The factor was also used in other studies (Biscaia et al., 2013; Chen et al., 2013; Lee & Kang, 2015).

**Demographics**

Attendance frequency was measured as a categorical variable with responses including 0, 1-3, 4-6, 7-9, 10-12, 13-15, 16-18, 19-22, 23-25, and more than 25 games attended during the team’s previous season. Another question asked participants whether they are a season ticket holder; therefore, the attendance habits of spectators were appropriately addressed as very few
fans were expected to attend more than 25 games without purchasing season tickets. In addition, with the current study conducted during June, spectators’ attendance during the previous season was determined to be a better assessment of their attendance habits. Other demographic information included gender, age, relationship status, average annual income, ethnicity, education, the people accompanying the participant to the game (such as family, friends, and business associates), zip code, and the inning in which they completed the survey. Participants were asked to provide their age, zip code, and inning in an open-response format. All other demographic questions employed categorical response options. The complete instrument can be found in the Appendix.

**Manipulation Check**

The instrument also contained a manipulation check in order to verify participants’ comprehension of nostalgia. This featured the following two questions, rated from (1) Not at all to (7) Very much: “Nostalgia is a positive memory about the past” and “Nostalgia is a feeling of regret.”

**Design and Procedures**

**Design**

This study’s design was nonexperimental as participants were not assigned to predetermined groups. Instead, this study utilized a survey comprising factors previously used in marketing and sport consumer behavior research. A correlational research design was employed to answer all four of the research questions. This design allowed for the examination of the direction and strength of relationships between all of the variables in the model, addressing each of the study’s research questions.
Setting

Data collection occurred at the ballpark of one Double-A MiLB baseball team in a mid-size Southern city. While the use of one team’s ballpark limits the generalizability of the study’s results, the aptness of this team’s ballpark for an investigation of spectators’ emotional and behavioral responses to nostalgic stimuli serves as a strength. For example, the team plays in a modern, downtown facility that opened in 2013, maintaining a blend of modern and historic attributes in its architecture and design. The team’s website specifically notes the facility’s design incorporating the city’s history with the current urban landscape. Also, seats throughout the ballpark are exposed to a view of the city’s skyline. The team also advertises its diverse food offerings on its website including many local foods and beverages. A conversation with a team representative also revealed that the organization recently added several food items that incorporate aspects of the city’s culinary traditions. Furthermore, the ballpark featured a concession stand featuring food from a historic restaurant in the region. Each of these elements are characteristic of many new MiLB ballparks. A 2015 Baseball America ranking of the best MiLB ballparks included seven downtown ballparks in the top 10. Themes among the top ballparks include highlighting the local city and region through architecture, picturesque views beyond the park, and offering local food and beverages (Leventhal, 2015). Thus, the common features among many modern MiLB ballparks are prone to evoke nostalgia. While acknowledging the limitation of the use of just one ballpark, the ballpark utilized for the current study features many of these characteristics, making it an ideal setting for this investigation.

Procedures

The current study employed systematic random sampling. While nonprobability sampling reduces a study’s generalizability (Abbott & McKinney, 2013), this type of sampling is often
utilized when individuals in a population cannot be individually identified (Kumar, 2014). Time and cost also prohibit a researcher from surveying each member of a study’s population (Henry, 1990). Thus, without being able to survey each fan that attends a game of the select team during the 2017 season, this sampling method was utilized.

Data were collected by the researcher and four trained research assistants at three June 2017 games. Each of the assistants were college students at a local university. Three of the assistants assisted with data collection at all three games while one individual assisted only during the Wednesday and Friday games and another the Thursday game. The lead researcher reviewed data collection procedures before each game to ensure that the planned methods were accurately conducted. The research team collected data utilizing self-administered questionnaires (SAQs). SAQs are surveys in which participants complete themselves. These surveys can take the form of both paper surveys as well as online (Fink, 1995). The current study employed both types of SAQs. Spectators were provided a paper survey, which they were able to complete with a pen that was made available to them. Surveys also included a Quick Response (QR) code and the URL link to the survey, allowing spectators to take the survey online. The survey was made available through the online survey software, Survey Monkey. This software is able to display surveys optimized specifically for smartphones. With smart phone ownership up to 68% of the population, according to 2015 Pew Research Center survey data (Anderson, 2015, October 29), many spectators had the option to complete the survey through this method. However, only 27% of Americans age 65 or older own a smartphone (Anderson, 2015, April 29). Thus, in order to account for potential non-response bias, participants who did not have access to a smart phone had the option of completing the paper survey.
Surveys were distributed to spectators using systematic random sampling. This method was chosen as it ensured that sections in all parts of the ballpark were included in the sample. The facility maintains 19 lower-level sections that are available for single-game ticket purchasing. Five sections are located behind the batter’s box while nine sections span the first-base line and five sections are on the third-base line. In addition, the ballpark includes a family zone on the third-base line as well as two berms and standing room for spectators in the outfield. For the current study, four areas within the ballpark were systematically chosen for data collection: (1) home plate sections, (2) first-base sections, (3) third-base sections, and (4) outfield berm/standing room areas. Prior to each game, two specific sections in each area were randomly selected using an online randomizer from the website Random.org. The outfield areas were divided between left field and right field. Each member of the data collection team was responsible for distributing surveys to fans in both of these sections. Once they completed data collection in these sections, they then were assigned other sections in which to collect data.

At the end of the third inning of the Thursday and Friday games, the members of the research team began distributing surveys to spectators sitting in these sections/areas. A 12-minute rain delay caused a later start to the Wednesday game. As a result, with most fans already seated prior to the delay, and to ensure collection of the desired number of surveys, data collection began at the end of the second inning. Choosing to begin data collection after at least two innings had elapsed ensured spectators were exposed to stimuli such as the music and food for an adequate amount of time. Also, to encourage survey participation, participants were offered a coupon for $1 team coupon that was redeemable at the team’s concessions and merchandise stores.
Understanding that a number of surveys would have missing data, the current study employed Expectation Maximization (EM) to address missing data. This method utilizes the observed data to estimate missing data and parameters. The missing data are predicted based upon a formula using responses from observed data. For example, if the majority of observed responses for a particular item are either a six or seven, the missing responses for this item will likely be either a six or seven. The EM method was employed in this study based upon its preference compared to other estimation methods such as pairwise deletion and mean substitution (Olinsky, Chen, & Harlow, 2003).

**Statistical Techniques and Data Analysis**

The current study employed CFA and SEM. Data were analyzed using IBM SPSS (Version 23) and the statistical software, R. Descriptives, frequencies, means, standard deviations, Little’s Missing Completely at Random (MCAR) test to assess for missing data, and EM were analyzed sing SPSS. Multivariate normality, CFA, and SEM analyses utilized R. R is a free, open-source computer software that maintains a wide range of statistical capabilities. Data can be entered manually or read from text files, which allows it to be easily transferred from other software such as SPSS. In addition to the basic system, hundreds of augmented packages are available to conduct analyses not possible in the basic system. One of these is the lavaan package, which provides the ability to conduct general SEM procedures such as fitting models using full information maximum likelihood (Kline, 2016).

**Confirmatory Factor Analysis**

To examine the factor structure of the nostalgic stimuli (Sight, Sound, Smell, Touch, Taste, and Sociability), a CFA was conducted. CFA is appropriate when sample data fit an a priori theoretical model. CFA was preferred to an EFA, which is appropriate when there is not an
established theory (Gerbing & Hamilton, 1996). Bowen and Guo (2012) provided four steps of the CFA process, which are also applicable to other SEM models: (1) model specification, (2) estimation, (3) evaluation of results, and (4) model modifications.

Model specification involves determining how many factors are included in the model, which variables are related to each factor, and correlation of latent variables and error terms (Bowen & Guo, 2012). Utilizing five previously-validated factors from the Sensoryscape and one factor from the SEQSS, the observed and latent variables were adapted from previous research; thus, the number of observed and latent variables was known for the current study. For factor identification, Kline (2016) suggested to give the first item of each factor a value of one. This sets the scale of the latent variable to that of the indicator variable.

The estimation process in CFA involves fitting function, in which differences between the sample and model estimate variance-covariance matrices are reduced. The most popular fitting function used is Maximum Likelihood (Brown, 2015). However, for non-normal distributions, other estimators including Weighted Least Squares (WLS) and mean- and variance-adjusted maximum likelihood (MLMV) are utilized (Asparouhov, 2005; Kline, 2016).

**Structural Equation Modeling**

SEM was employed to examine the relationships between the five senses (Sight, Sound, Smell, Touch, and Taste), Sociability, Pleasure, Arousal, and Behavioral Intentions. SEM utilizes modeling to display relationships between variables in order to test a theoretical model proposed by the researcher (Schumacker & Lomax, 2010). It allows for the investigation of interrelated research questions in a “single, systematic, and comprehensive analysis by modeling the relationships among multiple independent and dependent constructs simultaneously” (Gefen, Straub, & Boudreau, 2000, pp. 3-4). SEM is shown to be a better method for testing relationships
among variables in a complex model than simple bivariate correlations, taking measurement error into account in its analysis (Schumacker & Lomax, 2010). The use of SEM achieves two goals: (1) understanding the patterns of covariances among a set of observed variables and (2) explaining as much of the observed variables’ variance as possible with the researcher’s model. The covariance structure yields the variances and covariances among variables, which provides necessary information to address research hypotheses (Kline, 2016). The goal of SEM is to learn the extent to which the theoretical model is supported by data (Schumacker & Lomax, 2010).

The model displays observed variables in boxes and latent variables in circles or ovals. Lines display relationships between variables with lines beginning on endogenous variables and pointing toward exogenous variables. Bidirectional lines indicate a relationship between two variables. Numbers are presented above the lines to show the strength of each relationship (Schreiber, Nora, Stage, Barlow, & King, 2006). Two models were analyzed in the current study. The first one included the exogenous variables Sight, Sound, Smell, Touch, Taste, and Sociability. Pleasure and Behavioral Intentions were included as endogenous variables. The second model included Pleasure, Arousal, and the interaction of Pleasure and Arousal as exogenous variables and Behavioral Intentions as the endogenous variable. A more detailed explanation of these analyses is provided later in this section.

To assess model fit, a number of fit indices were examined. A traditional measurement is the chi-square test, which has been described as measuring “badness of fit” due to adequate fit displaying a significant result at the .05 level. However, due to the method’s ineffectiveness when the sample size is large, other indices are preferred. One such measure is the Root Mean Square Error Adjusted (RMSEA), which measures how well the model fits the population covariance matrix (Byrne, 2013). A value at or below .05 meets the accepted cutoff (Hu &
The Standardized Root Mean Square Residual (SRMSR) is the square root of the residuals of the sample covariance matrix and model covariance matrix (Hooper et al., 2008). Models with good fit maintain values of .05 or below (Byrne, 2013). Other fit measures include the Comparative Fit Index (CFI) and Tucker Lewis Index (TLI; Bentler, 1990) and Bentler and Bonett’s (1980) Normed Fit Index (NFI) and Non-normed Fit Index (NNFI). These measures compare the sample covariance matrix with the null model (Bentler, 1990). Both the NFI and NNFI are affected by sample size while the CFI is a popular index due to it being relatively unaffected by sample size (Hooper et al., 2008).

Adequate fit values for the CFI and TLI are .95 (Hu & Bentler, 1999) while the NFI maintains a cutoff of .90 (Hu & Bentler, 1999). With the NFI, NNFI, CFI, and TLI similar in their assessments, not all of these are necessary for reporting. Kline (2016) called for the use and reporting of the chi-square test, RMSEA, CFI and SRMR; therefore, the current study reported each of these four fit statistics in the results section.

Convergent and discriminant validity were also assessed. Convergent validity is indicated by the correlation among indicators of theoretically similar constructs. Thus, items of the same factor should maintain moderate-to-high correlations. Average variance extracted (AVE) is utilized to assess whether factors maintain convergent validity. This measurement displays the amount of variance captured by the construct compared to variance due to measurement error, with values above .40 exhibiting sufficient convergent validity (Diamantopolous & Siguaw, 2000). Discriminant validity is exhibited when the AVE of each factor is higher than the shared variance among all other factors (Fornell & Larcker, 1981). Therefore, factors are shown to be unique as they maintain a low-to-moderate amount of shared variance. Reliability of the factors was assessed with both Cronbach’s alpha and composite reliability. Cronbach’s alpha is a
widely-used measure of internal consistency among factors. While much research utilizes .70 as the acceptable threshold, Lowenthal (1996) suggested that .60 is acceptable for exploratory research. Composite reliability meanwhile is the ratio of the variance explained by the factor over the total variance (Kline, 2016). Factors maintaining values of .60 meet the threshold for acceptable composite reliability (Bagozzi & Yi, 1988).

**Research Questions**

SEM was employed to assess the four research questions. Research Question 1 examined the impact of nostalgia evoked from the five sensory stimuli on spectators’ pleasure. The second research question measured the impact of nostalgia evoked from spectators’ social interaction on spectators’ pleasure. The third research question investigated the impact of spectators’ pleasure on behavioral intentions. The first three research questions were assessed using one model, with Sight, Sound, Smell, Taste, Touch, Sociability, Pleasure, and Behavioral Intentions included in the model. To address the first two research questions, analyses were conducted to assess the impact of the five sensory factors and Sociability on spectators’ pleasure. The third research question used the same model to examine the impact of Pleasure on Behavioral Intentions.

Research Question 4 examined the extent spectators’ arousal moderated the relationship between spectators’ pleasure and behavioral intentions. To address this question, the R package “semTools” was utilized (Jorgensen et al., 2016). Within the semTools package, the “indProd” function allows users to mean center, double-mean center, or residual-center the data. The current study employed mean centering to assess the interaction between Pleasure and Arousal (Marsh, Wen, & Hau, 2004). The model included the variables Pleasure, Arousal, and Behavioral Intentions. In addition, to analyze the interaction of Pleasure and Arousal, an interaction term (PleasureXArousal) was created. Furthermore, the indProd function offers the
ability to create “matched pairs,” in which the first indicator of the first variable is multiplied by the first indicator of the second variable to create the first indicator of the interaction term. Thus, in the current study, the first indicator of Pleasure was multiplied by the first indicator of Arousal to create the first PleasureX Arousal indicator. While other methods of producing the interaction term including “one pair” and “all possible pairs” exist, Marsh et al. (2004) suggested that the matched pairs function is preferred as it uses each item only once, and therefore does not include the same item multiple times in constructing the interaction term. Based upon this recommendation, the interaction term included the first Pleasure indicator multiplied by the first Arousal indicator, the multiplication of the second indicator of each factor (e.g., Pleasure2X Arousal2), and the process was repeated through the fourth and final Arousal term. Thus, since Pleasure maintained more items than Arousal, not all Pleasure items were included in the interaction term. The complete model of the fourth research question included the following factors: Pleasure, Arousal, PleasureX Arousal, and Behavioral Intentions. The research questions and hypothesized models for Research Questions 1-3 and Research Question 4 are shown below in Figures 3 and 4.
Figure 3. Research Questions 1, 2, and 3 Model

Figure 4. Research Question 4 Model

Q1 What is the impact of nostalgia evoked through spectators’ senses on spectators’ pleasure?

Q2 What is the impact of nostalgia evoked through spectators’ social interaction on spectators’ pleasure?

Q3 What is the impact of spectators’ pleasure on behavioral intentions?

Q4 To what extent does arousal moderate the relationship between spectators’ pleasure and behavioral intentions?
A total of 394 surveys were collected, with 232 usable for data analysis. Eleven surveys were incomplete and another 11 were completed by participants not meeting the participant age requirement. In addition, 129 participants incorrectly responded to one or both manipulation checks. Scores of three or less on the item “Nostalgia is a positive memory about the past” were considered incorrect while scores of five or more on the item “Nostalgia is a state of disbelief” were considered incorrect. Finally, 10 surveys were disqualified from analysis due to an inordinate number of consecutive responses (i.e. marking a “7” on 12-consecutive items) despite correctly responding to both manipulation checks.

Responding participants included an even number of males and females (49% each) with 2% preferring not to provide their gender. Participants were mostly young, with 62% 32 years old or younger, and 82% were Caucasian. Participant income was evenly distributed, with 29% maintaining an annual income of less than $50,000 and 33% earning between $50,000 and $99,999. Half (50%) of participants were married and 70% held a college degree. Regarding attendance, 72% of participants attended three or fewer of the team’s games the prior season, and 3% of participants were season-ticket holders. Also, 38% of respondents indicated they attended with their friends while 21% attended with their immediate family. Finally, 81% of participants resided within 50 miles of the team’s ballpark. In comparison, a 2008 report displayed that 56% of MiLB fans were male while 57% were between the ages of 18 and 44. Meanwhile, a 2016
demographic report of the team used for this study exhibited 55% of the team’s fans were female and 75% were age 18-44, with 59% between 18 and 34. Therefore, compared to all of MiLB, the current study’s sample of fans featured a greater percentage of females and younger fans while this study featured fewer female fans but fans of approximately the same age as the selected team for this study. Complete demographic results of the current study can be seen in Table 2.

Table 2
Demographics of Respondents (N = 232)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N</th>
<th>%</th>
<th>Characteristic</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>Relationship status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>113</td>
<td>48.7</td>
<td>Single, never married</td>
<td>81</td>
<td>34.9</td>
</tr>
<tr>
<td>Female</td>
<td>114</td>
<td>49.1</td>
<td>Single, living with another</td>
<td>16</td>
<td>6.9</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td>Married</td>
<td>115</td>
<td>49.6</td>
</tr>
<tr>
<td>18-24</td>
<td>76</td>
<td>33.2</td>
<td>Divorced</td>
<td>9</td>
<td>3.9</td>
</tr>
<tr>
<td>25-32</td>
<td>66</td>
<td>28.8</td>
<td>Other</td>
<td>9</td>
<td>3.9</td>
</tr>
<tr>
<td>33-40</td>
<td>20</td>
<td>8.7</td>
<td>Attendance freq. (2016)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41-47</td>
<td>24</td>
<td>10.5</td>
<td>0</td>
<td>81</td>
<td>34.9</td>
</tr>
<tr>
<td>48-56</td>
<td>21</td>
<td>9.2</td>
<td>1-3</td>
<td>86</td>
<td>37.1</td>
</tr>
<tr>
<td>57+</td>
<td>22</td>
<td>9.6</td>
<td>4-6</td>
<td>38</td>
<td>16.4</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td>7-70</td>
<td>26</td>
<td>11.2</td>
</tr>
<tr>
<td>Caucasian</td>
<td>189</td>
<td>81.5</td>
<td>Season Ticket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>30</td>
<td>12.9</td>
<td>Yes</td>
<td>3</td>
<td>1.3</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>3.9</td>
<td>No</td>
<td>228</td>
<td>98.3</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td>Attend with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0 - $49,999</td>
<td>67</td>
<td>28.9</td>
<td>Friends</td>
<td>88</td>
<td>37.9</td>
</tr>
<tr>
<td>$50,000 - $74,999</td>
<td>41</td>
<td>17.7</td>
<td>Spouse</td>
<td>27</td>
<td>11.6</td>
</tr>
<tr>
<td>$75,000 - $99,999</td>
<td>36</td>
<td>15.5</td>
<td>Spouse and children</td>
<td>22</td>
<td>9.5</td>
</tr>
<tr>
<td>$100,000 - $149,999</td>
<td>38</td>
<td>16.4</td>
<td>Spouse and friends</td>
<td>14</td>
<td>6.0</td>
</tr>
<tr>
<td>$150,000+</td>
<td>29</td>
<td>12.5</td>
<td>Other family</td>
<td>18</td>
<td>7.8</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td>Business associates</td>
<td>11</td>
<td>4.7</td>
</tr>
<tr>
<td>Less than High School</td>
<td>1</td>
<td>0.4</td>
<td>Residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school/GED</td>
<td>22</td>
<td>9.5</td>
<td>Local</td>
<td>188</td>
<td>81.0</td>
</tr>
<tr>
<td>Some college</td>
<td>34</td>
<td>14.7</td>
<td>Non-local</td>
<td>40</td>
<td>17.2</td>
</tr>
<tr>
<td>2-year college degree</td>
<td>8</td>
<td>3.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-year college degree</td>
<td>108</td>
<td>46.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate degree</td>
<td>55</td>
<td>23.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Prior to data analysis, missing data were assessed regarding a potential pattern of missing data. Little’s Missing Completely at Random (MCAR) test revealed that data were not missing at random. This result was expected based upon many respondents rating several items as “NA.” For example, 27 participants reported “NA” for the item “The food I am eating at this game”
while 24 scored “NA” for “The beverages I am drinking at this game.” To improve the quality of data, missing data were estimated using EM, which is shown to be an effective method of data imputation (Do & Batzoglou, 2008; Schafer & Graham, 2002). Once the data set was complete, data were assessed for multivariate normality using Mardia’s Multivariate Normality Test. Results displayed data maintaining both non-normal skewness and kurtosis. However, SEM estimations are able to account for such nonnormality with robust fit statistics including WLS and MLMV. MLMV was used in the current study due to WLS requiring a larger sample size than the current study’s 232.

In order to assess the impact of nostalgia through spectators’ senses and social interaction on spectator pleasure, the overall fit of the CFA model was assessed. With latent factors from multiple scales utilized, model fit was examined through a multiple-stage process, beginning with the five factors from the Sensoryscape. This model (Model 1) exhibited poor fit ($\chi^2 = 284.210$, $df = 179$, $p < .001$, $\chi^2/df = 3.380$, CFI = 0.695, RMSEA = 0.050, SRMR = 0.065). Factor loadings of items comprising this model are displayed in Table 3.
Table 3
Model 1 Factor Loadings

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>The visual appeal of the stadium’s architecture. (Sight1)</td>
<td>.710</td>
</tr>
<tr>
<td>The visual appeal of the stadium’s decorations. (Sight2)</td>
<td>.827</td>
</tr>
<tr>
<td>The visual appeal of the stadium’s architecture. (Sight3)</td>
<td>.724</td>
</tr>
<tr>
<td>The visual appeal of the stadium’s landscape. (Sight4)</td>
<td>.634</td>
</tr>
<tr>
<td>The stadium’s sightlines to watch the game. (Sight5)</td>
<td>.650</td>
</tr>
<tr>
<td>The sight of the stadium’s scoreboards. (Sight6)</td>
<td>.567</td>
</tr>
<tr>
<td>The smells in the air at the stadium. (Smell1)</td>
<td>.669</td>
</tr>
<tr>
<td>The smell of the crowd. (Smell2)</td>
<td>.453</td>
</tr>
<tr>
<td>The stadium’s unique smell. (Smell3)</td>
<td>.692</td>
</tr>
<tr>
<td>The smell of stadium foods. (Smell4)</td>
<td>.650</td>
</tr>
<tr>
<td>The sound of the stadium’s announcer. (Sound1)</td>
<td>.620</td>
</tr>
<tr>
<td>The sound of cheering in the stadium. (Sound2)</td>
<td>.406</td>
</tr>
<tr>
<td>The sound of the stadium’s sound system. (Sound3)</td>
<td>.767</td>
</tr>
<tr>
<td>The sound of the music at the stadium. (Sound4)</td>
<td>.679</td>
</tr>
<tr>
<td>The taste of the stadium’s food. (Taste1)</td>
<td>.572</td>
</tr>
<tr>
<td>The taste of the stadium’s beverages. (Taste2)</td>
<td>.769</td>
</tr>
<tr>
<td>The beverages I am drinking at this game. (Taste3)</td>
<td>.723</td>
</tr>
<tr>
<td>The food I am eating at this game. (Taste4)</td>
<td>.672</td>
</tr>
<tr>
<td>The physical comfort of the stadium’s seating. (Touch1)</td>
<td>.670</td>
</tr>
<tr>
<td>The stadium’s spatial arrangement of the aisles and seats. (Touch2)</td>
<td>.838</td>
</tr>
<tr>
<td>Physical contact with other spectators when cheering. (Touch3)</td>
<td>.305</td>
</tr>
</tbody>
</table>

*Note: Fit statistics ($\chi^2 = 284.210$, $df = 179$, $p < .001$, $\chi^2/df = 3.380$, CFI = 0.695, RMSEA = 0.050, SRMR = 0.065*)

Examination of the model’s factor loadings revealed several items loading poorly on their associated factors. The item Sound2 maintained a standardized factor loading of .406, Smell2 had a loading of .453, and Touch3 maintained a factor loading of .305. Each of these items were consequently removed from the model due to not meeting the .50 factor loading threshold (Hair, Black, Babin, & Anderson, 2010). The revised model (Model 2) maintained improved, but still poor fit indices ($\chi^2 = 208.672$, $df = 125$, $p < .001$, $\chi^2/df = 1.669$, CFI = 0.732, RMSEA = 0.054, SRMR = 0.059).

Inspection of fit modification indices displayed the Taste1 item being a primary cause for poor model fit. Results showed a $\chi^2$ improvement of 43.626 by correlating its errors with those of Taste4. In addition, correlating its error terms with the Taste3 item would improve the $\chi^2$ value by 19.177. Thus, in order to attain the most parsimonious model, Taste1 was removed from the
model rather than correlating these error terms. These modifications led to greater model fit in Model 3, but still not to an acceptable level (χ² = 169.607, df = 109, p < .001, χ²/df = 1.556, CFI = 0.795, RMSEA = 0.049, SRMR = 0.053).

Investigation of fit modification indices exhibited correlating the error terms of Taste4 and Smell4 would lead to an improvement in the χ² value of 32.364. With both of these items assessing food at the stadium, theory supported the correlation of these items’ errors, which is an acceptable practice in model respecification (Kline, 2016). The revised model (Model 4) once again showed improvement (χ² = 154.386, df = 108, p = .002, χ²/df = 1.4295, CFI = 0.843, RMSEA = 0.043, SRMR = 0.049).

Fit modification indices showed the Touch factor contributing to poor model fit. For example, the χ² value was exhibited to improve by 14.582 by correlating the errors of Touch2 and Sight2. Also, correlating the errors of Touch1 and Sound4 was shown to improve fit by 10.627 while the correlation of errors between Touch2 and Taste3 would improve model fit by 10.597. With these modifications ranging among both Touch items, and in order to keep the model identified, both remaining Touch items were removed from the model. The revised model (Model 5) once again showed improvement (χ² = 112.929, df = 83, p = .016, χ²/df = 1.361, CFI = 0.880, RMSEA = 0.039, SRMR = 0.047).

Modification indices exhibited only two modifications that would improve the χ² by 10 or more. One of these modifications was allowing Sight5 to load onto the Smell factor, which displayed a χ² improvement of 12.487. Modification indices also showed the χ² improving by 8.327 by correlating its error terms with Taste3 and by 7.730 by correlating its errors with Sound4. While these were below 10, examination of other potential modifications suggested that Sight5 was the item most negatively affecting model fit. Therefore, Sight5 was removed from the
model. The consequent model (Model 6) further improved ($\chi^2 = 87.247$, $df = 70$, $p = .080$, $\chi^2/df = 1.246$, CFI = 0.929, RMSEA = 0.033, SRMR = 0.043).

Additional improvement was displayed through correlating the error terms of Sight1 and Sight6, which would improve the $\chi^2$ value by 14.842. With theory supporting this modification, these error terms were correlated to further improve model fit. The new model (Model 7; $\chi^2 = 79.049$, $df = 69$, $p = .191$, $\chi^2/df = 1.146$, CFI = 0.959, RMSEA = 0.025, SRMR = 0.041) displayed even greater model fit, with all fit indices suggesting the data fit the model well. Factor loadings of items comprising this model are displayed in Table 4.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Model 7 Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Factor Loading</td>
</tr>
<tr>
<td>The visual appeal of the stadium’s colors. (Sight1)</td>
<td>.762</td>
</tr>
<tr>
<td>The visual appeal of the stadium’s decorations. (Sight2)</td>
<td>.786</td>
</tr>
<tr>
<td>The visual appeal of the stadium's architecture. (Sight3)</td>
<td>.743</td>
</tr>
<tr>
<td>The visual appeal of the stadium’s landscape. (Sight4)</td>
<td>.645</td>
</tr>
<tr>
<td>The stadium’s sightlines to watch the game. (Sight5)</td>
<td>Removed</td>
</tr>
<tr>
<td>The sight of the stadium’s scoreboards. (Sight6)</td>
<td>.622</td>
</tr>
<tr>
<td>The smells in the air at the stadium. (Smell1)</td>
<td>.658</td>
</tr>
<tr>
<td>The smell of the crowd. (Smell2)</td>
<td>Removed</td>
</tr>
<tr>
<td>The stadium's unique smell. (Smell3)</td>
<td>.725</td>
</tr>
<tr>
<td>The smell of stadium foods. (Smell4)</td>
<td>.611</td>
</tr>
<tr>
<td>The sound of the stadium’s announcer. (Sound1)</td>
<td>.618</td>
</tr>
<tr>
<td>The sound of cheering in the stadium. (Sound2)</td>
<td>Removed</td>
</tr>
<tr>
<td>The sound of the stadium’s sound system. (Sound3)</td>
<td>.769</td>
</tr>
<tr>
<td>The sound of the music at the stadium. (Sound4)</td>
<td>.671</td>
</tr>
<tr>
<td>The taste of the stadium’s food. (Taste1)</td>
<td>Removed</td>
</tr>
<tr>
<td>The taste of the stadium’s beverages. (Taste2)</td>
<td>.781</td>
</tr>
<tr>
<td>The beverages I am drinking at this game. (Taste3)</td>
<td>.790</td>
</tr>
<tr>
<td>The food I am eating at this game. (Taste4)</td>
<td>.568</td>
</tr>
<tr>
<td>The physical comfort of the stadium’s seating. (Touch1)</td>
<td>Removed</td>
</tr>
<tr>
<td>The stadium’s spatial arrangement of the aisles and seats. (Touch2)</td>
<td>Removed</td>
</tr>
<tr>
<td>Physical contact with other spectators when cheering. (Touch3)</td>
<td>Removed</td>
</tr>
</tbody>
</table>

*Fit statistics ($\chi^2 = 79.049$, $df = 69$, $p = .191$, $\chi^2/df = 1.146$, CFI = 0.959, RMSEA = 0.025, SRMR = 0.041)*

With modification of the sensory factors complete, the Sociability factor was then added to the model. The addition of the Sociability factor (Model 8) slightly worsened model fit ($\chi^2 = 120.357$, $df = 107$, $p = .178$, $\chi^2/df = 1.124$, CFI = 0.949, RMSEA = 0.023, SRMR = 0.042).
However, each of the fit indices still met acceptable levels. Factor loadings of items comprising this model are displayed in Table 5.

Table 5  
Model 8 Factor Loadings

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>The visual appeal of the stadium’s colors. (Sight1)</td>
<td>.763</td>
</tr>
<tr>
<td>The visual appeal of the stadium’s decorations. (Sight2)</td>
<td>.787</td>
</tr>
<tr>
<td>The visual appeal of the stadium's architecture. (Sight3)</td>
<td>.743</td>
</tr>
<tr>
<td>The visual appeal of the stadium’s landscape. (Sight4)</td>
<td>.642</td>
</tr>
<tr>
<td>The stadium’s sightlines to watch the game. (Sight5)</td>
<td>Removed</td>
</tr>
<tr>
<td>The sight of the stadium’s scoreboards. (Sight6)</td>
<td>.621</td>
</tr>
<tr>
<td>The smells in the air at the stadium. (Smell1)</td>
<td>.657</td>
</tr>
<tr>
<td>The smell of the crowd. (Smell2)</td>
<td>Removed</td>
</tr>
<tr>
<td>The stadium's unique smell. (Smell3)</td>
<td>.727</td>
</tr>
<tr>
<td>The smell of stadium foods. (Smell4)</td>
<td>.612</td>
</tr>
<tr>
<td>The sound of the stadium’s announcer. (Sound1)</td>
<td>.607</td>
</tr>
<tr>
<td>The sound of cheering in the stadium. (Sound2)</td>
<td>Removed</td>
</tr>
<tr>
<td>The sound of the stadium’s sound system. (Sound3)</td>
<td>.780</td>
</tr>
<tr>
<td>The sound of the music at the stadium. (Sound4)</td>
<td>.669</td>
</tr>
<tr>
<td>The taste of the stadium’s food. (Taste1)</td>
<td>Removed</td>
</tr>
<tr>
<td>The taste of the stadium’s beverages. (Taste2)</td>
<td>.771</td>
</tr>
<tr>
<td>The beverages I am drinking at this game. (Taste3)</td>
<td>.793</td>
</tr>
<tr>
<td>The food I am eating at this game. (Taste4)</td>
<td>.580</td>
</tr>
<tr>
<td>The physical comfort of the stadium’s seating. (Touch1)</td>
<td>Removed</td>
</tr>
<tr>
<td>The stadium’s spatial arrangement of the aisles and seats. (Touch2)</td>
<td>Removed</td>
</tr>
<tr>
<td>Physical contact with other spectators when cheering. (Touch3)</td>
<td>Removed</td>
</tr>
<tr>
<td>The time socializing with my friends/family at this game. (Social1)</td>
<td>.581</td>
</tr>
<tr>
<td>The sense of family among the fans at this game. (Social2)</td>
<td>.664</td>
</tr>
<tr>
<td>The social interaction with other people at this game. (Social3)</td>
<td>.685</td>
</tr>
</tbody>
</table>

*Note: Fit statistics ($\chi^2 = 120.357, df = 107, p = .178, \chi^2/df = 1.124, CFI = 0.949, RMSEA = 0.023, SRMR = 0.042$)

Modification indices showed no values of 10 or more; thus, Model 8 was retained. To continue building to the full model, attention was then turned to the addition of endogenous variables – Pleasure and Behavioral Intentions. The addition of these two variables resulted in a well-fitting model ($\chi^2 = 288.719, df = 276, p = .287, \chi^2/df = 1.046, CFI = 0.961, RMSEA = 0.014, SRMR = 0.046$). Examination of modification indices exhibited no further improvements supported by theory. Thus, the current model (Model 9) was maintained as the complete measurement model.
Upon attaining an acceptable measurement model, Research Questions 1, 2, and 3 were investigated using the complete structural model. The complete structural model (Model 10) displayed adequate model fit ($\chi^2 = 298.165$, $df = 281$, $p = .230$, $\chi^2/df = 1.061$, $CFI = 0.947$, $RMSEA = 0.017$, $SRMR = 0.062$). Model 10’s factor loadings are displayed in Table 6.

### Table 6

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>The visual appeal of the stadium’s colors. (Sight1)</td>
<td>.762</td>
</tr>
<tr>
<td>The visual appeal of the stadium’s decorations. (Sight2)</td>
<td>.787</td>
</tr>
<tr>
<td>The visual appeal of the stadium's architecture. (Sight3)</td>
<td>.744</td>
</tr>
<tr>
<td>The visual appeal of the stadium’s landscape. (Sight4)</td>
<td>.644</td>
</tr>
<tr>
<td>The stadium’s sightlines to watch the game. (Sight5)</td>
<td>Removed</td>
</tr>
<tr>
<td>The sight of the stadium’s scoreboards. (Sight6)</td>
<td>.620</td>
</tr>
<tr>
<td>The smells in the air at the stadium. (Smell1)</td>
<td>.656</td>
</tr>
<tr>
<td>The smell of the crowd. (Smell2)</td>
<td>Removed</td>
</tr>
<tr>
<td>The stadium's unique smell. (Smell3)</td>
<td>.728</td>
</tr>
<tr>
<td>The smell of stadium foods. (Smell4)</td>
<td>.613</td>
</tr>
<tr>
<td>The sound of the stadium’s announcer. (Sound1)</td>
<td>.608</td>
</tr>
<tr>
<td>The sound of cheering in the stadium. (Sound2)</td>
<td>Removed</td>
</tr>
<tr>
<td>The sound of the stadium’s sound system. (Sound3)</td>
<td>.779</td>
</tr>
<tr>
<td>The sound of the music at the stadium. (Sound4)</td>
<td>.670</td>
</tr>
<tr>
<td>The taste of the stadium’s food. (Taste1)</td>
<td>Removed</td>
</tr>
<tr>
<td>The taste of the stadium’s beverages. (Taste2)</td>
<td>.774</td>
</tr>
<tr>
<td>The beverages I am drinking at this game. (Taste3)</td>
<td>.786</td>
</tr>
<tr>
<td>The food I am eating at this game. (Taste4)</td>
<td>.584</td>
</tr>
<tr>
<td>The physical comfort of the stadium’s seating. (Touch1)</td>
<td>Removed</td>
</tr>
<tr>
<td>The stadium’s spatial arrangement of the aisles and seats. (Touch2)</td>
<td>Removed</td>
</tr>
<tr>
<td>Physical contact with other spectators when cheering. (Touch3)</td>
<td>Removed</td>
</tr>
<tr>
<td>The time socializing with my friends/family at this game. (Social1)</td>
<td>.586</td>
</tr>
<tr>
<td>The sense of family among the fans at this game. (Social2)</td>
<td>.654</td>
</tr>
<tr>
<td>The social interaction with other people at this game. (Social3)</td>
<td>.693</td>
</tr>
<tr>
<td>Angry/Satisfied (Pleasure1)</td>
<td>.759</td>
</tr>
<tr>
<td>Unhappy/Happy (Pleasure2)</td>
<td>.904</td>
</tr>
<tr>
<td>Dissatisfied/Very pleased (Pleasure3)</td>
<td>.895</td>
</tr>
<tr>
<td>Sad/Joyful (Pleasure4)</td>
<td>.862</td>
</tr>
<tr>
<td>Bored/Entertained (Pleasure5)</td>
<td>.682</td>
</tr>
<tr>
<td>Disappointed/Delighted (Pleasure6)</td>
<td>.803</td>
</tr>
<tr>
<td>BehavioralIntentions1</td>
<td>.907</td>
</tr>
<tr>
<td>BehavioralIntentions2</td>
<td>.898</td>
</tr>
<tr>
<td>BehavioralIntentions3</td>
<td>.784</td>
</tr>
</tbody>
</table>

*Note: Fit statistics ($\chi^2 = 298.165$, $df = 281$, $p = .230$, $\chi^2/df = 1.061$, $CFI = 0.947$, $RMSEA = 0.017$, $SRMR = 0.062$)*
Investigation of Research Question 1 assessing the impact of nostalgia evoked through spectators’ senses on Pleasure revealed that none of the remaining senses in the model (Sight, Smell, Sound, and Taste) had a significant, positive impact on spectator pleasure. Interestingly, Sight had a significant, negative impact on spectator pleasure. Complete results of the first three research questions are displayed in Table 7, and the path coefficients are shown in Figure 5.

**Table 7**
Research Questions 1, 2, and 3 Model Path Coefficients  

<table>
<thead>
<tr>
<th>Factor</th>
<th>Standardized Estimate</th>
<th>Standard Error</th>
<th>z-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sight → Pleasure</td>
<td>-0.249</td>
<td>0.126</td>
<td>-1.986</td>
<td>0.047</td>
</tr>
<tr>
<td>Smell → Pleasure</td>
<td>0.082</td>
<td>0.080</td>
<td>1.023</td>
<td>0.306</td>
</tr>
<tr>
<td>Sound → Pleasure</td>
<td>-0.070</td>
<td>0.162</td>
<td>-0.431</td>
<td>0.666</td>
</tr>
<tr>
<td>Taste → Pleasure</td>
<td>0.143</td>
<td>0.128</td>
<td>1.114</td>
<td>0.265</td>
</tr>
<tr>
<td>Sociability → Pleasure</td>
<td>0.562</td>
<td>0.167</td>
<td>3.367</td>
<td>0.001</td>
</tr>
<tr>
<td>Pleasure → Behavioral Intentions</td>
<td>0.540</td>
<td>0.081</td>
<td>6.653</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>
Figure 5. Research Questions 1, 2, and 3 Model

In investigation of the fourth research question assessing the extent to which Arousal moderated the relationship between Pleasure and Behavioral Intentions, the model (Model 11) exhibited poor fit ($\chi^2 = 459.881, df = 113, p = .000, \chi^2/df = 4.070, CFI = 0.881, RMSEA = 0.115, SRMR = 0.074$). The model’s factor loadings are displayed in Table 8.
Table 8
Model 11 Factor Loadings

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angry/Satisfied (Pleasure1)</td>
<td>.738</td>
</tr>
<tr>
<td>Unhappy/Happy (Pleasure2)</td>
<td>.899</td>
</tr>
<tr>
<td>Dissatisfied/Very pleased (Pleasure3)</td>
<td>.889</td>
</tr>
<tr>
<td>Sad/Joyful (Pleasure4)</td>
<td>.868</td>
</tr>
<tr>
<td>Bored/Entertained (Pleasure5)</td>
<td>.695</td>
</tr>
<tr>
<td>Disappointed/Delighted (Pleasure6)</td>
<td>.822</td>
</tr>
<tr>
<td>Indifferent/Surprised (Arousal1)</td>
<td>.491</td>
</tr>
<tr>
<td>Passive/Active (Arousal2)</td>
<td>.650</td>
</tr>
<tr>
<td>Calm/Enthusiastic (Arousal4)</td>
<td>.607</td>
</tr>
<tr>
<td>BehavioralIntentions1</td>
<td>.912</td>
</tr>
<tr>
<td>BehavioralIntentions2</td>
<td>.903</td>
</tr>
<tr>
<td>BehavioralIntentions3</td>
<td>.781</td>
</tr>
</tbody>
</table>

*Note: Fit statistics ($\chi^2 = 459.881$, $df = 113$, $p = .000$, $\chi^2/df = 4.070$, CFI = 0.881, RMSEA = 0.115, SRMR = 0.074)*

The Arousal factor maintained an AVE value of .435 in Model 11. Inspection of the model’s factor loadings exhibited Arousal1 not maintaining an adequate loading (.491). Thus, this item as well as the interaction item comprising Arousal1 (Pleasure1xArousal1) were removed. The consequent model (Model 12) still did not meet acceptable standards ($\chi^2 = 368.608$, $df = 84$, $p < .001$, $\chi^2/df = 4.388$, CFI = 0.896, RMSEA = 0.121, SRMR = 0.071). Arousal’s AVE meanwhile rose to .485.

Inspection of modification indices exhibited Pleasure6 contributing to the poor model fit. The $\chi^2$ was shown to improve by 36.968 by allowing this item to load onto the Arousal factor. In addition, correlating the item’s error terms with Arousal3 would improve $\chi^2$ by 45.605. Therefore, Pleasure6 was removed from the model. The revised model exhibited improved fit (Model 13; $\chi^2 = 301.363$, $df = 71$, $p < .001$, $\chi^2/df = 4.244$, CFI = 0.905, RMSEA = 0.118, SRMR = 0.074). With the model still needing improvement, modification indices were examined. Indices showed Arousal4 affecting model fit. For example, the $\chi^2$ was shown to improve by 45.234 by allowing the item to load onto the interaction factor. In addition, the $\chi^2$ would improve
by 31.178 by allowing the correlation of errors between Arousal4 and Arousal2. Therefore, Arousal4 was dropped from the model, along with its interaction variable Pleasure4XArousal4. The resulting model displayed further improvement (Model 14; \( \chi^2 = 148.544, df = 48, p < .001, \chi^2/df = 3.095, CFI = 0.954, RMSEA = 0.095, SRMR = 0.046 \)).

While the model displayed sufficient fit, further examination of modification indices suggested additional improvement by removing Pleasure2. Modification indices showed an improvement in \( \chi^2 \) of 22.145 by correlating its errors with Pleasure2XArousal2. Also, allowing Pleasure2 to load onto the interaction factor was shown to improve \( \chi^2 \) by 13.023. Therefore, Pleasure2 and the interaction item Pleasure2XArousal2 were removed from the model. The revised model exhibited further model improvement (Model 15; \( \chi^2 = 70.568, df = 30, p < .001, \chi^2/df = 2.352, CFI = 0.971, RMSEA = 0.076, SRMR = 0.039 \)). Factor loadings of Model 15 are displayed in Table 9.

**Table 9**

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angry/Satisfied (Pleasure1)</td>
<td>.717</td>
</tr>
<tr>
<td>Unhappy/Happy (Pleasure2)</td>
<td>Removed</td>
</tr>
<tr>
<td>Dissatisfied/Very pleased (Pleasure3)</td>
<td>.893</td>
</tr>
<tr>
<td>Sad/ Joyful (Pleasure4)</td>
<td>.875</td>
</tr>
<tr>
<td>Bored/Entertained (Pleasure5)</td>
<td>.690</td>
</tr>
<tr>
<td>Disappointed/ Delighted (Pleasure6)</td>
<td>Removed</td>
</tr>
<tr>
<td>Indifferent/Surprised (Arousal1)</td>
<td>Removed</td>
</tr>
<tr>
<td>Passive/Active (Arousal2)</td>
<td>.584</td>
</tr>
<tr>
<td>Depressed/ Cheerful (Arousal3)</td>
<td>.816</td>
</tr>
<tr>
<td>Calm/ Enthusiastic (Arousal4)</td>
<td>Removed</td>
</tr>
<tr>
<td>Behavioral Intentions1</td>
<td>.912</td>
</tr>
<tr>
<td>Behavioral Intentions2</td>
<td>.903</td>
</tr>
<tr>
<td>Behavioral Intentions3</td>
<td>.781</td>
</tr>
</tbody>
</table>

*Note: Fit statistics (\( \chi^2 = 70.568, df = 30, p < .001, \chi^2/df = 2.352, CFI = 0.971, RMSEA = 0.076, SRMR = 0.039 \))

With the model exhibiting sufficient fit and modification indices suggesting no further improvement that was supported by theory, Model 15 was utilized to address Research Question
Results exhibited that Pleasure, Arousal, and the interaction term (Pleasure×Arousal) all were non-significant predictors of behavioral intentions. Further inspection of the results exhibited Arousal2 contributing to the results. Interestingly, by removing the Arousal2 item, Pleasure significantly predicted behavioral intentions ($\beta = .546; p < .001$). Potential multicollinearity was investigated, with VIF values all lower than three and tolerance no less than .380. Therefore, the Arousal2 item, which exhibited a factor loading of .584 in Model 15, caused the non-significant effects of Pleasure, Arousal, and the interaction term. Results of Research Question 4 are displayed in Table 10, and the path coefficients of are shown in Figure 6.

**Table 10**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Behavioral Intentions</th>
<th>Standardized Estimate</th>
<th>Standard Error</th>
<th>z-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleasure $\rightarrow$ Behavioral Intentions</td>
<td>-.028</td>
<td>.853</td>
<td>-.032</td>
<td>.974</td>
<td></td>
</tr>
<tr>
<td>Arousal $\rightarrow$ Behavioral Intentions</td>
<td>.728</td>
<td>.897</td>
<td>.812</td>
<td>.417</td>
<td></td>
</tr>
<tr>
<td>Interaction $\rightarrow$ Behavioral Intentions</td>
<td>.222</td>
<td>.195</td>
<td>1.143</td>
<td>.253</td>
<td></td>
</tr>
</tbody>
</table>
Reliability as well as convergent and divergent validity were assessed with model respecification complete. All of the factors maintained a Cronbach’s alpha measure of reliability of at least .60, which met the threshold for exploratory research (Loewenthal, 1996). Composite reliabilities also were greater than .60, which also exhibited evidence of internal consistency (Bagozzi & Yi, 1988). Furthermore, each factor loading was greater than the minimum level of .50 (Hair et al., 2010). Therefore, after the respecification process was complete, all factors maintained items that explained a sufficient amount of the factor’s variance, and the factors were shown to maintain consistency. Convergent validity was demonstrated with each factor maintaining an AVE value of .40 or greater, the minimum standard set by Diamantopolous and Siguaw (2000). Thus, each of the factors’ items exhibited moderate-to-high correlations. Each of the factors utilized to address Research Questions 1, 2, and 3 (the sensory factors, Sociability, Pleasure, and Behavioral Intentions) also exhibited divergent validity, with AVE squared.
correlations greater than correlation values (Fornell & Larcker, 1981). However, Pleasure and Arousal maintained a correlation of $r = .750$ in the model addressing Research Question 4. Therefore, these items did not maintain discriminant validity, as they were shown to share a large amount of variance. The final model’s descriptive statistics and correlations are shown in Tables 11 and 12.

**Table 11**
Descriptive Statistics and Factor Measures

<table>
<thead>
<tr>
<th>Factor</th>
<th>No. of items</th>
<th>Mean (std. dev.)</th>
<th>Cronbach’s alpha</th>
<th>Composite reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sight</td>
<td>5</td>
<td>5.43 (1.32)</td>
<td>.826</td>
<td>.838</td>
<td>.510</td>
</tr>
<tr>
<td>Smell</td>
<td>3</td>
<td>4.67 (1.46)</td>
<td>.712</td>
<td>.705</td>
<td>.445</td>
</tr>
<tr>
<td>Sound</td>
<td>3</td>
<td>5.48 (1.25)</td>
<td>.610</td>
<td>.728</td>
<td>.474</td>
</tr>
<tr>
<td>Taste</td>
<td>3</td>
<td>5.30 (1.33)</td>
<td>.759</td>
<td>.762</td>
<td>.520</td>
</tr>
<tr>
<td>Sociability</td>
<td>3</td>
<td>5.57 (1.23)</td>
<td>.675</td>
<td>.682</td>
<td>.418</td>
</tr>
<tr>
<td>Pleasure</td>
<td>6</td>
<td>6.17 (0.91)</td>
<td>.920</td>
<td>.925</td>
<td>.811</td>
</tr>
<tr>
<td>Arousal</td>
<td>2</td>
<td>5.67 (1.08)</td>
<td>.626</td>
<td>.664</td>
<td>.503</td>
</tr>
<tr>
<td>Behavioral</td>
<td>3</td>
<td>6.58 (0.79)</td>
<td>.893</td>
<td>.899</td>
<td>.748</td>
</tr>
</tbody>
</table>

*Note: Pleasure factor descriptive statistics are for the factor utilized in Research Questions 1, 2, and 3, which comprised six items; Arousal factor descriptive statistics are of the trimmed factor used in Research Question 4 (non-centered); The Behavioral Intentions factor comprised the same items in both models (Research Questions 1-3 and Research Question 4)*

**Table 12**
Factor Correlations

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Sight</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Smell</td>
<td>.379**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Sound</td>
<td>.547**</td>
<td>.264**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Taste</td>
<td>.579**</td>
<td>.435**</td>
<td>.420**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Social</td>
<td>.529**</td>
<td>.236**</td>
<td>.487**</td>
<td>.500**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Pleasure</td>
<td>.201**</td>
<td>.176*</td>
<td>.216**</td>
<td>.296**</td>
<td>.371**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Arousal</td>
<td>.234*</td>
<td>.243**</td>
<td>.198**</td>
<td>.300**</td>
<td>.403**</td>
<td>.750**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8 Behavioral</td>
<td>.262**</td>
<td>.152*</td>
<td>.241**</td>
<td>.358**</td>
<td>.375**</td>
<td>.499**</td>
<td>.418**</td>
<td>1</td>
</tr>
</tbody>
</table>

*Correlations significant at the .01 level
**Correlations significant at the .05 level

*Note: Pleasure factor descriptive statistics are for the factor utilized in Research Questions 1, 2, and 3; Arousal factor descriptive statistics are of the trimmed factor used in Research Question 4 (non-centered); Pleasure and Arousal factors (centered) used to address Research Question 4 maintained a correlation of $r = .739$
CHAPTER V
DISCUSSION

The current study sought to determine the extent in which nostalgia evoked through spectator senses and social interaction impacted pleasure and behavioral intentions. The results provided theoretical, practical, and methodological contributions that can assist both the marketing and sport management disciplines and also assist marketing and sport practitioners in decision making. The following section is divided into three components: First, the results of the research questions are discussed. Second, statistical and methodological limitations are discussed. Third, study limitations and suggestions for future research are provided.

Research Question 1

Results of Research Question 1 exhibited three overarching characteristics of spectators’ nostalgic experience while at the ballpark. First, spectators experienced an overall high level of nostalgia via their senses, which gives credence to the study of sensory marketing, and investigation of nostalgia via individuals’ senses. Interestingly, the five sensory factors all maintained a mean score greater than the scale's midpoint of four, with Sight, Sound, and Taste rating higher than five. However, when assessing the impact of such nostalgia on Pleasure, none of the senses had a significant, positive impact on spectator pleasure, with Sight a significant, negative predictor. These results raise the question of whether nostalgia is a mostly positive emotional experience, as many scholars have suggested (Holak & Havlena, 1998; Wildschut et al., 2006). Furthermore, the lack of significant relationships between the senses Sound, Smell,
and Taste and spectators’ pleasure is inconsistent with the SOR framework, which suggests that exposure to stimuli causes an emotional response, which then leads to a behavioral response. The theoretical and practical implications of these findings, beginning with the SOR theoretical implications, are explored throughout the rest of the review of Research Question 1.

Much previous research of consumer behavior provides support for the SOR framework (Donovan et al., 1994; Walsh, Shiu, Hassan, Michaelidou, & Beatty, 2011; Yüksel, 2007). Interestingly, the results of the current study did not exhibit a significant relationship between nostalgia evoked via Sound, Smell, and Taste and spectator pleasure, contradicting much of the previous research employing the SOR framework. Interpretation of this result requires further inspection of nostalgia. While spectators experienced a relatively high level of nostalgia via their senses, such nostalgic experiences did not produce a pleasurable response, and caused an unexpected negative response from Sight. Despite much research displaying the pleasurable nature of nostalgia (Reid et al., 2015; Sedikides et al., 2015b), nostalgia is shown to be a complex experience comprising both positive and negative emotions (Baker & Kennedy, 1994; Davis, 1979; Holak & Havlena, 1998). Holak and Havlena (1998) found support for the discrete emotional approach of measuring nostalgia, which included the emotions tenderness, irritation, elation, loss, fear, and serenity. Therefore, perhaps the inclusion of other emotions may better capture individuals’ experiences, especially in uncontrolled environments. With the use of the SOR framework to measure the impact of nostalgia still novel in non-experimental research, the results of the current study raise the question of whether pleasure is the appropriate emotional outcome of interest in such investigations.

Regarding the experience of nostalgia through spectators’ senses, Sight maintained a mean of 5.43 and standard deviation of 1.32. These values suggest that spectators experienced a
relatively high level of nostalgia as a result of stimuli seen throughout the ballpark, exhibiting the impact of the visual elements within the stadium of eliciting spectator nostalgia. While the role of Sight in evoking nostalgia does not have as much theoretical support as the senses smell and sound, previous consumer behavior research exhibits the role of the physical environment in contributing to individuals’ nostalgia. For example, in Lu et al.’s (2015) study of Taiwanese bakeries, nostalgia experienced through customers’ vision was found to positively impact their experiential value and purchase behavior. Thus, the nostalgic design and decoration of the bakery influenced customers’ emotions and behavior. Other scholars pointed to visual elements within Disneyland, Cracker Barrel, and Johnny Rocket’s in evoking nostalgia (Sierra & McQuitty, 2007; Spaid, 2013). Consistent with these previous studies, the current study exhibited that ballpark features including the scoreboard and visual appeal of the facility’s architecture, landscape, and colors effectively induced spectator nostalgia.

The purpose of these nostalgic features, however, is to evoke positive emotional and behavioral intentions. This was found not to be the case with Sight, which negatively impacted Pleasure ($\beta = -.249; p = .047$). One potential explanation for this result is the bittersweet characteristic of nostalgia. While previous research suggests that nostalgia is more positive than negative (Holak & Havlena, 1998; Reid et al., 2015; Wildschut et al., 2006), perhaps in the context of baseball, spectators experience more sadness than pleasure at the sight of ballpark features. For example, scoreboards comprise a multitude of visual stimuli such as advertisements and in-game promotions shown on the stadium’s videoboard, which could potentially elicit negative memories. Furthermore, the ballpark in which the current study took place featured a view of a children’s hospital beyond the center field wall. Thus, in responding to the item
assessing nostalgia experienced from the view of the stadium’s landscape, participants may have experienced negative emotions from this sight.

The ballpark also featured a design that incorporates an exposed beam structure, similar to many of the MLB ballparks built in the 1990s and early 2000s. The sight of these features may have evoked a sense of sadness for a time period that is no more, drawing upon elements of the Discontinuity Hypothesis (Davis, 1979; Bassett, 2006; Batcho, 1995). Results of previous studies have shown individuals to maintain a feeling that the past was better than the present. Spectators therefore may have experienced a yearning for a previous time, and similar to Bassett’s (2006) findings, may have had a negative outlook on the future, contributing to their negative emotional response. This is especially plausible considering that the Sight factor assessed ballpark features that were more likely to elicit simulated nostalgia compared to personal and collective nostalgia. Therefore, with spectators not experiencing as much personal nostalgia – which is more likely to vary from person to person – spectators may have had a homogenous negative emotional reaction to nostalgia caused by the visual stimuli, contributing to the negative impact on pleasure.

No matter the source of the result, the negative impact of these stimuli on spectators’ pleasure yields both theoretical and practical implications. Theoretically, the result suggests that nostalgia may engender more negative than positive emotions, which is inconsistent with much of the recent literature on nostalgia, but aligns with the early “melancholic” view of nostalgia. With societal attitudes constantly changing, perhaps the emotional response within the nostalgic experience changes. Thus, research conducted as recently as the early 2000s may not properly account for social pressures impacting individuals’ nostalgic responses. These characteristics may not be accurately accounted for in experimental conditions, which further showcases the
contribution of this study. More research is needed to determine the generalizability of the negative impact of visual stimuli across baseball settings as well as other environments such as restaurants and retail stores.

From a practical standpoint, based upon this finding, sport organizations should pay close attention to the visual stimuli throughout their facility to determine if such stimuli are present which could foster melancholic emotions among fans. Scholars have noted the multitude of nostalgic stimuli present in many MLB and MiLB ballparks (Ritzer & Stillman, 2001; Seifried & Meyer, 2010). However, if the sight of architectural features of a previous era generates negative emotions, clearly these features are not serving their intended purpose. Sport organizations must discover how fans react to the various architectural features that are now common in many MiLB and MLB ballparks. Also, in a broader sense, more focus is needed on the emotional responses to certain types of architecture throughout commercial environments.

Sound meanwhile was also a negative, though not significant, predictor of Pleasure ($\beta = -0.070; p = .666$). Like the Sight factor, it maintained a mean greater than five (5.48), with a standard deviation of 1.25. While this non-significant result limits its interpretation, the result is nonetheless worthy of closer examination. A ballpark is comprised of stimuli that can take people back to many different times and places. Previous research suggested that the sound of music can evoke both personal and collective nostalgia (Havlena & Holak, 1991; Van Dijck, 2006). While hearing “Take me out to the Ballgame” may evoke nostalgia for previous experiences at baseball games among many fans, hearing the wide variety of songs played at baseball games can bring fans back to many different settings, and consequently elicit various emotions. For example, perhaps hearing the song “Working for the weekend” elicits negative memories of a previous romantic relationship. Without distinguishing between personal and
collective nostalgia, it is unknown which types of songs evoked more nostalgia, and which songs engendered overall more negative emotions. Nonetheless, this result provides further evidence of music’s ability to evoke nostalgia while also demonstrating the mixture of emotions that result from hearing a diversity of music.

Other elements of the stadium experience including the sound of the stadium’s announcer and the sound of cheering in the stadium were also explored, which were similarly shown to evoke nostalgia, with individual item mean scores greater than five. These items build upon the current literature, which has largely focused on music. A multitude of sounds may be capable of eliciting nostalgia among individuals. For example, the sound of a train may take one back to their childhood in which they often heard trains from their home. In the baseball context, the sound of a ball hitting a glove may elicit memories of previous baseball experiences. These results provide support for additional research of sounds that can elicit nostalgia. From a practical standpoint, more research is needed to determine the emotional and behavioral impact of different types of sounds within the spectator experience – and specifically music. The current study’s findings displayed that music and the sound of the stadium’s announcer and sound system do in fact evoke nostalgia; however, with the ultimate goal of generating positive emotional and behavioral responses among spectators, such nostalgia serves little practical purpose.

Like Sight and Sound, both Taste ($M = 5.30$) and Smell ($M = 4.67$) maintained mean scores above the mid-point, but failed to positively predict spectator pleasure. These factors’ mean scores support previous research exhibiting food’s ability to evoke nostalgia (Havlena & Holak, 1996; Mannur, 2007). For example, the smells of foods including cinnamon rolls, chocolate chip cookies, and chicken noodle soup were shown to engender nostalgia based upon
individuals' memories of these foods from their childhood (Baker & Kennedy, 1994; Hirsch, 1992; Holbrook & Schindler, 2003). Similarly, in the current study, the smell of stadium foods ($M = 5.28$) elicited nostalgia among spectators. This supports Cho's (2014) and Lee et al.'s (2012) suggestion that smells within stadiums may evoke nostalgia. In addition to Smell, stadium foods' role in spectators' nostalgia were assessed through the Taste factor. Each of the factor's four items maintained scores greater than five. This finding provides theoretical support for the taste of food eliciting nostalgia. Much of the previous literature on food nostalgia focused on the role of the smell of food evoking nostalgia (Atwood, 1986; Baker & Kennedy, 1994; Hirsch, 1992). Other literature discussed the taste of food engendering nostalgia, but did not quantitatively measure the impact of taste in evoking nostalgia (Holbrook & Schindler, 2003). The current study exhibited the unique contribution of nostalgia resulting from the taste of stadium foods ($M = 5.39$) and beverages ($M = 5.40$). While taste in itself is a complex process, this finding nonetheless provides greater understanding of nostalgia evoked from food.

While Taste specifically measured the taste of food and beverages evoking nostalgia, Smell included a variety of ballpark elements including “The smells in the air at the stadium” and “The stadium’s unique smell.” The latter of these two items maintained a mean of 4.19, which was relatively low compared to other survey items. With the ballpark less than five years old, perhaps fans do not associate a specific smell with the facility, which may come through many more experiences in the future. “The smells in the air at the stadium” ($M = 4.54$) also displayed a mean score lower than most other instrument items. This may be a result of the vague nature of the item. Previous research exhibited nostalgia resulting from food, perfume, and holiday aromas (Holbrook & Schindler, 2003). Therefore, perhaps spectators were unable to accurately assess nostalgia resulting from scents without specific identification of these scents.
The variance among these items may have contributed to Smell’s insignificant impact on Pleasure. However, each Taste item maintained a mean score of greater than five. No matter the cause, the results showcase that even with spectators experiencing nostalgia from the taste of food and beverages and the smells within the ballpark, the nostalgia did not produce a pleasurable response. Similar to the other senses, this finding further underscores the bittersweet nature of nostalgia. While one may expect the nostalgia experienced from the taste or smell of hot dogs and popcorn to evoke pleasure, these results further suggest that while in an uncontrolled environment, individuals may experience mixed emotions as a result of these nostalgic experiences.

Touch meanwhile yielded somewhat mixed results. Prior to investigation of Research Question 1, the factor did not fit the theoretical model and was consequently dropped from analysis. The initial model (Model 1) maintained a factor loading of .305 for the third touch item, “Physical contact with other spectators when cheering.” Following its removal, further modifications exhibited the two remaining items’ errors correlating with items of the Sight, Sound, and Taste factors. These results suggest that Touch did not serve as a unique measurement of spectators’ nostalgia.

However, despite maintaining the lowest mean of the five senses ($M = 4.36$), Touch still was above the scale’s midpoint. Furthermore, while the item “Physical contact with other spectators when cheering” maintained a mean score of 3.72, the two items assessing stadium seating had mean scores of 4.58 and 4.81, respectively. Therefore, the touch of stadium seating was shown to evoke nostalgia among spectators. This is intriguing considering the previous research failing to attain strong theoretical support for its role in evoking nostalgia. Previous research displayed personal objects and mementos eliciting nostalgia (Belk, 1990); however,
research has yet to substantively exhibit touch as an antecedent of nostalgia. However, similar to Gobe's (2001) suggestion of holding Coca Cola bottles connecting to individuals’ memory and emotions, perhaps sitting on ballpark seats brought back childhood memories. While many objects in individuals' daily lives does not maintain a distinguishable feel, the touch of unique objects such as stadium seats – in which many people have limited interaction – may be more suited to evoking nostalgia. The current study’s results suggest that while touch does not evoke the level of nostalgia compared to the other four senses, the sense is worthy of continued investigation concerning its ability to elicit nostalgia.

**Research Question 2**

The results of Research Question 2 displayed that Sociability was a significant, positive predictor of spectators’ pleasure ($\beta = .562, p = .001$). Spectators’ social experiences triggered memories of previous experiences with family and friends, inducing pleasure. From a theoretical standpoint, this finding aligns with previous research using the SOR framework, as spectators’ nostalgia evoked from being around family and friends triggered an emotional response. This finding is also consistent with previous research of nostalgia, which exhibited individuals experiencing nostalgia for social events with family and friends (Davis, 1979; Havlena & Holak, 1996). While not surprising, this finding is nonetheless meaningful as it provides evidence for nostalgic experiences producing pleasurable responses in the consumption environment. Hwang and Hyun’s (2013) post-consumption investigation found that individuals experienced nostalgia for the social component of a previous luxury restaurant experience. The current study advances theory by displaying individuals experiencing nostalgia while in the midst of a consumption experience. Given the social nature of sporting events, with many spectators attending games with family and friends – including most participants in the current study – this exhibits the
importance of other people to spectators’ experience. Memories are created while attending games as children with parents and siblings, and later experiences at sporting events with other family and friends elicit nostalgia for these moments. Such nostalgia may also occur for time with family and friends away from the baseball setting. Items comprising the Sociability factor included “The social interaction with other people at this game” and “The time socializing with friends/family at this game.” Therefore, attending a game with family or friends may have triggered memories of time with family and friends in other contexts. While the quantitative nature of this study limits deductions of the results, the positive impact of the Sociability factor on Pleasure exhibits the function of nostalgia impacting future consumer experiences, and creates an avenue for more research into nostalgic experiences.

From a practical standpoint, this result is beneficial to sport organizations as well as practitioners in industries including restaurants, movie theaters, and other forms of entertainment that attract families and groups of friends. In the sport context, many organizations already maintain promotional strategies highlighting the social nature of sporting events. The results of this study provide support for the continuation of such efforts, and for organizations who do not already do so, to begin placing focus on fans’ previous experiences with family and friends. Stride et al. (2015) showcased the prevalence of statues through MiLB and MLB, some of which feature children and families. More facilities should look into constructing such statues, and also explore other ways to remind fans of previous experiences with family and friends.

Organizations can place photos of families attending games together throughout the ballpark and show such interactions on the ballpark videoboard in an attempt to evoke memories of previous social experiences. Organizations can also focus on evoking nostalgia for family and friends through gameday marketing efforts. With the popularity of giveaway promotions in MiLB and
MLB, focus should be placed on items that draw upon fans’ experiences with family and friends. Fairley (2003) displayed the meaningful role nostalgia played in the experience of a group of traveling sports fans, even serving as a motive for taking part in the activity, and Wilson (2004) exhibited nostalgia contributing to the experience of Wrigley Field tourists. While the ability of nostalgia to serve as a motive has yet to be explored quantitatively in the sport context, the results of the current study provide reason for organizations to utilize nostalgia to attract fans. The team utilized for the current study featured a Daddy-Daughter Date night during the 2017 season. Organizations should initiate similar promotions highlighting relationships with family and friends. Furthermore, in-game promotions can also employ nostalgia. For example, between-inning promotions including parents with children may effectively engender nostalgia among fans as they recall events with their parents.

While this study was limited to MiLB, the finding of social nostalgia impacting pleasure may also assist other social forms of entertainment. For example, movie theaters may benefit from promoting individuals’ experiences attending movies with family and friends when they were younger. Similarly, theme parks can highlight the relationship between parents and children to attract visitors. Future research is needed in each of these contexts to provide results that generalize to other settings, but the current study displays the potential widespread impact of nostalgia for previous social experiences.

**Research Question 3**

Investigation of the third research question revealed that spectator pleasure positively impacted behavioral intentions. Theoretically, this result is not surprising, as much research employing the SOR framework exhibits individuals’ emotional responses impacting behavior (Donovan & Rossiter, 1982; Yüksel, 2007). Much previous consumer behavior research –
including sport fan research – utilized satisfaction as the outcome variable. The cognitive-affective composition of satisfaction, as presented in more recent investigation of satisfaction (Mano & Oliver, 1993; Oliver, 1993), provides credence for its use. However, while pleasure is solely an affective response (Russell & Pratt, 1980), its measurement may provide organizations with a better assessment of consumers’ experience. The current study employed the following six items, adopted from Bigne et al. (2005): angry-satisfied, unhappy-happy, dissatisfied-very pleased, sad-joyful, disappointed-delighted, and bored-entertained. With items including satisfied, happy, and entertained, such a factor may be more useful than a three-item factor focusing only on the “satisfaction” of consumers. This may especially be true in settings such as theme parks and baseball games, which are likely to induce a high level of emotion. More focus is needed on the use of pleasure as an outcome variable in various consumer environments, including sporting events.

**Research Question 4**

Results of Research Question 4 yielded two findings that contribute to future study within environmental psychology that employs the SOR framework. In analysis of the interaction of Pleasure and Arousal, a matched-pairs interaction term was created. While this method is a preferred technique (Marsh et al., 2004), a limitation of its interpretation is if one of the two interacting factors has large variance in its factor loadings (Foldnes & Hagtvet, 2014). With the original Arousal factor maintaining factor loadings ranging from .491 to .842, such variance likely contributed to the factor creating such disparity in the results based upon the inclusion and removal of its items. While this created difficulty in interpreting the results of the current study, the factor loading variance suggests that one or more of the items accurately assessed spectator arousal while one or more others did not.
The current study employed four Arousal items from Bigne et al.’s (2005) study of theme park experiences. The standardized loadings in their 2005 study ranged from .55 to .82. While these items were still preferred for the current study based upon their face validity and the relative similarity of the theme park and MiLB environments, the disparity among the items in explaining Arousal suggests that one or more of the four items is not accurately measuring Arousal. With environments such as coffee shops, retail stores, and sporting events ranging in their emotional impact upon individuals, greater focus is warranted on selecting (or creating new) items that accurately assess individuals’ arousal within the specific context of each study.

A second issue arising from the current study is the need for the use of Arousal in the SOR framework due to the relationship among the factors. The original Pleasure and Arousal factors in the current study maintained a Pearson’s correlation of $r = .750$, exhibiting the similarity between the factors. Previous studies utilizing the framework took place in environments including retail stores (Morrison, Gan, Dubelaar, & Oppewal, 2011) and restaurants (Hwang & Hyun, 2013), as well as Bigne et al.’s (2005) theme park context and the current study within sporting events. These studies employed various models specifying the relationships between Pleasure, Arousal, Behavioral Intentions, and other variables. For example, Bigne et al. (2005) found that Arousal positively predicted Pleasure. With the current study investigating nostalgia, the relationships among Pleasure, Arousal, and Behavioral Intentions were based off Hwang and Hyun’s (2013) study of nostalgia in the luxury restaurant context. They also found Arousal had no impact on the relationship between Pleasure and Behavioral Intentions. While Hwang and Hyun (2013) did not report the correlation between Pleasure and Arousal, based upon the results in stimulating environments such as restaurants, theme parks, and baseball games, more focus should be directed toward the relationships of these
variables and their practical implications in theoretical models. If Pleasure and Arousal are found to maintain moderate-to-strong relationships, than there may be no need in including Arousal in the model. This is especially of question in studies exploring the interaction between Pleasure and Arousal. Just as Russell (1979) found evidence for the removal of Dominance from the PAD framework, certain environments such as ballparks and theme parks may not gain new information from the inclusion of both Pleasure and Arousal. Future work should strongly consider the inclusion of Arousal based upon the context of the study.

**Statistical and Methodological Limitations**

The results of the current study must be understood while considering the novelty of the study. Utilizing an instrument that had not previously measured nostalgia, the results forced modifications of the model in order to construct a model that appropriately fit the theoretical model. Several items were removed, and two error correlations were necessitated, which while displaying the imperfection of the instrument, provide beneficial information for future research. For example, the Sight5 item stating, “The stadium’s sightlines to watch the game” was removed from the model due to its errors correlating with items on other factors and its partial loading onto the Smell factor. Surprisingly, this item attained a mean score of 5.44 among participants, but its incompatibility with other items from the Sight factor led to its removal from the model.

Other items that were removed from the model based upon statistical and theoretical reasoning included “The sound of cheering in the stadium” and “The smell of the crowd.” This result is not surprising considering the content of these items. While previous research provides support for the smell of foods and beverages evoking nostalgia (Havlena & Holak, 1996; Stern, 1992), assessing the smell of the crowd is a novel research exploration. The item’s mean rating of 3.55 suggests that this is not a nostalgic trigger. The sound of cheering in the stadium
meanwhile maintained a mean value of 5.35, suggesting that fans may in fact experience nostalgia based upon the sound of the crowd. While this item did not adequately load onto the Sound factor in the current study, this component of sporting events is worthy of future investigation to determine the role the sound of the crowd plays in triggering spectators’ nostalgia.

While the current study yielded a novel finding in exhibiting the impact of taste in evoking nostalgia, the complex, multisensory nature of food consumption still limits the interpretation of this finding. Also, due to the complexity of the experience, individuals may not be able to accurately assess how much nostalgia they are experiencing as a result of the taste – or other senses. Also, many participants in the current study responded "N/A" to items assessing consumption of food and beverages. While these non-responses were replaced through expectation maximization, minimizing impact to data analysis and results, the non-responses exhibit that not all spectators consume food and beverages while attending baseball games. While all fans are exposed to sights, smells, and sounds, the taste sense is restricted to those who consume food and beverages.

The results also displayed the difficulty of measuring nostalgia, especially in a context such as a baseball game. The current study provided a paragraph description of nostalgia and also employed two manipulation checks in order to ensure participants maintained an accurate comprehension of the concept. More than 100 participants did not accurately respond to at least one of these items, displaying the difficulty of its understanding. This serves as a unique methodological contribution to research. Future research attempting to examine similar psychological constructs in an uncontrolled environmental setting needs to employ techniques to enhance participants' understanding of the measured construct. With much research on nostalgia
using qualitative and experimental methods, the current study attempted to assess nostalgia experienced "in the moment," using a quantitative survey method.

**Limitations**

While the use of the instrument in this study yielded several methodological contributions to research, its use was nonetheless a limitation of the study due to its construction measuring satisfaction as opposed to nostalgia. The necessary respecification of the model in order to address the research questions exhibited the fact that the instrument was limited in accurately assessing the impact of nostalgia on spectators’ pleasure. Also, while the on-site data collection is a unique aspect of the study, with data collection occurring in the midst of spectators’ consumption of a baseball game, participants may have hurriedly completed the survey. This may have been a contributor to the large number of incorrect responses to the manipulation checks. Another limitation was the use of one team. While the team’s ballpark maintains many of the same features common among many new MiLB and MLB facilities, research is needed in other contexts in order to determine the generalizability of the current study’s findings.

Finally, the current study selected three games in which to collect data. These three dates were chosen in consultation with the team’s management in order to attain an accurate and generalizable sample of the team’s fans. However, the results yielded a primarily young sample of fans, with 62% of the survey’s respondents 32 years old or younger. While from a marketing standpoint a large number of fans in the prime 18-34 demographic is a benefit, the sample nonetheless is a limitation from a generalizability perspective. The nostalgic experience must also be considered when interpreting the results. Research shows that the majority of the memories in which individuals later experience nostalgia occur between age 10 and 30 (Holbrook & Schindler, 1996; Rubin et al., 1998). Thus, many of the current study’s participants
were still at an age in which they will experience moments that they will later recall as part of nostalgic experiences. At the same time, though, Davis (1979) noted that there is no minimum amount of time that must pass between events and the experience of nostalgia for such events. Considering the context of the current study, many fans likely attended baseball games with their parents and siblings as children and adolescents. Therefore, many of the participants in the current study maintained memories in which they experienced nostalgia. So, while the large number of young participants in the current study is a limitation, it also serves as a foundation for future research in the baseball setting to compare.

**Future Research**

The results of this study provide ample direction for future research. First, a novel, unique contribution of this study was its measurement of nostalgia evoked for previous experiences during a consumption experience. Much previous research of nostalgia utilized either qualitative or experimental methods, or surveyed individuals following an experience. The effectiveness of such a method to capture the nostalgia individuals experience while in an environment is unknown. To address this, future research should compare the current study's results with a survey of individuals following an event. Such research would provide both theoretical and practical knowledge as it would exhibit the level of nostalgia experienced during the consumption experience compared to a specific amount following the experience. Practically, with the difficulty of on-site data collection, this information would show the benefit of such research.

The results of this study also provided direction for practical investigations that may assist sport organizations. With the Sight factor shown to negatively predict Pleasure, future research should measure emotional responses to various ballpark features. For example, do old-
fashioned scoreboards elicit positive emotions? Do photos of past teams evoke a sense of 
pleasure or perhaps mostly bring about a sense of sadness from the realization that these times 
are in the past? Pajoutan and Seifried (2014) developed a theoretical flowchart examining the 
relationship between nostalgia and innovation technology. With the continued evaluation of sport 
facilities, understanding the proper balance of nostalgic and modern amenities will assist sport 
organizations in creating a desirable spectator experience.

Future research should also explore elements of sound within the ballpark experience. An 
intriguing aspect of the Sound factor was the item, “The sound of the stadium’s announcer.” This 
item attained a mean value of 5.36, lower than items assessing the sound of the music and sound 
system. While the tenure of the public address announcer at the ballpark in the current study is 
unknown, this serves as a point for future research. For example, former Yankee Stadium 
anouncer Bob Sheppard held his role for more than 50 years (Monek, 2010). Thus, many fans 
likely attended games as children and then later as adults while Sheppard was announcing, 
creating situations prone for nostalgia. In addition to Sheppard, numerous professional and 
collegiate teams feature public address announcers who have called games for decades 
(McCollough, 2013; 225 Magazine, 2011). While this type of nostalgic experience takes many 
years to develop, understanding unique aspects of the ballpark experience can assist 
organizations in making decisions that are more likely to evoke such nostalgic responses.

Similarly, while the sound of a public address announcer may elicit a sense of collective 
nostalgia, the ballpark is ripe with features that may evoke a feeling of personal nostalgia. One of 
the unique characteristics of nostalgia – which was investigated in this study – is that a sight, 
smell, or sound can take oneself back to a previous time that is completely unrelated to the 
current experience. Much like smelling hamburgers while walking past a neighborhood
restaurant can take a person back to their father grilling in their backyard, the sights, smells, and sounds within a ballpark may bring about a memory of an experience that occurred outside the ballpark. Based upon this idea, future research should utilize qualitative methods to ascertain the types of personal experiences that are triggered while at the ballpark. Understanding the propensity of these experiences to evoke memories from previous times at baseball games versus other non-baseball related experiences can provide additional knowledge to assist sport organizations in creating a nostalgic environment. Furthermore, the use of other research methods including experiments and even more complex techniques such as neuroimaging may be able to more accurately assess the true impact of nostalgia within the ballpark experience.

Future study should also look into the ability of sport organizations to cultivate experiences in which fans may experience nostalgia for the baseball game as a result of later sensory experiences outside the ballpark. For example, a unique aspect of baseball is the playing of "walk-up" songs, in which a portion of the same song is played for each home team batter each time they come up to bat. Some players select songs that are incongruous with the baseball setting. Thus, hearing a song like “Circle of Life” may cultivate an association between the song and player, later evoking nostalgia among fans at the hearing of the song. Organizations could use nostalgia for music both within and outside the ballpark. With the simplicity and practicality of such strategies, more research is deserved on this topic.

Future research should also look into the role of sense of place in potentially contributing to spectators' nostalgia. The current study chose a ballpark that featured many design elements highlighting its city and region, and the team served several local food items and varieties of beer. Surprisingly, no differences in nostalgia experienced through spectators’ five senses or social interaction were found based upon geographic residence. Future studies may benefit from
utilizing other measures of geographic identity include sense of place, place attachment, and place identity, which may exhibit the role of spectators' identity in nostalgic experiences. With many ballparks throughout MiLB and MLB emphasizing their cities and regions, such research may assist organizations in decisions concerning food and beverage offerings, music selection, and facility design.

Similarly, the role of sport and team identification on nostalgic experiences in the stadium setting is worthy of future investigation. The team utilized for the current study was partly chosen based upon its long association with the city in which it plays. Despite its ballpark being less than five years old, the team has played in the city for more than 30 years, and has a connection with the city dating back more than a century. Therefore, many fans who are in middle-adulthood likely attended games as children. Still, many fans likely do not maintain a high level of identification with the team, compared to fans of an MLB team (c.f., James & Ross, 2002). While many of the instrument's items including the sound of the stadium's music and smell of stadium foods were likely more prone to elicit nostalgic responses among all types of spectators, others such as the sight of the stadium's scoreboard and smell of the crowd may be more likely to evoke nostalgia among spectators who have attended many games at the ballpark. Thus, future research is warranted in the context of MLB and other major professional leagues, where many fans maintain higher identity with the team (James & Ross, 2002).

In conclusion, the current study exhibited the experience of nostalgia in the midst of a consumption experience to produce a pleasurable response. This finding is a meaningful contribution both to literature as well as managers and marketers within the sport industry and other consumer contexts, given the positive relationship between Pleasure and Behavioral Intentions. Meanwhile, the insignificant impact of nostalgia evoked through spectators’ senses
on Pleasure despite their moderate-to-high mean scores necessitates further research to determine why spectators’ nostalgia did not engender a feeling of pleasure. With ballparks’ use of nostalgic stimuli, the effectiveness of these features is in question. The current study serves as an initial investigation into this topic, creating an avenue for future research on nostalgia within the sport spectator experience.


# Appendices

**Table 13**  
Adaptation of Scale Items

<table>
<thead>
<tr>
<th>Original item</th>
<th>Adapted item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sight</strong></td>
<td></td>
</tr>
<tr>
<td>The stadium’s colors are attractive.</td>
<td>The visual appeal of the stadium’s colors.</td>
</tr>
<tr>
<td>The stadium’s decorations are enjoyable.</td>
<td>The visual appeal of the stadium’s decorations.</td>
</tr>
<tr>
<td>The stadium provides good sightlines to watch the game.</td>
<td>The stadium’s sightlines to watch the game.</td>
</tr>
<tr>
<td>The stadium’s architecture is attractive.</td>
<td>The visual appeal of the stadium’s architecture.</td>
</tr>
<tr>
<td>The stadium’s landscape is attractive.</td>
<td>The visual appeal of the stadium’s landscape.</td>
</tr>
<tr>
<td>The stadium’s scoreboards are entertaining to watch.</td>
<td>The sight of the stadium’s scoreboards.</td>
</tr>
<tr>
<td><strong>Sound</strong></td>
<td></td>
</tr>
<tr>
<td>The stadium announcer is entertaining.</td>
<td>The sound of the stadium’s announcer.</td>
</tr>
<tr>
<td>The sound of cheering in the stadium adds excitement.</td>
<td>The sound of cheering in the stadium.</td>
</tr>
<tr>
<td>The stadium has a quality sound system.</td>
<td>The sound of the stadium’s sound system.</td>
</tr>
<tr>
<td>The music at the stadium is exciting.</td>
<td>The sound of the music at the stadium.</td>
</tr>
<tr>
<td><strong>Touch</strong></td>
<td></td>
</tr>
<tr>
<td>The stadium provides comfortable seating.</td>
<td>The physical comfort of the stadium’s seating.</td>
</tr>
<tr>
<td>The stadium has appropriate spatial arrangement of the aisles and seats.</td>
<td>The stadium’s spatial arrangement of the aisles and seats.</td>
</tr>
<tr>
<td>Physical contact with other spectators when cheering is exciting.</td>
<td>Physical contact with other spectators when cheering.</td>
</tr>
<tr>
<td><strong>Smell</strong></td>
<td></td>
</tr>
<tr>
<td>The smells at the stadium bring back pleasant memories.</td>
<td>The smells in the air at the stadium.</td>
</tr>
<tr>
<td>The smell of the crowd is exciting.</td>
<td>The smell of the crowd.</td>
</tr>
<tr>
<td>The stadium has a unique smell.</td>
<td>The stadium’s unique smell.</td>
</tr>
<tr>
<td>I like the smell of stadium foods.</td>
<td>The smell of stadium foods.</td>
</tr>
<tr>
<td>The smell of the tailgate parties is exciting.</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Taste</strong></td>
<td></td>
</tr>
<tr>
<td>The stadium offers a wide range of food and beverage.</td>
<td>N/A</td>
</tr>
<tr>
<td>When eating at this stadium, I feel like I am released from everyday life.</td>
<td>The food I am eating at the game.</td>
</tr>
<tr>
<td>It feels like foods purchased inside the stadium taste better than foods purchased outside.</td>
<td>N/A</td>
</tr>
<tr>
<td>The stadium provides good tasting food.</td>
<td>The taste of the stadium’s food.</td>
</tr>
<tr>
<td><strong>Sociability</strong></td>
<td></td>
</tr>
<tr>
<td>I have quality time with my friends/family at the event.</td>
<td>The time socializing with my friends/family at this game.</td>
</tr>
<tr>
<td>I feel a sense of family among the fans at the event.</td>
<td>The sense of family among the fans at this game.</td>
</tr>
<tr>
<td>I really enjoy the social interaction in the event.</td>
<td>The social interaction with other people at this game.</td>
</tr>
</tbody>
</table>
### Table 14
Pleasure Factor Items

<table>
<thead>
<tr>
<th>At this game I feel …</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unhappy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissatisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bored</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disappointed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 15
Arousal Factor Items

<table>
<thead>
<tr>
<th>At this game I feel …</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indifferent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 16
Behavioral Intentions Factor Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>The probability that you will attend another sporting event of your team is …</td>
<td>The likelihood that you would recommend (team name) game to a friend is …</td>
</tr>
<tr>
<td>If you had to attend this game again, the probability you would make the same choice is …</td>
<td><em>Items measured using a 7-point Likert-type scale ranging from Very low (1) to Very high (7)</em></td>
</tr>
</tbody>
</table>
**Table 17**
Survey Items

<table>
<thead>
<tr>
<th>Factor/item</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Sight**   | The visual appeal of the stadium’s architecture.  
The visual appeal of the stadium’s landscape.  
The stadium’s sightlines to watch the game.  
The sight of the stadium’s scoreboards.  
The visual appeal of the stadium’s decorations.  
The visual appeal of the stadium’s colors. |
| **Sound**   | The sound of cheering in the stadium.  
The sound of the stadium’s sound system.  
The sound of the stadium’s announcer.  
The sound of the music at the stadium. |
| **Touch**   | Physical contact with other spectators when cheering.  
The physical comfort of the stadium’s seating.  
The stadium’s spatial arrangement of the aisles and seats. |
| **Smell**   | The smells in the air at the stadium.  
The stadium’s unique smell.  
The smell of the crowd.  
The smell of stadium foods. |
| **Taste**   | The food I am eating at the game.  
The beverages I am drinking at the game.  
The taste of the stadium’s food.  
The taste of the stadium’s beverages. |
| **Sociability** | The sense of family among the fans at this game.  
The social interaction with other people at this game.  
The time socializing with my friends/family at this game. |
| **Manipulation checks** | Nostalgia is a positive memory about the past.  
Nostalgia is a feeling of regret. |

*Items measured using a 7-point Likert-type scale ranging from 1 (Very little) to 7 (Very much)
Table 18
Demographic Questions

The following information is being requested for statistical purposes only. Please answer the following questions by placing a mark in the box or writing a response in the space provided.

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your gender?</td>
<td>☐ Male ☐ Female ☐ Prefer not to say</td>
</tr>
<tr>
<td>What is your age?</td>
<td>__________</td>
</tr>
<tr>
<td>Are you a season ticket holder?</td>
<td>☐ Yes ☐ No</td>
</tr>
<tr>
<td>Approximately how many (team name) games did you attend last season?</td>
<td>☐ 0 ☐ 1-3 ☐ 4-6 ☐ 7-9 ☐ 10-12 ☐ 13-15 ☐ 16-18 ☐ 19-22 ☐ 23-25 ☐ More than 25</td>
</tr>
<tr>
<td>Who are you attending this game with? (Check all that apply)</td>
<td>☐ Myself ☐ Spouse ☐ Spouse and children ☐ Other family ☐ Friends ☐ Business associates ☐ Other</td>
</tr>
<tr>
<td>What is your relationship status?</td>
<td>☐ Single, never married ☐ Single, but living with a significant other ☐ Married ☐ Divorced ☐ Other</td>
</tr>
<tr>
<td>What is your approximate annual household income?</td>
<td>☐ Less than $50,000 ☐ $50,000-$74,999 ☐ $75,000-$99,999 ☐ $100,000-$124,999 ☐ $125,000-$149,999 ☐ $150,000+</td>
</tr>
<tr>
<td>What is your ethnicity?</td>
<td>☐ African-American/Black ☐ Asian ☐ Caucasian/White ☐ Hispanic ☐ Other ______________________________________</td>
</tr>
<tr>
<td>What is your education?</td>
<td>☐ Less than high school ☐ High school degree/GED ☐ Some college ☐ 2-year college degree ☐ 4-year college degree ☐ Graduate degree</td>
</tr>
<tr>
<td>Please provide the zip code of your current residence.</td>
<td>________________</td>
</tr>
<tr>
<td>What inning is the game currently in?</td>
<td>________________</td>
</tr>
</tbody>
</table>
Consent Form

Hello! You are being invited to participate in a research study by completing the following survey about your experience at tonight's game. The information collected will assist the (team name) in enhancing the game experience; therefore, your responses are extremely valuable. The survey will take approximately five minutes to complete.

Taking part in this survey is voluntary. The only requirement to participate in this study is that you are at least 18 years old. You may choose to not complete this survey, and you may skip any questions that make you uncomfortable. All information collected will be used only for this research and will be kept confidential.

The only identifiable information the researchers may have access to is your zip code if you choose to provide it at the end of the survey as well as your IP address if you complete this survey online. All identifying information will be kept confidential, and IP addresses will be destroyed once all surveys are collected within the next seven (7) days.

In exchange for your time completing this survey, you are being provided one (Team Name) Buck, which you can use to receive $1 off at concession or merchandise stands.

If you have any questions, comments, or concerns, please contact Mark Slavich at slavichma@vcu.edu.

By accepting to complete this survey, you acknowledge:

* You are at least 18 years of age.
* You have read the above information explaining this study.
* You freely and voluntarily choose to participate in this research project.

You can complete the following survey using one of three methods: (1) typing the link below into your phone, (2) scanning the QR code with your phone, or (3) completing the paper copy and returning it to the person who provided it to you. Thank you.

(1) Survey link: https://www.surveymonkey.com/r/...

(2) QR code:
Survey Page One

Please reading the following information below before beginning this survey.

Nostalgia is a feeling that is caused by remembering something from the past and wishing that you could experience it again.

A person may experience nostalgia when smelling cinnamon rolls, reminding them of their grandmother. One may also experience nostalgia when hearing a song that was popular in high school or seeing a historic building that reminds them of a previous era in time.

Based upon your understanding of nostalgia provided in the box above, please rate the level of nostalgia you are experiencing at tonight’s game based upon the following statements below. (1 = No nostalgia experienced at all; 7 = Nostalgia experienced very much)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>The smells in the air at the stadium.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The physical comfort of the stadium’s seating.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The sound of the stadium’s announcer.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The taste of the stadium’s food.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The time socializing with my friends/family at this game.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The visual appeal of the stadium’s colors.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The sense of family among the fans at this game.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The sound of cheering in the stadium.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The smell of the crowd.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>Nostalgia is a positive memory about the past.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
</tbody>
</table>

Please rate the level of nostalgia you are experiencing at tonight’s game based upon the following statements below. (1 = No nostalgia experienced at all; 7 = Nostalgia experienced very much)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Net at all</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>The stadium’s spatial arrangement of the aisles and seats.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The visual appeal of the stadium’s decorations.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The taste of the stadium’s beverages.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The visual appeal of the stadium’s architecture.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The stadium’s unique smell.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The smell of stadium foods.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The visual appeal of the stadium’s landscape.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The sound of the stadium’s sound system.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The beverages I am drinking at this game.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The sound of the music at the stadium.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The stadium’s sightlines to watch the game.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>Nostalgia is a state of disbelief.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>Physical contact with other spectators when cheering.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The food I am eating at this game.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The sight of the stadium’s scoreboards.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
<tr>
<td>The social interaction with other people at this game.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
</tbody>
</table>
The following section of the survey concerns how you feel about your experience at tonight’s game. Please respond to each pair of adjectives by circling the appropriate number from 1-7.

At this game, I feel...

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
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</table>

The probability that you will attend another (team name) game is...

Very low 1 2 3 4 5 6 7 Very high

The likelihood that you would recommend a (team name) game to a friend is...

Very low 1 2 3 4 5 6 7 Very high

If you had the choice to attend this game again, the probability you would make the same choice is...

Very low 1 2 3 4 5 6 7 Very high

Please answer the following questions by placing a mark in the box or writing a response in the space provided.

What is your gender?  □ Male  □ Female  □ Prefer not to say

What is your age? __________

Are you a (team name) season-ticket holder?  □ Yes  □ No

Approximately how many (team name) games did you attend last season?

□ 0  □ 1-3  □ 4-6  □ 7-9  □ 10-12  □ 13-15
□ 16-18  □ 19-21  □ 22-24  □ 25+

Who are you attending this game with? (Check all that apply)

□ Myself  □ Spouse  □ Spouse and children  □ Other family
□ Friends  □ Business associates  □ Other

What is your relationship status?

□ Single, never married  □ Single, but living with a significant other
□ Married  □ Divorced  □ Other

What is your approximate annual household income?

□ Less than $50,000  □ $50,000-$74,999  □ $75,000-$99,999
□ $100,000-$124,999  □ $125,000-$149,999  □ $150,000+

What is your ethnicity?

□ African-American/Black  □ Asian/Pacific Islander  □ Caucasian/White
□ Hispanic/Latino  □ Other ______________________

What is your highest level of education?

□ Less than high school  □ High school degree/GED  □ Some college
□ 2-year college degree  □ 4-year college degree  □ Graduate degree

What is the zip code of your current residence? ________

What inning is the game currently in? ________
VITA

Mark A. Slavich was born on Oct. 10, 1986, in New Orleans, La. The son of a restauranteur and teacher, it is appropriate that his journey has brought him to academia, with research interests including food in sports. A New Orleanian at heart, he spent his adolescent years in Alabama, before returning to Louisiana for college, eventually attaining a Bachelors in Marketing in 2009 and Masters in Sport Management in 2011 from LSU. After spending a brief time in sports information, he chose to return to school to pursue a doctorate in Sport Leadership at VCU. His research interests align with his personal interests and hobbies – sports, food, and travel. His sport fan highlights include visiting more than 30 MLB ballparks and every SEC football stadium.