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# An Examination of Twitter's Role in the Formation of Collegiate Sport Fans' Allegiance Using the Revised Psychological Continuum Model (PCM)

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An Examination of Twitter's Role  
in the Formation of Collegiate Sport Fans' Allegiance  
Using the Revised Psychological Continuum Model (PCM)

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A Thesis  
Presented to  
the Graduate School of  
Clemson University

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science  
Parks, Recreation and Tourism Management

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by  
Sukjoon Yoon  
December 2013

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Accepted by:  
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## ABSTRACT

Allegiance has long been considered one of the most notable research topics in sport studies (Funk & Pastore, 2000; Wann & Branscombe 1990). Allegiant fans are those who have formed strong connections to their favorite team, and these attitudes strengthen their psychological involvement.

Twitter has grown dramatically since its inception in 2006, totaling more than 500 million users as of early 2013 (Gupta, Goel, Lin, Sharma, Wang, & Zadeh, 2013). Twitter is one of the most popular communication technologies used by both fans and sport organizations (Clavio, 2011), and allows individuals, organizations, and other social groups to connect with one another (Hambrick, Simmons, Greenhalgh, & Greenwell, 2010).

The purpose of this study was to examine the mediating effects of Twitter on the formation of fan allegiance using the revised Psychological Continuum Model (PCM), which reflects fans' psychological development to allegiance with a particular sport team. Subjects (N = 412) were collected from fans attending four men's baseball games at Clemson university during the spring 2013 season. Of the 412 collected surveys, only 212 were Twitter users who followed the Clemson Men's Baseball team's Twitter account. The results demonstrated a significant relationship between Twitter usage and team allegiance reflected through a high level of psychological connection to a specific team. Based on the results of this study, practitioners can identify a unique market segment from surveyed participants, which could help them attract and reach team allegiance through Twitter. Specifically, more Twitter usage regarding a specific team

influences fans with weak attachments, to strengthen their attachment toward a team and increase their Twitter usage. Since this study shows the positive relationship between the frequency of Twitter usage and fan allegiance, it could target participants with lesser Twitter usage to increase their frequency, thus, increasing new marketing and communication strategy related to Twitter. Finally, the empirical evidence of this study can provide a better understanding of the growing phenomena of social media and the trends of Twitter usage in sport study context. This study could extend to include other kinds of social media and their effectiveness during interactions between sport organizations and sport fans.

## DEDICATION

To the memory of my grandmother in Heaven, Seung Nam Shin, who taught me through life how to love and how to live.

To my parents, Tae Won Yun and Dul E Sung, and my sister, Hyun Gi Yun.

## ACKNOWLEDGMENTS

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## CHAPTER ONE

### INTRODUCTION

Over the past decade, technological advances have led to the dramatic growth of the online marketplace through the widespread global use of social media. These advances in social media not only provide users with interactive two-way communication tools but also allow them to communicate efficiently and effectively with a growing population world-wide in new and unique ways (Zhang et al., 2010). Specifically, new communication technologies have provided users with various platforms for self-presentation, the organization of virtual communities, and the utilization of instant messaging in cyberspace (Sanderson, 2008).

While Web 2.0, as explained by O'Reilly (2007), was introduced as a vehicle for sharing data and services, it also created a new forum that allows users to contribute to its growth and creation through participation in social networking, revitalizing the online marketplace. Among social media, Social Networking Services (SNS) represents one of the ways communication has expanded to become a dominant global trend. The use of social media by adult Internet users in the United States increased from 5% in 2005 to 65% in 2011 (Madden & Zickuhr, 2011). For example, the online social media platform Twitter, which was introduced in 2006, dramatically grew over the next six years, totaling more than 500 million users by February 2012 (Dugan, 2012). It is one of the most popular communication technologies for both individuals and organizations (Clavio, 2011), providing users with the opportunity to post short messages up to 140 characters long called *tweets*, which are then read by followers. Its increasing use allows individuals,

organizations, and other social groups to connect with one another more effectively (Hambrick, Simmons, Greenhalgh, & Greenwell, 2010).

One area in which social media is playing an essential role is in the sports world (Sanderson, 2011; Sanderson & Kassing, 2011), becoming increasingly influential in the way professional sports are being marketed. Moreover, an increasing number of sport organizations and teams are relying on the social media, along with the Internet and mobile technology, to facilitate sport consumer behavior and to encourage ticket sales and the purchase of team merchandise (Mullin, Hardy, & Sutton, 2000) as part of their marketing, brand-management, and communication strategies. More importantly, they are realizing the benefits and value of social media as both a communication and marketing tool. One of the dominant topics of discussion regarding social media is its role in helping sport organizations understand consumer behavior and its viability for addressing these needs for marketing their products using new and unique methods (Blaszka, 2011). Enhancing this understanding will help sports organizations strengthen their relationships with consumers.

Social media, specifically Twitter, is an optimal way for sport organizations to communicate with potential consumers through the Internet. These technologies increase the opportunities for fans to engage in topics of interest concerning sport teams, particularly those to which they are most attracted. That being said, it is necessary for sport organization experts to understand the online environment and its impact on fan-team relationships (Clavio & Kian, 2010; Hambrick, Simmons, Greenhalgh, & Greenwell, 2010). Sport marketers want to heighten the experience and increase fan interaction using

advanced technology to allow their followers to interact their teams at home, at school or work, or in the stadium (Petersen, 2009).

Mirroring the growth and success of the sport industry, Twitter is rapidly increasing in popularity, allowing users to share their interests and information about their favorite teams or brands (Schultz & Sheffer, 2010). One of its advantages is the unique method of communication it offers: by relying on direct communication between the fans and the athletes and sport figures, Twitter encourages sport consumers to actively identify with specific teams or athletes and offers their thoughts about them and their actions both on and off the field (Sanderson & Hambrick, 2012). This social identity and the resulting commitment to teams or athletes can stimulate maladaptive behaviors (Wakefield & Wann, 2006) if fan expectations are not met as well as offering forum for expressing praise and support (Browning & Sanderson, 2012).

In addition to using Twitter as a communication tool linking organizations and athletes with their fans, it is increasingly being used as a marketing tool for enhancing allegiance, cultivating relationships with supports, and building or maintaining a strong brand presence (Coyle, 2010). The Women's Professional Soccer (WPS) League is one example of a niche league using Twitter as a strong marketing tool to develop a fan base (Gregory, 2009). However, since Twitter is a new form of social media, the research on the number of fans, sport organizations or teams using Twitter is limited as are studies on the effective ways to use it and its impact in such areas as increasing the attendance and the number of followers. To better understand sport consumers' use of Twitter, initial research is needed to examine the development of allegiance in fans. Understanding this

factor will help explain why Twitter users follow players, coaches, and teams. In addition, this information will help sports teams and managers more effectively use Twitter to reach their fan base.

Allegiance is defined as the commitment to a particular team or brand that shapes sport fans' desires and cognitive thoughts through behavioral and attitudinal means (Funk & James, 2006). Loyal sport fans have well-formed attitudes about the team they like, attitudes that are connected by a strong psychological link (Groot & Robinson, 2008). Funk, Haugtvedt, and Howard (2000) propose that allegiance can be measured by personal commitment. Earlier research by Haugtvedt and Petty (1992) suggests that the formulation of these personal commitments can be examined using a three-step process: (a) initial beliefs, (b) post-initial persuasive messages, and (c) post-second persuasive messages. Funk and James (2006) included this three-step process in their research, focusing on individual factors instead of social situational factors such as parents, media, and peers. They also argued that allegiance is conceptualized by an individual's distinct attitudinal properties, including intensity, personal relevance, and direct experience. Although previous research that examined fan loyalty in terms of either attitudinal or behavioral components, these two researchers emphasize that this factor utilizes both based upon attributes and benefits, attachment properties, and loyalty.

Expanding on their previous research, Funk and James (2001) conceptualized the Psychological Continuum Model (PCM) as a platform for understanding an individual's hierarchy development through four stages of psychological progression: (a) awareness, (b) attraction, (c) attachment, and (d) allegiance. Their revised PCM, developed in 2006,

added specific inputs, processes, and outputs to the earlier framework, additions that provide a fuller understanding of the effects of working through the four stages of this vertical continuum. Furthermore, the revised PCM illustrates how each step helps the individual move to the next level (Funk & James, 2006) in addition to describing a consumer's psychological and behavioral perspectives toward sport teams. Although the revised PCM enhances the understanding of the psychology and behavior of sport fans as they choose and evaluate their favorite teams or brands, more research is needed to complement this model in order to more fully grasp sport-consumer behavior. Such studies have been focused in the areas of online activity, music, and consumer trends, beginning with the exposure of sport fan to a particular team (Lee, Park, Kim, Kim, & Moon, 2011).

#### Statement of the Problem

However, with the enormous growth and success of online social networks, team preference, consumer allegiance, and the motivational factors for game attendance are increasingly being studied, the results helping sport organizations better understand consumers (Backman & Crompton, 1991; Funk & James, 2006; Madrigal, 2006; Mahony, Mardrigal, & Howard, 2000). In the context of sport today, most research to date has focused on how sport teams can increase the current allegiance of their fans (Backman & Crompton, 1991; Funk & James, 2006; Reichheld, 1993); however, very little has been conducted to determine how team allegiance develops. More specifically, there has been limited research regarding the use of social media, in particular Twitter, by sport fans, as they follow players, coaches, and teams and develop a close relationship with them.



According to Hambrick et al. (2010), one area of future research on social media should concern itself with the engagement between the sport organizations and fans. Thus, there is merit in investigating the process of fostering allegiance with sport consumers by examining their psychographics, sociodemographics, and team identification determined through the use of Twitter, an areas which is relatively unstudied (Mullin, Hardy, & Sutton, 2000; Pitts & Stotlar, 2007; Zhang, Pease, Hui, & Michaud, 1995). While social media as tool for marketing, networking, and public relations has recently attracted the attention of scholars as a new paradigm for the study of sport communication, the question has been raised as to why collegiate sport have been exceptionally slow in embracing social media (Clavio, 2011).

#### Purpose of the Study

In light of this question, this study proposes to investigate Twitter's role in the formation of team allegiance using the framework of the revised PCM. Although collegiate sport programs are using social media to communicate with their fans, little research has been conducted to determine how social media, specifically Twitter, impacts the formation of team allegiance, information important for sport managers and sport experts (Blaszka, 2011). More specifically this study expects to contribute to future research and to serve as a marketing tool by increasing the understanding of consumers' needs and wants. Despite the rapid rise of studies on social media conducted in academic and practical disciplines, few researchers have attempted to apply principles of social media to areas of athletic research. With these goals in mind, the primary focus of this

study will be to analyze how individuals interact with sport teams via Twitter as well as how those interactions form allegiance.

### Objectives of the Study

The objectives of this study are:

1. To understand the demographics and psychographics of sport fans who use Twitter for market segmentation purposes.
2. To examine the sport media consumption levels of Twitter users.
3. To estimate fan allegiance as determined by individual use of Twitter at four Clemson University home baseball games.
4. To estimate the value of Twitter's role in the formation of allegiance between a fan and a favorite team.

### Research Hypotheses

The research hypotheses for this study were developed based on the relationship between the proposed model of psychological commitment toward a sport team and the use of Twitter. They hypotheses are as follows:

H1: There is a significant relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attribute and benefits) as a result of Twitter usage during a baseball game.

H1-1: There is a significant relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attribute and benefits) as a result of Twitter usage before or after a baseball game.

H2: There is a significant relationship between Level 2 outcomes (attributes and benefits) and Level 3 outcomes (i.e., knowledge, importance, and affect) related to attitude strength properties as a result of Twitter usage during a baseball game.

H2-1: There is a significant relationship between Level 2 outcomes (attributes and benefits) and Level 3 outcomes (i.e., knowledge, importance, and affect) related to attitude strength properties as a result of Twitter usage before or after a baseball game.

H3: The relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attributes and benefits) is mediated by the attachment process as a result of Twitter usage during a baseball game.

H3-1: The relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attributes and benefits) is mediated by the attachment process as a result of Twitter usage before or after a baseball game.

### Limitations of the Study

This study is seen as an initial step in this area of research; therefore, it has several limitations, the first of which is sample bias. The scope of this study is narrow, as it uses small samples, only one social media tool, Twitter, and only one collegiate sport team, Clemson University's baseball team. Therefore, the results of the study are not meant to be generalized as more research involving larger, more varied samples is needed.

In addition, the data were collected over the course of one month—from February 10, 2013, to March 16, 2013. It would be beneficial to examine trends over an extended period of time to determine whether management techniques remain constant or change

over time. In addition, the Twitter user levels used to describe the current interactions were not controlled for any type of covariate (i.e., time of day). Therefore, the current needs to be expanded to include a longer period of time and related to various covariates.

A third limitation is the respondents' personal bias. Since the survey was self-administered, it cannot be assumed that all respondents answered all survey questions honestly.

### Significance of the Study

This study will contribute to the current body of literature by investigating the relationship between sport fan allegiance and the use of Twitter, a form of social media, used in advertising, marketing, and other areas. More specifically, this study will determine whether studying interactions with Twitter is an effective way to understand the developing relationship between individuals' awareness and emotions related to watching sport games and their allegiance toward specific sport teams.

In addition, this study will identify the frequency and purpose of Twitter usage, albeit with limitations, the results helping to identify basic guidelines for learning how to best use social media in the sporting arena. Moreover, this research will aid professional and amateur sport marketing professionals by providing them with insights into sport consumer behavior, insights that can potentially determine the needs and motivations of consumers who use the Internet. As a result, it will help shape Internet marketing communication for sport marketers wishing to improve their marketing, media, and public relations efforts.

Finally, this study may contribute empirical evidence that will lead to a further understanding of the growing phenomenon of social media and begin a trend of using Twitter content in future studies. Based on the theoretical concepts of the revised PCM and social capital theory (Lin, 1999), this study may provide further knowledge about fan allegiance and its development. By examining this concept in light of Twitter usage, these results represent a pioneering effort in the examination of the interrelationship between sport and technology.

### Organization of the Thesis

This thesis is organized into five chapters with accompanying appendices. Chapter I has provided an introduction to new communication technologies, social media, Twitter, allegiance, the Psychological Continuum Model (PCM), and the relationship between social media and sport. This chapter has also identified the importance of estimating the effect of Twitter's role in the formation of fan allegiance towards a favorite team.

Chapter II presents a comprehensive literature review of the theoretical development of the PCM, the revision model, and Twitter are provided.

Chapter III explains the research methodology used in this study to estimate the relationship between fan allegiance of supporters attending four Clemson University home men's baseball games and their Twitter usage. Specifically this chapter describes the sample selection, the data collection procedures, and the measurements involved in this study.

Chapter IV reports, interprets, and analyzes the findings in relation to the research hypotheses of this study. It presents the descriptive findings of all respondent results of statistics. Chapter V concludes this study by summarizing the significance of the research findings, its implications, limitations, and the future research directions.

### Definition of Terms

The following definitions are provided to assist in the understanding of the terms used throughout the study. Those definitions not accompanied by a citation were developed by the researcher.

- *Web 2.0* – Web 2.0 is the network that serves as a platform for individuals to interact and collaborate with one another in a virtual community.
- *Social Media* – Social media represents direct and indirect communication tools that connect communities of people, allowing them to share information, knowledge, and opinions.
- *Social Networking Service (SNS)* – SNS is a web-based service that forms relationships and prompts interactions among individuals having similar interests. These services focus on maintaining and improving social resources within a bounded system for the interaction of individuals.
- *Twitter* – Twitter is an online social networking service that enables its users to develop and distribute messages to others.
- *Tweet* – A tweet is a post made on the Twitter online message service that is limited to 140 characters.

- *Follower* – A follower is a function on Twitter that enables users to follow or subscribe to another user's posts.
- *Allegiance* – Allegiance refers to a fan's well-formed attitudes toward a specific team that he or she likes; these attitudes are connected by a strong psychological link.
- *Psychological Continuum Model (PCM)* – PCM is a theoretical model summarizing the process by which individuals strengthen a connection to sport or teams.
- *Atlantic Coast Conference (ACC)* – The ACC is a collegiate athletic conference in Division I of the U.S. National Collegiate Athletic Association. It is comprised of 12 member universities: Clemson, Duke, Maryland, North Carolina, North Carolina State, South Carolina, Wake Forest, Georgia Tech, Florida State, Miami, Virginia Tech, and Boston College.

## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

This literature review provides an analysis of the research pertaining to the study proposed here on allegiance and Twitter. It begins with a discussion of the Psychological Continuum Model (PCM) to provide the historical context of the theoretical framework for this study. The second section focuses on the reason for its revision before detailing the conceptualization and the development of each level of the revised Psychological Continuum Model (PCM). A discussion and analysis of the four stages— Awareness, Attraction, Attachment, and Allegiance —is then provided. The remaining sections define and characterize Twitter before concluding with a discussion of how sport teams, organizations, athletes, fans use this new social medium.

#### Psychological Continuum Model (PCM)

Previous research on allegiance has focused on investigating the connection between sport fan and a sport or team, resulting in several concepts describing it: attraction (Hansen & Gauthier, 1989), identification (Wann & Branscombe, 1990), loyalty (Murrell & Dietz, 1992), involvement (Kerstetter & Kovich, 1997), association, (Gladden, Milne, & Sutton, 1998), importance (Funk & Pastore, 2000), commitment (Mahony et al., 2000), and attachment (Funk et al., 2000). The semantic differences explored in the literature have led to the development of a model based on sport fan psychology to examine the difference between a spectator and a fan.

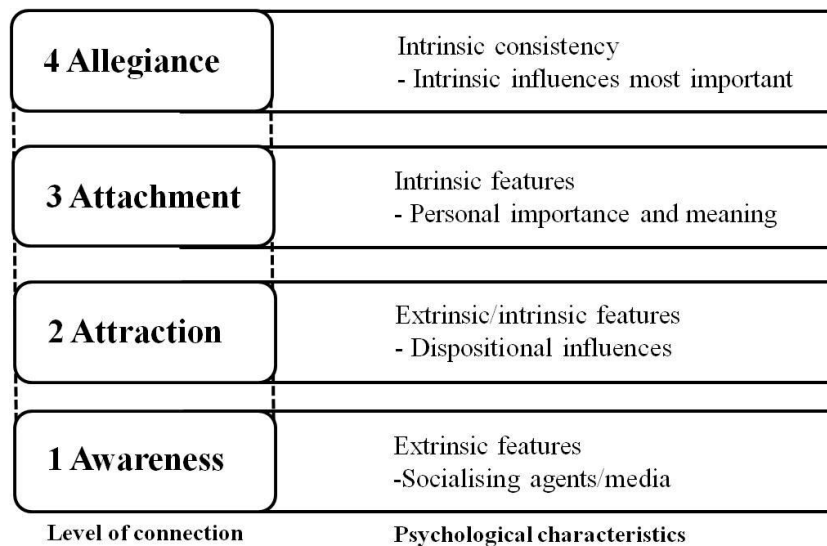


This initial resulting model, referred to as the Psychological Continuum Model (PCM) developed by Funk and James (2001), provides a platform for the study of sport fans. It focuses on allegiance, proposing that it is formed by persistence, resistance to change, and the impact of cognitive processes and behavior. Funk and James (2001) suggested that the development a sport fan is a psychological process, beginning with Awareness and proceeding through Attraction, Attachment, and Allegiance. This approach is supported by recent sport consumer behavior theory that suggests loyalty evolves through a psychological continuum characterized by four stages: Awareness, Attraction, Attachment, and Allegiance as seen in Figure 1 (Funk & James, 2001).

*Figure 2.1*

The Psychological Continuum Model

- A conceptual framework for understanding an individual's psychological connection to sport (3As to Allegiance)



- Funk, D.C., & James, J.D. (2001), Psychological Continuum Model

**Awareness.** This first stage of the PCM suggests that sport and teams exist and individuals develop awareness of them through close family, friends, peers and/or institutions in their environment. According to Barnett (2005), Awareness is considered the first significant step in the decision-making context: An individual is unable to participate in an activity if he/she is not aware of the opportunity to do so. Several researchers have investigated the impact of external factors such as media, family, friend, and peers on individual awareness of and attitude towards activities not yet engaged in (Courneya, Plotnikoff, Hotz, & Birkett, 2001; Gilbert, 2001; McDonough & Crocker, 2005; Parr & Olsin, 1998; Srinivasan, O’Fallon, & Dearry, 2003), the results indicating that an individual’s perceived and desired identities of a specific object are created by these socializing influences (Moschis, 2007; Vignoles, Manzi, Regalia, Jemmolo & Scabini, 2008).

Awareness may generate varied responses, meaning an individual may become aware of the existence of a particular team, sport, or sport brand but have little interest in it (Funk & James, 2001). How and when individuals are introduced to this level is crucial, with past research finding that family and friends, in particular, are a significant factor in promoting awareness. As Lewko and Greendorfer (1977) explained, fathers play a primary role at this initial stage introducing their children, particularly boys, to a sport or team, shaping their interest in games and activities. Kelly and Tian’s study (2004) subsequently confirmed the significance of the father’s role in creating awareness. As

sport socialization research suggests, how one creates knowledge about a sport team is the basis for creating awareness (Funk & James, 2001).

**Attraction.** The Attraction process illustrates how personal, psychological and environmental determinants lead to preferences and emotional results, interacting with Awareness outcomes. Personal determinants such as gender, age, education, race, and ethnicity encourage or discourage desire for involvement in a certain activity (e.g., Recours, Souville & Griffet, 2004), while psychological determinants such as hedonic needs can lead to experiential-based interests (Beard & Ragheb, 1983) and environmental determinants (Williams, Patterson, Roggenbuck, & Watson, 1992) as well as social situational contexts (Crompton & McKay, 1997) can provide reasons for people being attracted to particular recreational experiences.

The second level of the PCM, Attraction, manifests as a developed attitude or distinct interest towards a sport team or brand. Although it is primarily a psychological connection, it is at this level that individuals may first begin to attach increased meaning to an activity. In examining the motivation of sport fans for attending and/or watching games and thinking of a specific team, sport consumer behavior is reached when individuals develop an interest in a particular team based upon various psychological and physical features. For instance, a person may feel amusement and excitement through social situations (i.e., special price discounts, special events, and unique promotions), hedonic motives toward the aesthetic quality of sport (i.e., Attending a Clemson football home game reduces my stress level. Watching a game is inspiring), and/or social factors (i.e., I like the Clemson football team since my family/friend likes the team) (Funk &

James, 2001, 2006). However, at the attraction level, individuals do not yet strongly identify with a team or player; this stable psychological connection to a sport or team develops in the next stage.

**Attachment.** In his study on Attachment, the third level of the PCM, Buchanan (1985) introduced the concept of continuance as a component of the complexity and stability of the connection between an individual and a sport or team, a logical development as it suggests internal psychological meaning shown by the attributes and benefits associated with a team (Gladden & Funk, 2001). According to Stewart, Humphries, and Smith (2005), identification is a significant component of a fan's development of a psychological or emotional connection with a team. Based on Stewart et al.'s observation (2005), Fink, Trail, and Anderson (2002) concluded that the strongest motivator is "gleaning personal worth" through first connecting and then engaging with a particular team. Thus, identification can be defined as "the sense of oneness with or belongingness to a team" (Matsuoka et al., 2003, p. 246) or the extent to which an individual feels a psychological commitment to a specific team (Wann & Branscombe, 1993). Fisher and Wakefield (1998) suggest that this identification can either be minimal, i.e. fair-weather, fans or extreme die-hard fans. Most of the variance in sport fan satisfaction and behavioral intentions has been examined in the context of identification (Lavarie & Arnett, 2000; Matsuoka et al., 2003; Van Leeuwen, Quick, & Daniel, 2002), with the results suggesting it is one of the precursors of sport fans satisfaction, perception, or behavioral intention (Lavarie & Arnett, 2000; Trail, Anderson, & Fink, 2000). However, according to Madrigal (2001), identification has not yet been studied as a moderator

when examining the relationships among sports fan service constructs, satisfaction perceptions, and behavioral intentions.

With regard to the level of identification, more highly committed fans are more likely to attend another game or spend additional income on team merchandise to reinforce their identification with a specific team. Funk and James (2001) supported this conclusion by demonstrating the importance of the psychological level and of the hierarchical progression from Attraction to Attachment. Attachment develops as a self-concept when memories of a team strengthen and maintain internal links between it and one's attitude and beliefs. The Attachment process provides three types of meaning, emotional, functional, and symbolic, to activities, controlling the transition from Attachment to Allegiance (Funk & James, 2006). Research suggests that these meanings may result from the self-developmental concepts of individuation, integration, and temporal orientation (e.g., Gibson, Willming & Holdnak, 2002; Schultz, Kleine & Kernan, 1989). Thus, a fan uses sports as a means to motivate personal value, belief, and commitment.

While the Attachment processes is complex and difficult to understand, it is clear that as sport fans increase participation, the stronger and more stable the psychological connection with teams becomes, reducing the impact of other influences (Funk & James, 2001). This conclusion is supported by several studies which suggest that participation leads to more personalized meaning and subsequently to more stable and predictable behavior (Anderson, 2004; Kendzierski, 1994; Sheeran & Orbell, 2000; Wilson, Rodgers, Fraser, & Murray, 2004).

Thus, the Attachment outcome is a more complex and stable psychological connection than that for Attraction. In addition, individuals at the Attachment stage are more likely to remain stable in a changing environment than people in the Attraction stage. Yet at the Attachment stage, the psychological connection is still not as strong as that in the Allegiance stage, the final level of psychological connection.

**Allegiance.** The final stage of the PCM, Allegiance, includes people at passionate or enthusiastic levels of commitment. This concept has been defined as “the range of all those elements which induce citizens to give their loyalty to institutions of governance, which whether national, international or supranational” (Milward, 1997, p.11).

Allegiance, which is also characterized by persistence and resistance to change, has an impact on cognitive processes and behavior (Funk & James, 2001). Hence, allegiant fans have developed highly formed connections to a particular team, attitudes that strengthen their psychological involvement.

Furthermore, this attitude toward a team is internalized with other values, self-concepts, and behavior, becoming like those, an integral part of a person’s being. A strong psychological commitment is based not only the record of a favorite team but also on the benefits gained through personal experience. Allegiance, therefore, is more stable, durable, and not quite emotion-based as attachment.

Previous research has been found allegiance to have the strongest connection to consumer behavior, psychological attachment, and repeat consumption (Backman & Crompton, 1991). At the Allegiance level, people also have a psychological connection that responds quickly and without awareness, one that has a complex influence on

information processing and consumer behavior; people in this stage have a resistance to change over time (Pritchard, Havitz & Howard, 1999). For instance, as individuals incorporate sport into their personal behavior and value systems, they spend more time watching sport teams, following sport news and players, and engaging in conversations about sport with other fans and spectators.

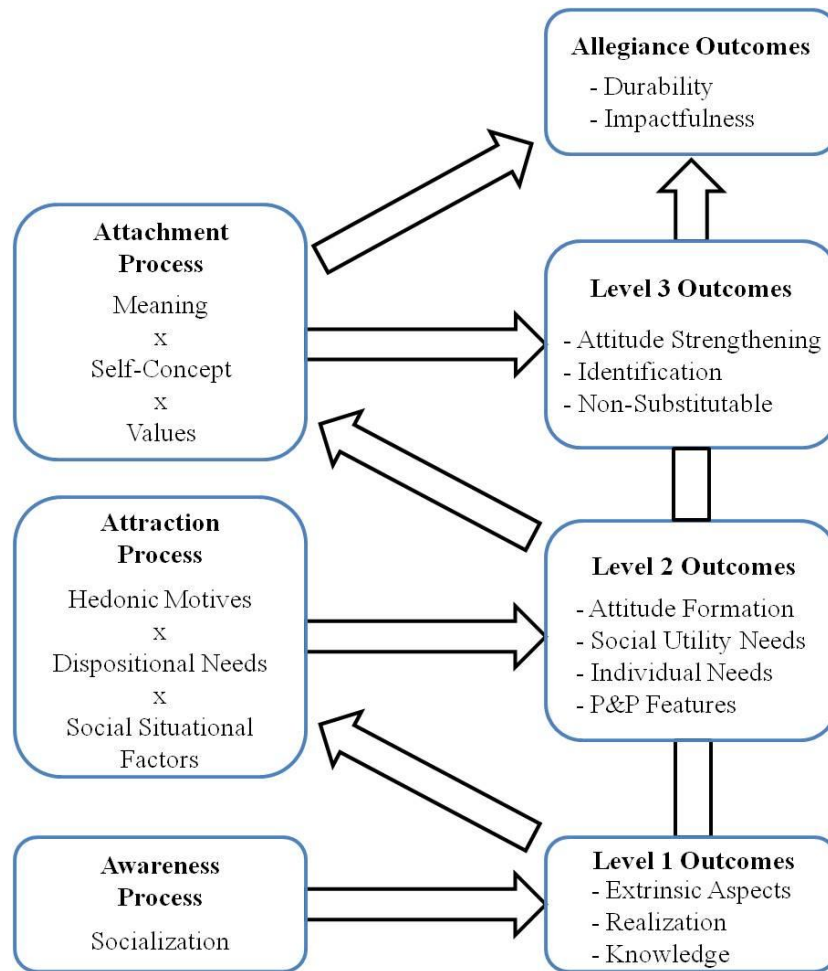
Though the Psychological Continuum Model offers a strong theoretical framework for analyzing the four stages involved in an individual's psychological development toward supporting a specific team, it has one major limitation: it cannot fully clarify the factors that mediate the progress among the four stages of Awareness, Attraction, Attachment, and Allegiance, as pointed out by Funk and James (2001). As a result, the PCM cannot fully illustrate the developmental progression toward allegiance. In response to this limitation, Funk and James (2006) proposed the revised Psychological Continuum Model (PCM), improving the conceptual foundations of the original model by including both the processes and the stage-based hierarchical outcomes.

#### The Revised Psychological Continuum Model (PCM)

The revised Psychological Continuum Model (PCM), which incorporates such organizational theories as Equity Theory (Adams, 1963), Expectancy Theory (Vroom, 1964), and Model of Motivation (Porter & Lawler, 1968), explains the allegiance process based on stage-based outcomes as seen in Figure 2. As this figure illustrates, three processes, Awareness, Attraction, and Attachment, mediate within and between the four outcomes. These revisions (Funk & James, 2006) to the PCM aid in understanding how an individual moves through the four original stages, showing how each helps him/her

reach the next one (Funk & James, 2006). This model is a logical next step in consumer behavior research because it more accurately explains the complexity of the human mind than the current models. Because individual processes are assumed to be flexible in the ever-changing environment (Chelladurai, 2001), this model also provides integrated sociological and psychological factors, resulting in particular hierarchical outcomes (Funk & James, 2006).

*Figure 2.2*  
The Revised Psychological Continuum Model (PCM)



- Funk, D.C., & James, J.D. (2006). Consumer Loyalty



To provide a detailed analysis of the revised PCM, it is helpful to relate it to the Hierarchy of Effects Theory (Funk & James, 2001), first introduced by Palda (1966) in response to the advertising effectiveness research conducted by Lavidge and Steiner (1961). To borrow Barry's (1987) view, their model suggests that consumers must be aware of a product's existence or be interested in its features or benefits, and desire its offerings in order to purchase it. Referred to as the Awareness Interest Desire Action (AIDA) model, it is comprised of four stages equivalent to those in the PCM, and was first proposed to account for consumer purchase behavior (Funk & James, 2001).

According to Lavidge and Steiner (1961), the AIDA:

is a model that takes into account learning theory and other models from the field of psychology. Lavidge and Steiner proposed that consumers pass through five stages: (a) awareness, (b) knowledge, (c) liking, (d) preference and (e) purchase (p. 123).

These five stages include three variable phases, cognitive (thinking), affective (feeling), and behavioral (doing), and show how an individual experiences each (Lavidge & Steiner, 1961). These three ideas are similar to the Learning Hierarchy, Dissonance Hierarchy, and Low-Involvement Hierarchy based on the Hierarchy of Effects model (Ray, 1973). Of particular significance in this model is the use of involvement to characterize an individual's psychological connection to a sport or team by incorporating the Three Orders Model (Funk & James, 2001) to identify the appropriate responses the consumer's involvement toward a product.

The revised PCM reflects an individual perspective with sociological and psychological aspects. Through socialization, an individual reaches Awareness, the first

stage of the revised model. For example, as applied to the sport fields, socialization, media, advertisements, friends, and peers result in the Level 1 outcomes of individual knowledge and realization that he or she likes a particular team and its brand (Funk & James, 2006). The Attraction process shows how these Level 1 outcomes connect with the hedonic motives, dispositional needs, and social situational factors to develop the Level 2 outcomes.

Level 2 outcomes indicate the initial formation of an individual's attitude toward a particular team in order to achieve social and individual needs, and to identify with a particular team. More specifically, the hedonic motives stimulate pleasurable interests such as entertainment needs, and dispositional needs reflect individual characteristics, traits, and needs for supporting a sport object. In addition, such needs tend to motivate people to identify with sport objects (e.g., teams, sport brands, and athletes) For instance, when fans support their teams by going to games or discussing sport, they are entertained, and they socialize with their neighbors (Funk, Mahony, & Ridinger, 2002). Similarly, the local sport team may be used to satisfy the individual need to belong to a new community since it promotes community solidarity.

In moving from Level 2 to Level 3, the Attachment process explains how Level 2 outcomes affect functional and emotional meaning, dealing with the self, and building on the individual's existing beliefs. Level 3 outcomes strengthen attitudes and levels of identification while reducing substitutability, which is the possibility of replacing the team with another (cf. Dick & Basu, 1994; Kahle, Duncan, Dalakas, & Aiken, 2001; Madrigal, 2003). Movement from Level 2 to Level 3 shows how an idea such as "I like

the Clemson Tigers” evolves into a significant connection expressed as “I am a Clemson Tiger fan” (e.g., Kleine & Baker, 2004).

As depicted in Figure 2, the Attachment process and Level 3 outcomes contribute to the development of Allegiance and its outcomes. Level 3 is an intermediate final state, different from Allegiance. Viewing Allegiance from the perspective of attitudinal and behavioral variables is consistent with previous studies that have examined this concept. To understand it fully, it is necessary to examine how consumer allegiance has been examined in early studies. Jacoby and Chestnut (1978) asserted that previous studies of allegiance assigned it a theoretical meaning as an attitudinal factor. Allegiance means being committed and completely steadfast in one’s attitude toward a person, cause, or subject (Pritchard, Havitz, & Howard, 1999). Given the conceptualization and measurement of attitude properties (Crosby & Taylor, 1983; Pritchard et al., 1999), the attitudinal factor as a representation of psychological commitment is distinct from attitudinal outcomes (e.g., Basilli, 1996; Dick & Basu, 1994). For the purposes of this discussion, this difference can be understood as the difference between attitude properties and their outcomes, such as commitment and behaviors (e.g., Bassili, 1996; Krosnick, Boninger, Chuang, Berent, & Carnot, 1993). Hence, the term *allegiance* refers to a commitment to a particular brand that shapes consumers’ desires and cognitive thoughts through behavioral and attitudinal factors (Funk & James, 2006).

In sport consumer behavior literature, identification, attitude formation, and perceived value have received much attention in the conceptualization, operation, and outcomes of a process as distinct from psychological commitment (Funk & Pastore,

2000; Kahle, 1996; Mahony, Madrigal, & Howard, 2000). Over the last two decades, much research has focused on examining the psychological connection of the sport participant to his/her sport activity (Heere & Dickson, 2008; Funk & James, 2006; Harrolle, Trail, Rodriguez, & Jordan, 2010). Specifically, the Attachment process, as placed within the revised PCM, illustrates how Level 3 outcomes formulate, strengthen, and feed back into the process to establish psychological commitment (e.g., Dimanche, Havitz, & Howard, 1993; Shamai, 1991). Allegiance, thus, characterizes the relative stability (i.e., persistence and resistance) and results (i.e., influences cognition and behavior) of the Attachment outcomes, strengthening and influencing the Attachment process.

Thus, the revised Psychological Continuum Model (PCM) represents an individual systems perspective having two perspectives, the sociological and psychological aspects (Funk & James, 2006). The focus of this system is to understand the progression of the developmental stages that lead to allegiance. Since the revised PCM can be characterized as an individual's complex allegiance formation for a particular team, future research, both theoretical and empirical, is needed to test and further develop the model and its propositions.

However, given the complexity of the revised PCM, it would be difficult to investigate all three processes and four outcome levels at the same time (Funk & James, 2006). For the research proposed here, Attachment, as has been mentioned previously, provides a good starting point for examining inputs, processes, and outputs. In addition, further study of it enhances the previous research conducted on Level 2 outcomes related

to team brand association and Allegiance in order to clarify its vague meaning (Gladden & Funk, 2001; Gladden & Funk, 2002).

In addition, sport fans' consumer behavior unconsciously involves a number of psychological processes including motives and attitudes. The psychology and behavior of sport fans when choosing, using, and evaluating their consumption behavior represents one of the most complex fields of consumer behavior research. Although many researchers have focused on the steps of the psychological process, few have studied the mediating progression of other media such as the Internet, music, and consumer trends (Lee, Park, Kim, Kim & Moon, 2011). A more recent trend involves the use of social media, in particular Twitter, with regard to mediating the sport communication process and sport fan behavior. To investigate these areas, i.e. the usage of Twitter as the mediating role instead of the Attachment process, the following hypotheses are proposed based on the revised PCM.

**The Connection between Level 2 Outcomes and Allegiance.** Level 2 represents several outcomes relevant to team brand associations. According to Aaker (1991, 1996), brand associations are defined as anything linked in a consumer's memory to a particular brand. Team brand associations are images, thoughts, and ideas functioning as recognition points for specific a sport team. Sport managers are beginning to understand their team, leagues, and properties as prospective "brands" to be managed (Gladden & Funk, 2002). Keller's (1993), the classification of consumer-based associations in brand management providing three aspects, attributes, benefits, and attitudes, relevant for sports associations (Gladden, Milne, & Sutton, 1998). Based on this framework, the Team

Association Scale (TAS) (see Appendix G) was developed by Gladden and Funk (2001) to measure thirteen attributes and benefits indicating the extent to which consumers can become linked to a sport team. Gladden and Funk (2001) further investigated the relationship, if any, of the team brand associations and allegiance for a professional sport team, finding that of thirteen associations, seven factors, star player, tradition, escape, identification, product delivery, nostalgia, and peer group acceptance, were connected to allegiance (Funk & James, 2006).

Gladden and Funk (2002) explored the relationship between Level 2 outcomes and Allegiance using the Team Association Scale (TAS), the results indicating star player, team identification, nostalgia, product delivery, success and escape can be used to classify respondents with 74.3% accuracy into three types of consumers: casual, moderate, and loyal. Research conducted by Gladden and Funk (2001) and Gladden and Funk (2002) identified that individuals exhibiting allegiance have specific associations toward a sport team. Based in these studies, the following hypothesis is proposed:

H1: There is a significant relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attribute and benefits) as a result of Twitter usage during a baseball game.

H1-1: There is a significant relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attribute and benefits) as a result of Twitter usage before or after a baseball game.

Hypothesis I suggests that Level 2 outcomes of attribute and benefit properties of a sport team will be significantly related to Allegiance outcomes. Based on the revised Psychological Continuum Model (PCM), Level 2 outcomes characterize team brand associations in terms of hedonic motives, dispositional needs, and social situational factors. To further investigate this perspective, Funk, Ridinger, and Moorman (2004) examined both the peripheral and psychological motives of sport consumers. Peripheral motives are related to indirect factors such as stadium capacity, weather, and location, while psychological motives are linked to individual factors such as expectations, preferences, perceived value, and perceptions. However, Hypothesis 1 does not explain how Allegiance develops in a person who has particular internal associations for a sport team. Moreover, the process by which images, ideas, and thoughts develop Allegiance has not yet been explored.

**The Connection between Level 2 Outcomes and Level 3 Outcomes.** To examine the strength of these associations, Funk et al. (2000) combined contemporary attitude theory and the team brand associations developed by Gladden and Funk (2002), incorporating three additional attitude properties into the original Team Association Scale (TAS) of thirteen association measures to clarify past research and the theoretical issues concerning the attitude element of brand association (e.g., Aaker, 1996; Keller, 1993). Gladden and Funk (2002) assessed the strength of the associations evoked by a sports team using attitude properties: (1) importance (i.e., symbolic meaning and value of the team), (2) knowledge (i.e., functional information), and (3) affect (i.e., emotions evoked by the team), demonstrating three higher order constructs, attributes, benefits, and

attitudes, associated with sixteen factors. However, Gladden and Funk (2002), in explaining that Keller's research could not appropriately support how the attitude measure motivated the attributes and benefits dimensions, suggested future research conceptualizing the attitude dimension to better understand it on a more abstract level.

Team brand associations as indicated by the research conducted by Funk (2002) and Gladden and Funk (2001, 2002) support the revised PCM. Level 2 outcomes, which are linked to the attributes and benefits involved with a sport team, influence the development process for Allegiance, leading to a more meaningful psychological stage. This significant meaning will be indicated to the advantage of attitude formation related to a sport team recognized within Level 3. Hence, the following hypothesis is proposed:

H2: There is a significant relationship between Level 2 outcomes (attributes and benefits) and Level 3 outcomes (i.e., knowledge, importance, and affect) related to attitude strength properties as a result of Twitter usage during a baseball game.

H2-1: There is a significant relationship between Level 2 outcomes (attributes and benefits) and Level 3 outcomes (i.e., knowledge, importance, and affect) related to attitude strength properties as a result of Twitter usage before or after a baseball game.

From this perspective, Level 2 outcomes linked to attribute and benefits will be related to the attitude properties of importance (i.e., symbolic), knowledge (i.e., functional) and affect (i.e., emotional) of Level 3. To examine the relationship between



Level 2 outcomes and both Level 3 and Allegiance outcomes, a test of mediation will be required.

**Attachment Process.** As discussed earlier, there is a progression of development leading to Attachment, a progression consistent with the interrelationship between social-structural and individual psychological processes. Wallendorf and Arnould (1988) found that attachment is seen more frequently in individuals who focus on hedonic pleasures in choosing their favorite objects. In addition, Schultz, Kleine and Kernan (1989) observed that attachment includes facets of affiliation created from the autonomy of individuation (i.e., differentiation of self from others), integration (i.e., integration of self with others), and temporal orientation (i.e., changes in self over time). Gibson, Willming, and Holdnak (2002) further noted that a collegiate football team allows individuals opportunities for the expression of identity (individuation) and a sense of association (integration) on game day during the football season (temporal orientation).

Various forms of attachment have been examined in past research: attachment to a work team (Korsgaard, Schweiger, & Sapienza, 1995), attachment to a multinational corporation (Reade, 2001), employee attachment to the mission of a youth and recreation service organization (Brown & Yoshioka, 2003), and attachment to recreation spending (Kyle, Absher, & Graefe, 2003). Based on their research, Kleine and Baker (2004) defined attachment as “a multi-faceted property of the relationship between an individual group of individuals and a specific material object that has been psychologically appropriated, and singularized through person-object interaction” (p.1).

More specific to the context of the research proposed here, Funk and James defined attachment as a process allowing individuals to demonstrate an association evolving with symbolical, functional, and/or emotional meaning into thoughts, ideas, and images for a sport team. Based on this conceptualization, Attachment represents an active, emotionally complex internal process that explains the relationship between Allegiance and fan and team brand associations as evidenced by the previous research of Gladden and Funk (2001). Positive ideas, thoughts, and images (i.e., Level 2 outcomes) influence Allegiance while these associations function as inputs and assume symbolical, functional, and emotional meaning.

**Allegiance Outcomes.** In the past allegiance has received much research attention in several fields including attitudinal and behavioral variables (Chaudhuri & Holbrook, 2001; Day, 1969; Jacoby, 1971; Jacoby & Kyner, 1973; Jacoby & Chestnut, 1978). According to Jacoby (1971), allegiance is “the tendency to prefer and purchase more of one brand than of others” (p. 25). An allegiant consumer who exhibits highly repetitive behavioral habits indicates a strong, positive attitude toward a brand or an object in general. More specifically, Jacoby emphasizes that brand allegiance involves making repeated purchases based on cognitive, affective, evaluative, and dispositional factors. These attitudinal components suggest a psychological commitment to a sport team, offering the reason why a team is valued and considered meaningful.

The development process involved in achieving allegiance can be analyzed by investigating attitude formation and change (Funk, Haugtvedt, & Howard, 2000). This approach suggests diverse strength-related attitude properties. The research conducted by

McPherson (1976) and Smith et al. (1981) first suggested the need for a better understanding of how allegiance develops. Among the many studies on allegiance conducted in recent years, Funk and Pastore (2000) asserted that allegiance for a professional baseball team could be observed based on nine attitude properties, while Trail, Anderson, and Fink's (2005) research demonstrated that allegiance is comprised of four developmental stages. Although little attention has focused on understanding the relationship between attitude formation and allegiance in the area of sport, empirical research has been conducted related to both attitude properties and the components of allegiance, particularly resistance to change (cf. Pritchard, Havitz & Howard, 1999; Krosnick & Abelson, 1992; Krosnick & Petty, 1995). For example, when individuals internalize sports, they spend more time watching sport teams, following sport news and players, and engaging in sport discussions with other fans and spectators.

Based on the attitude formation literature, an increased understanding of the process of allegiance development could be achieved through an attitude strength framework (e.g., Krosnick & Petty, 1995). Integrating attitude strength with the revised PCM offers insight into the complexity of allegiance. Attitude properties (i.e., importance, knowledge, and affect) may independently or dependently impact Allegiance outcomes. Krosnick and Petty's study (1995) suggested that research has related many attitude properties to durability resulting in outcomes and impact.

Based on this perspective, the attitude strength framework can be used to understand consumer allegiance in the sport realm. In previous research, Backman and Crompton (1991) conceptualized allegiance in terms of a psychological attachment and

behavioral commitment, resulting in the categories of high loyalty, spurious loyalty, low loyalty, or latent loyalty. They indicated that a consumer's level of loyalty may be measured by his or her level of psychological attachment and frequency in purchasing his or her favorite brands and participating in sports. More specifically, their model explains that strategies and programs focusing on each consumer group may increase involvement of consumers with low or spurious loyalty develop loyalty by providing purchase opportunities for those with latent loyalty or maintain high levels of loyalty from truly loyal customers. This integrated classification, identifying each type of consumer, contributes to a better understanding of the characteristic of each particular group.

The revised PCM allows for the integration of Allegiance with team brand associations. A positive relationship between Level 2 outcomes and Allegiance could be considered as individuals having spurious allegiance. However, the strength of this relationship would probably be difficult to explain based on the extended self. Individuals represented by high allegiance would exhibit well-formed attitude properties at Level 3. Therefore, Funk and James (2006) suggested the attachment process allows individuals to demonstrate an association evolving through symbolic, functional, and/or emotional meaning. The study proposed here examines how team associations develop internal meaning and mediate the development process of allegiance. The following hypotheses are proposed:

H3: The relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attributes and benefits) is mediated by the attachment process as a result of Twitter usage during a baseball game.

H3-1: The relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attributes and benefits) is mediated by the attachment process as a result of Twitter usage before or after a baseball game.

These hypotheses suggest allegiance develops through an internal process generated when an individual's thoughts, images, and ideas linked to a specific sport team take on symbolic, functional, and emotional meaning. Allegiance is formed to the extent to which Level 2 outcomes assume a high level of individual meaning, indicating the strength of attitude formation at Level 3. To examine this progression, mediation as suggested by the revised PCM will be used to obtain empirical evidence.

Only one study thus far has investigated the revised Psychological Continuum Model (PCM) and Attachment process as a mediating variable. However, when Funk and James conducted this research in 2006, the influence of social media was not widespread, so they examined print media (i.e., newspaper, magazine) and broadcasting media (i.e., TV, radio). Due to the increasing usage of social media, in particular Twitter, by both fans and sport team, it is suggested that Twitter usage may be a mediating variable.

#### Twitter Usage as Mediating Variable

This study proposes to investigate Twitter usage as a mediating influence on Allegiance in the revised Psychological Continuum Model (PCM). Methodologically, this means examining mediating relationships (Baron & Kenny, 1986). Conceptually, it means assuming that Twitter usage is tested at two different time periods: one is during a baseball games and the other is before or after the games. This proposal hypothesizes that

the frequency of Twitter usage at two different times may directly influence allegiance toward a specific team. In so far as possible, statistical models should indicate indispensable factors as social processes. This represents that analyses for treating Twitter usage may lessen the role of Twitter. The significance of Twitter usage depend not only on its direct effect on outcomes after controlling Level 2 and Level 3 outcomes but also on its mediating effect of those factors on the outcomes of Attachment. All things considered, Twitter usage as a mediating variable may influence on allegiance with fans that a variety of influences allow individuals to choose types and ways of contacting social media while attending games or before or after attending games. In other words, Twitter usage as a mediating variable may indicate to effect allegiance with fans toward their favorite team.

### Twitter

Twitter, created in 2006 as a micro-blogging service, has become one of the most popular social networking services (SNS) and new communication technologies (Weingarten, 2008). A real-time network that allows users to share information through personal messages (Waters & Jamal, 2011), it is the “place” for instant, happening, breaking sports news and direct communication between athletes, sport teams, and fans (Sanderson & Hambrick, 2012). Twitter usage is growing dramatically: in 2012 it exceeded 500 million users (Browning & Sanderson, 2012), and Dugan (2012) suggests that “if Twitter keeps growing at this rate, it will reach 1 billion users in about a year and a half—but it might even be sooner than that, as its growth continues to accelerate.”

Twitter allows users to post messages, or tweets, up to 140 characters (Johnson & Yang, 2009). Several recent studies on the use of Twitter focus on the function of specific linguistic components of the tweets including the @ symbol, which is linked to user account names (Honeycutt & Herring, 2009), while Boyd, Golder, and Lotan (2010) studied the function of the “retweet” in the Twitter world. According to Johnson and Yang (2009), Twitter motivates users based on gratification theory. In addition, they suggested that Twitter was being used for social as well as for information purposes, explaining in part its popularity with sport fan, athletes, teams, and journalists (Daley, 2009).

Traditionally, the popularity and prestige of specific sport teams and star players have often been associated with sport media. Nicholson (2007) explained the relationship between the media and athletics, saying

It is clear that in order to be successful in the competitive arena of professional sport, a team, league or event must not only have official media posture, but must also be able to attract general media coverage that illustrates a broad interest or awareness among the population (p. 12).

Nicholson asserted that sport media involves everything from radio broadcasts and billboards advertising athletes to pop songs sung by them. Today, Twitter appears to lie at the heart of sport media. Hutchins (2011) stressed that Twitter has significantly changed the role of sport media from a broadcast environment to interpersonal interactions in virtual communities. No matter the type, ultimately, the function of sport media is to facilitate the development of the relationship among sport organizations, players, and fans.

**Sport Organization.** Collegiate and professional sport teams or organizations use Twitter in various ways. First, if not foremost, sport teams and organizations are able to engage in meaningful discussions about sport figures or news by posting scores, news articles, and press releases. From the management perspective, Twitter strengthens branding, customer service, public relations, sales, marketing, and sponsorships. Pegoraro (2010) found that sport teams or organizations realize the benefits Twitter brings to their brand or reputation by allowing for direct communication with their fans.

Similarly, collegiate athletic teams or departments use Twitter to communicate to their students, families, and alumni. Kassing and Sanderson (2012) found that Twitter has become one of the primary recruiting tools in collegiate sport programs, especially in light of the fact that the National Collegiate Athletic Association (NCAA) approved of its use in recruiting high school students (Davidson, 2009). According to Davidson (2009), Twitter has become one diverse blog providing information about institutions and athletes for the purpose of recruiting.

It is obvious that collegiate and professional sport teams or organizations are trying to strengthen fan attraction and attachment through social networking services (SNSs), such as Twitter and Facebook. Since Twitter is immediate, it allows collegiate and professional sport teams or organizations to be in direct communication with their fans. Investigating how sport teams or organizations communicate with fans through social media may elucidate the relationship between Twitter usage and fan allegiance.

**Athletes.** Several recent studies have focused on the use of Twitter by athletes (Hambrick, Simmons, Greenhalgh, & Greenwell, 2010; Clavio & Kian, 2010; Hambrick



et al., 2010; Kassing & Sanderson, 2010; Pegoraro, 2010; Hutchins, 2011; Sanderson & Hambrick, 2012), the influence of Twitter on sport media production and consumption (Hutchins, 2011; Sanderson & Hambrick, 2012), and the characteristics of Twitter followers of athletes (Clavio & Kian, 2010). These studies have played a significant role in enhancing the understanding of the Twitter phenomenon in the sport context.

More specifically, Kassing and Sanderson (2010) focused on Twitter usage by professional cyclists during the 2009 Giro d' Italia. They used it to promote fan interest, to post race and physical conditions and to provide a behind-the-scenes look at the event (Kassing & Sanderson, 2010). Similarly, Pegoraro (2010) analyzed what and how athletes were tweeting in the National Basketball Association (NBA), the National Football League (NFL), the Major League Baseball (MLB), the National Hockey League (NHL), the Professional Golf Association (PGA), the Major League Soccer (MLS), and the National Association for Stock Car Auto Racing (NASCAR). Tweets were classified by whether they were direct messages or whether they included a photo or a link (Pegoraro, 2010). Based on their content Tweets were categorized as relating to an individual life, relating to a sport, relating to sport or athletes, responding to fans, or responding to sport or athletes. In particular, he found athletes were the most dynamic during their respective seasons; however, most do not recognize the power of Twitter as a marketing tool (Pegoraro, 2010).

Hambrick et al. (2010) investigated Twitter usage by professional athletes and their interaction between fans and athletes. Tweets were classified into six categories: diversion, sharing content, information, interactivity, fanship, and promotional. The

results of this study (Hambrick et al., 2010) indicate most were interactive (34%). Hambrick et al. (2010) proposed future research should examine the relationship between sport organizations and their target markets. Although Twitter is able to provide diverse types of information and satisfy the needs of consumers, a study of the relationship between sport organizations and information about their followers has not yet been conducted.

### Summary

Twitter is dramatically changing the sport industry. In particular, it is increasingly being used for promotional purposes by both athletes and organizations. More importantly, it provides sport teams and organizations an interactive way to communicate with their fans. While these benefits are apparent, knowing more about their fans' commitment would be valuable for sport teams and organizations for both marketing and managerial decisions.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### Introduction

This chapter details the research methods for investigating fan allegiance of individuals attending four Clemson University men's home baseball games. It begins by describing the study area, then explaining the sampling procedures and the study site. In the third section, the data collection procedures are presented, while the next one discusses the development of the instrument. The next section provides the proposed conceptual framework and the hypotheses, and then the pilot test procedures are discussed. The final section of the chapter explains the statistical methods used to test the hypotheses.

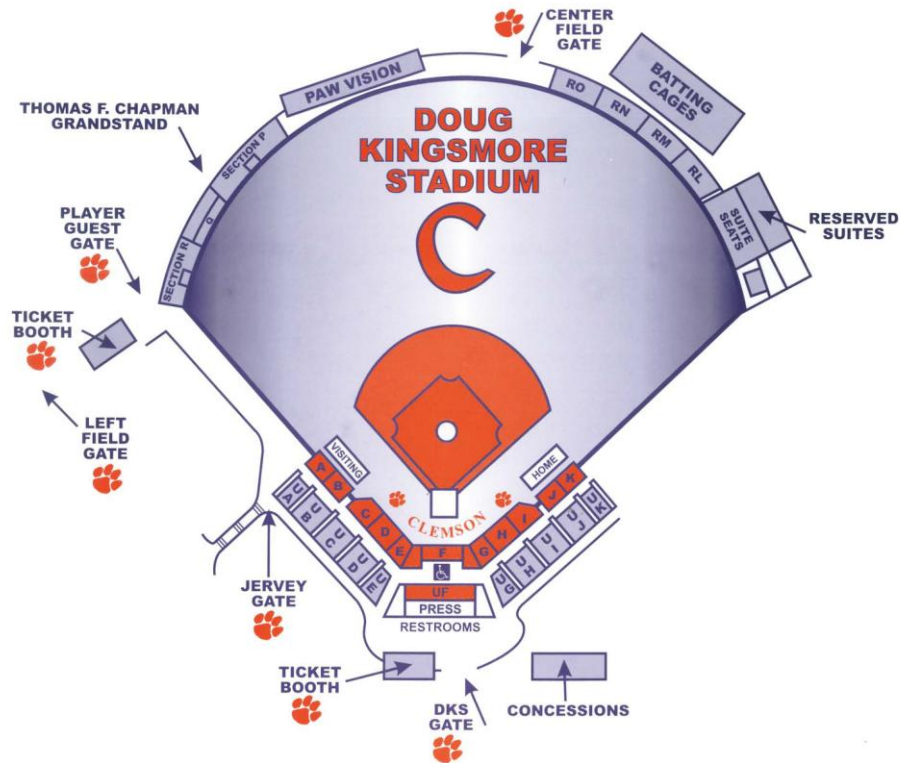
#### Study Area

Clemson University, selected as the study area, enrolled a total of 16,562 undergraduate students and 4,206 graduate students for the Fall 2012. As a member of the Atlantic Coast Conference, it is also part of the NCAA Division I Baseball League, important for this study for two reasons: first, this is a strong league, and second, baseball, a popular sport in the United States, is played in multiple settings, attracting a large number of fans at each level.

According to the Clemson Athletic Department, a total of 61,301 fans were in attendance at Doug Kingsmore Stadium (see Figure 3) for Clemson's 13 home games in 2012, an average of 4,715 per game. This attendance places the University at seventh in the nation, at the top of the ACC, and on pace to be the fourth-best for a season. The

2011 season was the eighteenth in a row that Clemson's attendance was in the top-20 nationally, and it was the tenth consecutive year it was in the top 10.

*Figure 3.1*  
Map of Doug Kingsmore Stadium at Clemson University



Given these record numbers of fans, the primary purpose of the study proposed here is to investigate fan use of social media, specifically Twitter, in relation to their allegiance to the Clemson baseball team. A secondary focus is to examine the demographic and baseball consumer variables in relation to fan allegiance. However, the findings from this study should not be generalized to other settings because the games and fans were not randomly chosen.

### Sampling Procedures

The sample for this study was selected based on the guidelines suggested by Dillman (1978) and Nunnally and Bernstein (1994). The pilot study involved distributing 292 online questionnaires, with 117 being returned, suggesting a response rate of 40.0 %. Based on this rate, a total of 412 from four home games was usable data for this study. The participants were recruited at four Clemson men's home baseball games, all played during the middle of the Spring 2013 season. The specific games are listed in Table 3.1 below:

*Table 3.1*  
Clemson Baseball Home Games Used in the Study (2013 year)

<b>Date</b>	<b>Opponent</b>
Sunday, February 24	Wright State
Wednesday, February 27	Winthrop
Friday, March 1	South Carolina
Saturday, March 16	Virginia

### Data Collection

Prior to the data collection, Institutional Review Board (IRB) approval was obtained for this study (See Appendix A). Permission to conduct this study was also obtained from the Clemson University Athletic Department so that the research team, which was composed of the author and seven undergraduate students, could be issued

Clemson University credentials. Furthermore, all eight completed the Collaborative Institutional Review Board Training Initiative (CITI) for Social and Behavioral Sciences. The researcher and seven undergraduate students from Clemson University then collected the data during the four men’s baseball home games listed in Table 3.1. Each research team was comprised of total two members, a team leader and another researcher, for each game. Each of the eight research team members were trained with respect to the data collection procedures and proper research protocol.

On game day, each research team attended a baseball game operations briefing held at Doug Kingsmore Stadium 90 minutes before the first pitch. Next, the teams began data collection at each gate indicated on Figure 3.1 (see p. 41). Clemson baseball fans who passed through these areas were informed (see Appendix B) of the purpose of this study, then asked to voluntarily participate in it. After indicating their oral agreement to participate, the participants gave the researchers their names and email addresses. Table 3.2 below indicates the total number of fans at each game who agreed to participate in the study.

*Table 3.2*  
Number of Respondents per Home Game

<b>Date</b>	<b>Opponent</b>	<b>Number of Participants</b>
February 24	Wright State	124
February 27	Winthrop	114
March 1	South Carolina	90
March 16	Virginia	84
<b>Total</b>		412

The second step in the data collection involved emailing these fans agreeing to participate in the study. Three unique email messages were created, the phrasing of each focused on encouraging fans at different times in the process to complete and return the survey; these email messages can be found in Appendix C, D, and E. The first e-mail sent to the participants asked them to click on the hyperlink to the survey on game day or the next day. The intent of this email was to invite and persuade them to complete the questionnaire. Three days later, a second email was sent reminding them about the survey and requesting they respond within a week. After one week, a final email was sent thanking the respondents for their time and effort. The same process was followed for each home game used in this study.

#### Questionnaire Development

A web survey divided into five sections was used to collect data on the dependent and independent variables. This survey instrument, entitled “Fan Allegiance and Twitter Survey” measuring Twitter usage and fan allegiance for a specific collegiate team, in this case Clemson University’s baseball team, can be found in Appendix F.

The questionnaire began with an introduction explaining the purpose of the study, identifying the researchers and organizations involved in it, and providing assurance of confidentiality. In the first section, participants were questioned about their general Twitter usage, specifically if they have a Twitter account and their number of tweets per day as well as during a sporting event, the latter two measured using a range. In addition, they were asked to specify their number of followers as well as the total number of people/organizations they followed. This section concluded by asking them for the

number of sport related people and organization they followed as well as how they accessed their Twitter accounts based on a suggested list of possibilities.

Questions in the second section related to the participants' use of Twitter for sporting events being followed, asking if the respondents followed the Clemson men's baseball team's official Twitter account and/or the accounts of the coaches, players, or writers, measured by asking them to check either Yes or No. This section then went on to ask them to specify the number of tweets they sent while watching and after watching a Clemson men's baseball game, their number of visits to the University's baseball website, and the frequency they read articles, both online and in print, about the team.

Section 3 of the survey instrument focused on the participants' team identification, asking them to use a 5- point Likert scale to assess how they feel about the baseball team as well as the level of importance they attach to being a fan. It concluded by asking them to indicate how often they follow the team either in person or through the media by checking the appropriate numerical range.

In section 4 of the survey, respondents were asked to relate the TAS (Team Association Scale), developed by Gladden and Funk (2002) containing 16 factors involving 48 items as seen in Table 3.3, with the revised Psychological Continuum Model (PCM) seen in Table 3.4.



*Table 3.3*  
Team Association Scale (TAS) Measures

	<b>Definition</b>
<b>Attributes and Benefits</b>	
Success	Winning, making the playoffs and competing for championships
Star Player	The presence of a player who is outstanding; often defined by all-star appearances.
Head Coach	The presence of a head coach who has a record for success and/ or possesses significant charisma.
Management	The extent to which an organization garners trust from consumers; a belief that management is doing its best to satisfy consumer needs.
Logo Design	Use of a corporate logo and/or mark(s) to establish and reinforce an image.
Venue	The extent to which the facility in which a team plays enhances the consumption experience.
Product Delivery	The extent to which a team satisfies a consumer's need for entertainment.
Tradition	Whether or not a team possesses a history of winning or behaving in a certain manner.
Identification	A team provides a vehicle (often representing success) with which consumers can affiliate.
Peer Group Acceptance	The ability of a team to provide a vehicle which generates broad social approval when followed.
Escape	Following a team provides an escape from one's daily routine.
Nostalgia	A sport team conjures up feelings and fond memories from the past.
Pride in Place	A team provides a rallying point for civic pride.
<b>Attachment Properties</b>	
Importance	Psychological significance or symbolic value of a sport team.
Knowledge	Functional knowledge that an individual has related to a sport team.
Affect	Emotions elicited from an evaluative response of the team.
<b>Allegiance</b>	
Behavior	Number of games attended and watched on television; monthly media usage, and participation in team-related activities.
Commitment	Resistance to change and persistence.

Source: Gladden and Funk (2001, 2002).

Table 3.4

Psychological Continuum Model (PCM) Measures

Level	Concept Name	Measurement		Scales and Authors
Level 4	Allegiance	1 Factor	3 items: Behavior	Team Association Scales (TAS): Gladden and Funk (2002)
			4 items: Commitment	
Level 3	Attachment	3 Factors (9 items): Attachment Properties (Importance, Knowledge, Affect)		Team Association Scales (TAS): Gladden and Funk (2002)
Level 2	Attraction	13 Factors (39 items): Attributes and Benefits		Team Association Scales (TAS): Gladden and Funk (2002)
Level 1	Awareness	Assumptions		Gladden and Funk (2002)

The second level of the PCM, Attraction, includes the measure, Attributes and Benefits, the first category in the TAS, with the former involving 8 factors and the latter 5 for a total of 13. Attributes, which characterize the team sports setting, include such factors as success, star player, head coach, management, logo design, venue, product delivery, and tradition, all of which contribute to the overall performance and branding of a team, both in the short term and over time. These factors were operationalized for this study using a five-point Likert scale anchored by “Strongly Disagree,” “Disagree,” “Neutral,” “Agree,” and “Strongly Agree.” Benefits include the five constructs that enhance the understanding of how people attach meaning and value to the products they consume in the sports industry: Identification, peer group acceptance, escape, nostalgia, and pride in place. These factors were also measured using a five-point Likert scale anchored by “Strongly Disagree,” “Disagree,” “Neutral,” “Agree,” and “Strongly Agree.”

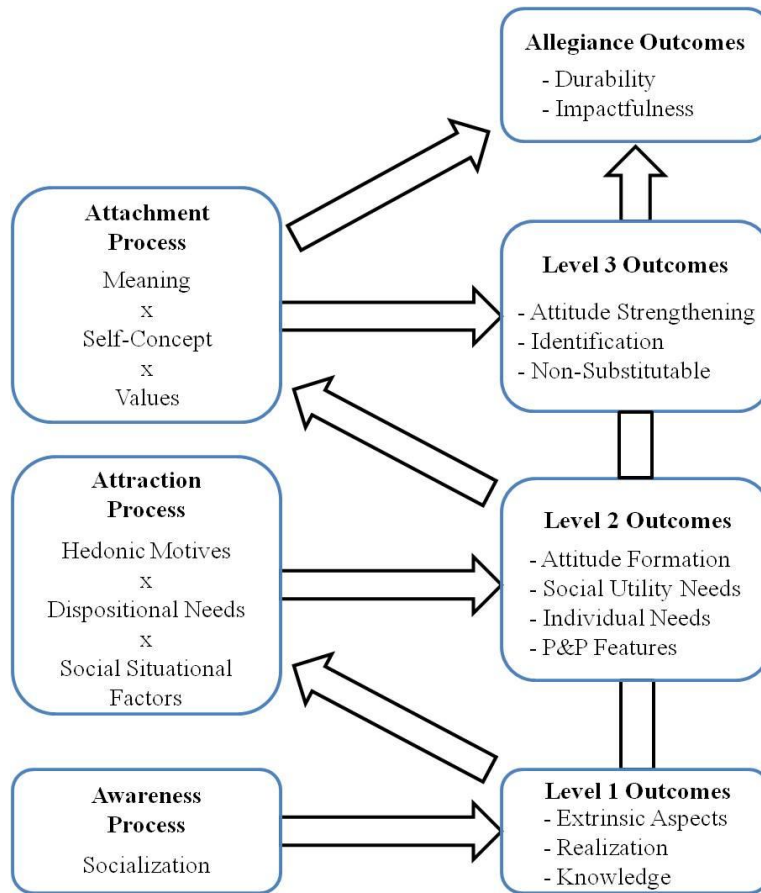
Level 3 of the PCM, Attachment, includes the 3 factors of importance, knowledge, and affect along with their 9 corresponding items. Each item was measured using the scale of 1 = “Strongly Disagree” to 5 = “Strongly Agree.”

The final section of the questionnaire requested information on several demographic variables, including gender, age, marital status, number of household members, highest completed educational level, ethnicity, occupation, and annual household income. This section also asked whether respondents were season ticket holders or a member of IPTAY, the booster club for Clemson University. Most of these responses were answered by checking the appropriate category or number or filling in a blank with the appropriate answer.

### Conceptual Framework

Figure 3.2 below is conceptual framework used as the basis of this study. It is based on previous studies delineating the hierarchical interrelationship among allegiance, attachment, and attraction (Funk & James, 2006; 2001) as indicated by the hierarchy of effects theory. In addition, it uses the revised Psychological Continuum Model (PCM), which past research has found to be a useful framework for conceptualizing various psychological outcomes related to sport objects. Hence, this study proposes to add Twitter usage as a mediator, hypothesizing that it plays a significant role in the progress toward allegiance. Thus, the process of hypotheses test was tested at two different time periods: one was during the four baseball games and the other was before or after the games.

Figure 3.2  
The Conceptual Framework of the PCM



- Funk, D.C., & James, J.D. (2006). Consumer Loyalty

## Hypotheses

The hypotheses guiding this study are based on the work of Gladden and Funk (2001) and Funk (2002) describing the relationship between team brand associations and team identification and allegiance, Funk's (2002) Team Association Scale (TAS) and Blaszkas (2011) research on the critical role Twitter plays in the direct interaction action between fans and their favorite teams or players. Specifically, the three hypotheses investigated here are

H1: There is a significant relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attribute and benefits) as a result of Twitter usage during a baseball game.

H1-1: There is a significant relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attribute and benefits) as a result of Twitter usage before or after a baseball game.

H2: There is a significant relationship between Level 2 outcomes (attributes and benefits) and Level 3 outcomes (i.e., knowledge, importance, and affect) related to attitude strength properties as a result of Twitter usage during a baseball game.

H2-1: There is a significant relationship between Level 2 outcomes (attributes and benefits) and Level 3 outcomes (i.e., knowledge, importance, and affect) related to attitude strength properties as a result of Twitter usage before or after a baseball game.

H3: The relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attributes and benefits) is mediated by the attachment process as a result of Twitter usage during a baseball game.

H3-1: The relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attributes and benefits) is mediated by the attachment process as a result of Twitter usage before or after a baseball game.

#### Statistical Approach for Analyzing the Data

The data obtained from the questionnaires were analyzed in relation to the proposed hypotheses using the Statistical Package for the Social Sciences (SPSS) 18.0. The three hypotheses were tested using correlation analysis and MLR. Correlation refers to the strength of a relationship between two variables. This analysis was used to determine the individual significance of correlation coefficients and then those significant at the 5% level of significance, following the guidelines suggested by Edgington (1986). Correlation analysis revealed a positive relationship among TAS (Team Association Scales) through a correlation matrix of continuous-level variables and scales.

To examine the predictability of all measures of the three hypotheses, multiple linear regressions (MLR) were used to examine the mediation role based on the recommendation of Barron and Kenny (1986). Consistent with their recommendations, a four-step process was used here to investigate the three hypotheses. Step 1 tested H2 as Level 3 outcomes were regressed on Level 2 outcomes. Step 2 tested H1 as Allegiance

was regressed on Level 2 outcomes. The final step tested H3 as Allegiance was regressed on Level 2 outcomes mediated by Twitter usage.

## CHAPTER FOUR

### RESULTS

#### Introduction

This chapter presents the descriptive findings from the analysis of the data collected from Clemson men's baseball fans to determine their relationship to each hypothesis. For this research, Clemson baseball fans included all individuals entering Doug Kingsmore Stadium for four Clemson men's home baseball games. The analyses of these fans were conducted using predictive statistical software SPSS 18.0.

The chapter begins by providing the sample size and response rate for the study, with the second section providing the participants' demographics, Twitter usage, and Twitter usage related to the Clemson baseball team. Next, validity and reliability are presented, followed by the results from the correlation analysis of the study's variables. The final section of the chapter applies the statistical results to the hypotheses.

#### Sample Size and Response Rate

Based on the sampling strategy for this study outlined in Chapter Three, of the 846 questionnaires emailed to attendees at Clemson men's baseball home games, 46 were undeliverable due to the inability of the researcher to read the handwriting of the research respondents and/or inaccurate email addresses. After correcting these issues, a total of 412 questionnaires were returned for a response rate of 48.6%. The mean scores, standard deviations, and reliability measures for Clemson men's home baseball games are reported



in Appendix H. These surveys, none of which had data missing, formed the basis of this study. Table 4.1 below provides the response rate by game:

*Table 4.1*  
The Response Rate per Game for the Clemson Home Baseball Games Survey (2013 year)

<b>Clemson Men's Home Baseball Games</b>				
<b>Date</b>	<b>Team</b>	<b>Intercepts</b>	<b>Responses</b>	<b>Responses Rate</b>
Sun. Feb 24	Wright State	292	124	42.4%
Wed. Feb 27	Winthrop	270	114	42.2%
Fri. Mar 1	South Carolina	150	90	60.0%
Sat. Mar 16	Virginia	134	84	62.7%
Totals		846	412	48.6%

### Descriptive Statistics

#### *Demographics*

The respondent information collected included the general demographics of gender, age, marital status, household number, education, ethnicity, occupation, and annual household income as well as more pertinent information for the purposes of this study on the participants' status as a Clemson season ticket holder and IPTAY member. This information is presented below in Table 4.2 to Table 4.11. The final sample of 412 respondents was composed of 61.7% females (n = 254) and 38.3% males (n = 158) (Table 4.2). Approximately half of the respondents, 41.5%, were in the 18 to 22 years of age category (n = 171) (Table 4.3). Of the remaining respondents, 55.6% were relatively equally distributed between the age intervals of 51-65 (15.3%), 23-30 (14.6%), 41-50 (13.6%), and 31-40 (12.1%) (Table 4.3). Of the respondents, 61.7% were male and 37.6% were female (Table 4.2). 58.7% were single and 37.6% were married (Table 4.4).

Table 4.2

Frequency Distribution of Clemson Baseball Fans by Gender

<b>Gender</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Male	254	61.7
Female	158	38.3
No response	--	--
<b>Total</b>	<b>412</b>	<b>100</b>

Table 4.3

Frequency Distribution of Clemson Baseball Fans by Age

<b>Age</b>	<b>Number of Respondents</b>	<b>Percentage (%)</b>
18-22	171	41.5
51-65	63	15.3
23-30	60	14.6
41-50	56	13.6
31-40	50	12.1
66 or older	12	2.9
No response	--	--
<b>Total</b>	<b>412</b>	<b>100</b>

Table 4.4

Frequency Distribution of Clemson Baseball Fans by Marital Status

<b>Marital Status</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Single	242	58.7
Married	155	37.6
Divorced	9	2.2
Widowed	1	0.2
Other	5	1.2
No response	--	--
<b>Total</b>	<b>412</b>	<b>100</b>

Approximately 46.6% of the respondents had 3 to 4 members in their households (Table 4.5). For the level of education, a 4-year college degree and some college were the most frequently reported categories (n = 277, 67.3%) (Table 4.6). The majority of participants, 90.0%, indicated that White/Caucasian best described their ethnicity (Table 4.7). Almost 20% of the respondents were Clemson students with the remaining 80.9% indicating they were non-students (Table 4.8). The annual household income information indicated that 20.4% of the respondents earned from \$100,000 to \$149,999, 19.7% under \$20,000, and 13.1% from \$60,000 to \$79,999 a year (Table 4.9). Of these respondents 74.5% indicated they were not Clemson season ticket holders, while 25.5% answered yes (Table 4.10), and 49.8% said yes and 50.2% said no when asked if they were Clemson IPTAY members (Table 4.11). To summarize, the typical respondent was an 18-22-year-old white male or female who had either graduated with a 4-year college degree or had some college.

*Table 4.5*  
Frequency Distribution of Clemson Baseball Fans by Number in Household

<b>Household Number</b>	<b>Number of Respondents</b>	<b>Percentage (%)</b>
3-4	192	46.6
2	95	23.1
1	73	17.7
5-6	49	11.9
7-8	3	0.7
No response	--	--
<b>Total</b>	<b>412</b>	<b>100</b>

Table 4.6

Frequency Distribution of Clemson Baseball Fans by Education

<b>Education</b>	<b>Frequency</b>	<b>Percentage (%)</b>
4-year College Degree	142	34.5
Some College	135	32.8
Master's Degree	63	15.3
High School / GED	35	8.5
2-year College Degree	20	4.9
Doctoral Degree	12	2.9
Professional Degree (JD, MD)	4	1.0
Other	1	0.2
No response	--	--
<b>Total</b>	<b>412</b>	<b>100</b>

Table 4.7

Frequency Distribution of Clemson Baseball Fans by Ethnicity

<b>Ethnicity</b>	<b>Frequency</b>	<b>Percentage (%)</b>
White/Caucasian	371	90.0
Asian	26	6.3
African American	11	2.7
Native American	2	0.5
Hispanic	1	0.2
Other	1	0.2
No response	--	--
<b>Total</b>	<b>412</b>	<b>100</b>

Table 4.8

Frequency Distribution of Clemson Baseball Fans by Occupation

<b>Occupation</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Non-Student	333	80.9
Student	79	19.1
No response	--	--
Real estate or rental and leasing	88	21.4
Student	79	19.1
Health care or social assistance	47	11.4

Unclassified establishments	26	6.3
Management of companies or enterprises	24	5.8
Forestry, fishing, hunting or agriculture	16	3.9
support		
Administration, support, waste management or remediation services	16	3.9
Arts, entertainment or recreation	16	3.9
Manufacturing	16	3.9
Finance or insurance	15	3.6
Construction	13	3.2
Professional, scientific or technical services	9	2.2
Retail trade	7	1.7
Transportation or warehousing	7	1.7
Information	5	1.2
Utilities	5	1.2
Wholesale trade	4	1.0
Mining	2	0.5
Other services (except public administration)	17	4.1
-----		
No response	--	--
-----		
Total	412	100
-----		

*Table 4.9*  
Frequency Distribution of Clemson Baseball Fans by Income

<b>Income</b>	<b>Frequency</b>	<b>Percentage (%)</b>
\$100,000-\$149,999	84	20.4
Below \$20,000	81	19.7
\$60,000-\$79,999	54	13.1
\$40,000-\$59,999	48	11.7
\$80,000-\$99,999	43	10.4
\$20,000-\$39,999	38	9.2
\$150,000-\$199,999	35	8.5
Above \$200,000	29	7.0
-----		
No response	--	--
-----		
Total	412	100
-----		

*Table 4.10*

Frequency Distribution of Clemson Baseball Fans by Clemson Season Ticket Holder

<b>Season Ticket</b>	<b>Frequency</b>	<b>Percentage (%)</b>
No	307	74.5
Yes	105	25.5
No response	--	--
Total	412	100

*Table 4.11*

Frequency Distribution of Clemson Baseball Fans by Clemson IPTAY Member

<b>IPTAY Member</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	205	49.8
No	207	50.2
No response	--	--
Total	412	100

*Twitter usage*

Descriptive statistics were calculated to analyze Twitter usage. As Table 4.12, which presents the descriptive statistics for general Twitter usage, shows, the majority (51.5%) of the respondents have Twitter accounts, with 50.5% indicating they have had one for 1 to 2 years and 21.2% for 3 to 4 years, followed by 16.5% between 6 months and one year, 10.8% for less than a year, and 0.1% for 5 to 6 years. When asked the frequency of Twitter usage on a typical day, 1 to 5 times indicated the majority (54.2%) of respondents.

*Table 4.12*  
Frequency Distribution for General Twitter Usage

Type	Category	Number of Respondents	Percentage (%)
Twitter Account	Yes	212	51.5
	No	200	48.5
Length of Time of Twitter Account	1-2 years	107	50.5
	3-4 years	45	21.2
	6-12 months	35	16.5
	Less than 6 months	23	10.8
	5-6 years	2	0.1
Frequency of Using Twitter	1-5	115	54.2
	None	66	31.1
	11-15	13	6.1
	6-10	12	5.7
	16-20	4	1.9
	Over 20	2	0.1

Table 4.13 provides the descriptive statistics concerning Twitter usage specifically related to sporting events. Of the Twitter users, 78.8% used Twitter while watching games and 21.1% did not. Respondents were also asked about the number of tweets they sent about the game while watching a sporting event. The category most frequently chosen by respondents (40.6%) was “Less than once per month,” while approximately 28.8% indicated “A few times a month, 10.8%, “A few times per week,” 9.0% , “Many times a day,” and 7.5% , “Once a week.” Finally, almost 2.4% selected “About once a day.”

Table 4.13

Twitter Usage Watching Game & Twitter Experience Watching Game

Type	Category	Number of Respondents	Percentage (%)
Twitter Usage Watching Game	Yes	167	78.8
	No	45	21.2
Twitter Experience Watching Game	Less than once per month	86	40.6
	A few times a month	61	28.8
	A few times per week	23	10.8
	Many times a day	19	9.0
	Once a week	16	7.5
	About once a day	5	2.4
	Never	2	1.0

Respondents were further asked how many Twitter followers they have, with the results being shown in Table 4.14. Approximately 33.0% have 51 to 100 followers and 29.7%, 1 to 50 followers. When asked about the number of people or organizations they followed on Twitter, 47% of the respondents indicated 51 to 100, followed by 12.7%, 1 to 10 and 10.8%, 11 to 20. When asked about the number of organizations/people related to sports they followed, the majority of the respondents indicated 1 to 10 (32.6%), followed by 11 to 20, 21 to 40, and 41 to 60 with 16.5%, 15.6%, and 14.2%, respectively.



*Table 4.14*  
Data on Twitter Usage related to Follower

Type	Category	Number of Respondents	Percentage (%)
Number of Followers	51-100	70	33.0
	1-50	63	29.7
	101-150	37	17.5
	More than 200	20	9.4
	151-200	19	9.0
	None	2	1.0
	8	1	0.5
Number of People/ Organizations Followed	More than 100	99	47.0
	1-10	27	12.7
	11-20	23	10.8
	41-60	20	9.4
	21-40	18	8.5
	61-80	13	6.1
	81-100	11	5.2
None	1	0.5	
Follow people/ organizations related to sports	1-10	69	32.6
	11-20	35	16.5
	21-40	33	15.6
	41-60	30	14.2
	More than 100	15	7.1
	61-80	14	6.6
	None	12	5.7
81-100	4	1.9	

Descriptive statistics were used to identify how Twitter users check their accounts. While 3 or 4 participants (1.9% and 1.4%) said they used their iPod touch and iPod to check Twitter news, the vast majority used their phones (88.7%), computers (71.7%), and tablet pc's (27.4%).

*Table 4.15*  
Data on How to Access Twitter

Type	Category	Number of Respondents	Percentage (%)
Phone	Yes	188	88.7
	No	24	11.3
Computer	Yes	152	71.7
	No	60	28.3
Tablet PC	Yes	58	27.4
	No	154	72.6
Other Method	iPod touch	4	1.9
	iPod	3	1.4

Table 4.16 presents the descriptive statistics used to measure Twitter usage related to Clemson men’s baseball team. When questioned about checking the Clemson Baseball Team’s Official Twitter Account, 55.2% of the respondents answered “yes” and 44.8%, “no.” When asked if they followed the Clemson baseball coaches on Twitter, approximately 79.7% of respondents indicated “No, while 60.6% responded that they did not follow the players. Concerning following writers who cover the Clemson men’s baseball team on Twitter, approximately 47.6% said “Yes” and 52.4% said “No.” The majority of respondents (45.3%) indicated they tweet from 1 to 3 times while watching a Clemson men’s baseball game, followed by none (43.4%), 4 to 7 (8.0%), and more than 10 (2.3%).

Table 4.16

Descriptive Statistics for Twitter Usage Related to Clemson Men’s Baseball Team

Type	Category	Frequency (N)	Percentage (%)
Do You Follow the Clemson Baseball Team’s Official Twitter Account?	Yes	117	55.2
	No	95	44.8
Do You Follow the Clemson Baseball Team’s Coaches on Twitter?	Yes	43	20.3
	No	169	79.7
Do You Follow the Players on Clemson Men’s Baseball Team?	Yes	84	39.6
	No	128	60.6
Do You Follow Writers Who Cover the Clemson Men’s Baseball Team on Twitter?	Yes	101	47.6
	No	111	52.4
How Often Do You Tweet While Watching a Clemson Men’s Basketball Team?	1-3	96	45.3
	None	92	43.4
	4-7	17	8.0
	Over 10	5	2.3
	8-10	2	1.0

Table 4.17 presents the frequency and topic of the Tweets about the Clemson men’s baseball team. The majority (95.8%) of the respondents were equally distributed between the frequency of “Many times a day (26.4%),” “Never (24.1%),” “Once a week (17.9%),” “Less than once per month (15.6%),” and “A few times a month (11.8%).” When asked about the frequency of checking the Clemson men’s baseball team website, 28.8% of the respondents said “Less than once per month,” while 26.0% said “Never.” Concerning accessing online articles related to sports, 23.6% responded “Less than once per month”, followed by “Once a week (22.2%),” “A few times a month (16%),” and “A

few times per week (13.2%). However, 35.4% responded “Never,” significantly more than the 13.2% that responded they never read print articles.

*Table 4.17*  
Frequency and Topics for Tweeting about Clemson Men’s Baseball Team

<b>Type</b>	<b>Category</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Tweeting About Clemson Men’s Baseball Team	Many times a day	56	26.4
	Never	51	24.1
	Once a week	38	17.9
	Less than once per month	33	15.6
	A few times a month	25	11.8
	A few times per week	9	4.2
Frequency of Checking Clemson Men’s Baseball Team Website	Less than once per month	61	28.8
	Never	55	26.0
	A few times a month	31	14.6
	Once a week	28	13.2
	Many times a day	19	9.0
	A few times per week	18	8.5
Accessing Sports Related Online Articles	Less than once per month	50	23.6
	Once a week	47	22.2
	A few times a month	34	16.0
	A few times per week	28	13.2
	Never	28	13.2
	Many times a day	20	9.4
	About once a day	5	2.4
Reading Sports Related Print Articles	Never	75	35.4
	Many times a day	61	28.8
	Less than once per month	42	19.8
	A few times a month	21	9.9
	Once a week	13	6.1

### Correlation Analysis of the Study's Variables

Literature indicates that research utilizing multiple linear regressions (MLR) should examine correlation matrices (Barron & Kenny, 1986). The construct mean scores, standard deviations, and reliability measures for the 412 responses used in this study can be found in Appendix B. Based on the literature, correlation analyses were conducted on a total of 17 variables, both the independent and dependent, for this study. Based on the hypotheses, this analysis can be presented two different time periods; Twitter usage while watching Clemson men's baseball games and Twitter usages before or after watching the Clemson men's baseball game.

The results of the correlation analysis during watching a Clemson men's baseball game is reported in Table 4.18. The mean scores ranged from  $M = 4.21$  to  $M = 6.26$  and the standard deviations from  $\delta = 1.08$  to  $\delta = 1.57$ . The reliability analysis found that the alpha levels for each construct was approximately  $\alpha = .97$ , and the correlations among the constructs ranged from  $\gamma = .41$  to  $\gamma = .89$ .

Among the variables of Allegiance (Loyalty) and Attachment Properties (Importance, Knowledge, and Affect), the analysis indicated that Importance (0.75), Knowledge (0.73), and Affect (0.69) were correlated with Loyalty. More specifically, Importance and Loyalty (0.75) and Knowledge and Loyalty (0.73) were found to be highly correlated, while Affect and Loyalty (0.69) were found to be moderately related. Moreover, within a correlational analysis framework of the correlation Attachment Properties (Importance, Knowledge, and Affect) and Attraction (13 variables), Team Identification (0.89), Nostalgia (0.86), Logo Design (0.86), and Product Delivery (0.82)

were highly correlated with Importance. The analysis further indicated that Team Identification (0.83), Nostalgia (0.81), Success (0.73), and Logo Design (0.73) were highly correlated with Knowledge, while the correlations between Team Identification (0.85), Success (0.77), Logo Design (0.75) and Nostalgia (0.72) with Affect were moderately high.

Table 4.19 presents the analysis of the correlation matrix of Twitter usages for before or after watching a Clemson men's baseball game. The mean scores for each construct ranged from  $M = 4.601$  to  $M = 6.63$ , with the standard deviations for each construct ranging from  $\delta = 1.10$  to  $\delta = 1.65$ . The reliability analysis indicated the alpha levels for each construct were approximately  $\alpha = .97$ , and the correlations among the constructs ranged from  $\gamma = .45$  to  $\gamma = .89$ .

In addition the analysis indicated that Importance (0.77), Knowledge (0.75), Team Identification (0.75), Nostalgia (0.73), Affect (0.71), and Logo Design (0.71) were highly correlated with loyalty to Clemson men's baseball games. The variables of Team Identification (0.89), Logo Design (0.87), and Nostalgia (0.86) were found to be moderately and highly correlated to Importance, respectively. The correlation between Knowledge and Team Identification (0.83) and Knowledge and Nostalgia (0.81) were moderately high. The analysis further indicated that there were high correlations between Affect and Team Identification (0.85).

Table 4.18  
Correlation Matrix for Watching Clemson Men's Baseball Game (N = 212)

	LOY	IMP	KNW	AFF	SUC	HC	STP	MGT	PD	LOG	VEN	TRD	ESC	NOS	PGA	PIP	TI
LOY	1																
IMP	0.75	1															
KNW	0.73	0.78	1														
AFF	0.69	0.79	0.73	1													
SUC	0.69	0.80	0.75	0.77	1												
HC	0.66	0.77	0.69	0.60	0.74	1											
STP	0.59	0.71	0.68	0.64	0.75	0.68	1										
MGT	0.64	0.77	0.68	0.67	0.72	0.85	0.74	1									
PD	0.59	0.82	0.70	0.69	0.74	0.74	0.75	0.80	1								
LOG	0.67	0.86	0.73	0.75	0.79	0.76	0.75	0.84	0.89	1							
VEN	0.55	0.69	0.55	0.61	0.63	0.67	0.68	0.72	0.82	0.81	1						
TRD	0.57	0.63	0.62	0.50	0.64	0.71	0.80	0.74	0.70	0.69	0.69	1					
ESC	0.61	0.80	0.70	0.68	0.67	0.67	0.73	0.75	0.78	0.79	0.68	0.69	1				
NOS	0.70	0.86	0.81	0.72	0.76	0.76	0.73	0.76	0.82	0.84	0.70	0.66	0.76	1			
PGA	0.41	0.61	0.56	0.63	0.59	0.53	0.55	0.60	0.60	0.60	0.53	0.43	0.56	0.58	1		
PIP	0.57	0.75	0.63	0.63	0.71	0.80	0.73	0.81	0.77	0.74	0.73	0.75	0.74	0.76	0.62	1	
TI	0.73	0.89	0.83	0.85	0.84	0.75	0.76	0.78	0.81	0.86	0.72	0.65	0.83	0.86	0.68	0.77	1

Table 4.19  
Correlation Matrix for Before or After Watching Clemson Men's Baseball Game (N = 212)

	LOY	IMP	KNW	AFF	SUC	HC	STP	MGT	PD	LOG	VEN	TRD	ESC	NOS	PGA	PIP	TI
LOY	1																
IMP	0.77	1															
KNW	0.75	0.79	1														
AFF	0.71	0.80	0.74	1													
SUC	0.72	0.80	0.76	0.76	1												
HC	0.69	0.77	0.70	0.61	0.74	1											
STP	0.63	0.71	0.69	0.64	0.73	0.68	1										
MGT	0.67	0.77	0.69	0.67	0.71	0.86	0.73	1									
PD	0.64	0.82	0.71	0.70	0.74	0.75	0.76	0.80	1								
LOG	0.71	0.87	0.74	0.75	0.79	0.76	0.74	0.83	0.89	1							
VEN	0.59	0.69	0.56	0.62	0.62	0.67	0.67	0.72	0.83	0.82	1						
TRD	0.59	0.61	0.61	0.47	0.59	0.69	0.78	0.71	0.68	0.66	0.66	1					
ESC	0.64	0.80	0.71	0.69	0.68	0.69	0.74	0.75	0.79	0.80	0.69	0.68	1				
NOS	0.73	0.86	0.81	0.73	0.77	0.77	0.74	0.76	0.82	0.85	0.70	0.65	0.77	1			
PGA	0.45	0.61	0.57	0.63	0.56	0.52	0.52	0.58	0.60	0.59	0.51	0.36	0.56	0.58	1		
PIP	0.60	0.74	0.63	0.62	0.68	0.80	0.71	0.80	0.76	0.73	0.72	0.71	0.74	0.75	0.58	1	
TI	0.75	0.89	0.83	0.85	0.83	0.75	0.76	0.78	0.81	0.86	0.71	0.62	0.83	0.87	0.67	0.76	1



### Mediation Effect of Twitter

Following the procedures recommended by Barron and Kenny (1986), mediation tests of the data (N = 212) were used to examine the three hypotheses. These tests are important from two perspectives: one is the point of view while watching a baseball game, and the other is the perspective for before or after watching a baseball game. Of the 412 useable responses, 212 participants have a Twitter account.

The results of the first mediation tests (Table 4.20) for the data (N=212) reported the effect while watching a baseball game. Step 1 presented H2 in that the relationship between four of thirteen variables of association and attitude formation (Level 3) were significant ( $\rho < .05$ ). Based on the attributes and benefits, the combined variance was  $R^2 = .89$ . The analysis of the standard beta weights for the 13 attributes and benefits indicated that Team Identification, Nostalgia, and Success were positively related to attitude formation. However, the beta weight for Pride in Place indicated a negative relationship.

The results of the next step reported in Table 4.20 tested H1 as partial support that Allegiance was regressed on Level 2 outcomes. The relationship between Allegiance and six of the thirteen associations in Level 2 was significant ( $\rho < .05$ ). The variance explained in Allegiance by Level 2 outcomes which include the attributes and benefits was  $R^2 = .60$ . The standard beta weights for Team Identification, Nostalgia, Product Delivery, and Success were positively related to team allegiance, while the beta weights for Peer Group Acceptance and Pride in Place were negatively related.

The final step also provided support for H3 (see Table 4.20). The Attachment process explained the direction and strength of the relationship among three of the Level 2 attribute and benefit outcomes and Allegiance. The variance accounted for Allegiance by Level 3 and Level 2 outcomes was  $R^2 = .65$ . The standard beta weights in Step 3 (shown in Table 4.20) indicated that the relationship between Allegiance and the Level 2 outcomes of Team Identification, Nostalgia, and Success were fully mediated by Level 3 attitude formation.

*Table 4.20*  
Testing of Mediation Effect as a result of Twitter Usage during a Baseball Game (N = 212)

<b>Level 2 Outcomes</b>	<b>Step 1(H2) Level 3 Outcomes</b>	<b>Step 2 (H1) Allegiance Outcomes</b>	<b>Step 3 (H3) Allegiance Outcomes</b>	<b>Interpretation</b>
Team Identification	.54	.51		Full Mediation
Nostalgia	.20	.22		Full Mediation
Product Delivery		-.24	-.26	
Head Coach				
Escape				
Star Player				
Success	.05	.19		Full Mediation
Peer Group		-.01	-.17	
Management				
Log Design				
Tradition				
Venue				
Pride in Place	-.10	-.20		
<b>Level 3 Outcomes</b>				
<b>Twitter Usage (Watching Game)</b>			.74	Mediator
F	131.876	24.588	29.107	
R <sup>2</sup> Adjusted	.89	.60	.65	

※ Note: Standardized Regression Coefficient given if significant at .05 or less

No mediation exists if the regression coefficient in Step 1 or Step 2 is not significant. No mediation exists if the regression coefficient in Step 3 (or Step 4) is not significant. Partial mediation exists if the regression coefficient in Step 1 and Step 3 (or Step 4) is significant. Full mediation exists if a regression coefficient in Step 1 is significant but not in Step 3 (or Step 4).

The results of the second mediation tests seen in Table 4.21 represent the effect before or after watching a baseball game. The results of the first step including H2 in that the relationship between four of the thirteen variables of associations and attitude formation (Level 3) were significant ( $p < .05$ ), with 89% of the variance being explained by this model ( $R^2 = .89$ ). The non-significant beta weights for Team Identification, Nostalgia, and Success were positively related to attitude formation, with only the beta weight for Pride in Place indicating a negative relationship.

Results of the second test seen in Table 4.20 provided partial support for H1 in that the relationship between Allegiance and six of the thirteen associations in Level 2 was significant ( $p < .05$ ), with 80% of the combined variance being explained by this model ( $R^2 = .63$ ). The beta weights for Team Identification, Nostalgia, Head Coach, and Success were positively related to Allegiance, while the beta weights for Product Delivery and Pride in Place were negatively related.

The third step revealed support for H3 as seen in Table 4.21. The Attachment process accounted for the relationship between Allegiance and four of the Level 2 attribute and benefit outcomes, with 68% of the total variance being explained by this process ( $R^2 = .68$ ). The beta weights in Step 3 revealed that the relationship between Allegiance and the Level 2 outcomes of Team Identification, Nostalgia, Success, and Pride in Place were fully mediated through Level 3 attitude formation.

Table 4.21

Testing of Mediation Effect as a result of Twitter Usage **before or after a Baseball Game**  
(N = 212)

<b>Level 2 Outcomes</b>	<b>Step 1(H2) Level 3 Outcomes</b>	<b>Step 2 (H1) Allegiance Outcomes</b>	<b>Step 3 (H3) Allegiance Outcomes</b>	<b>Interpretation</b>
Team Identification	.51	.38		Full Mediation
Nostalgia	.20	.21		Full Mediation
Product Delivery		-.23	-.26	
Head Coach		.18	.16	
Escape				
Star Player				
Success	.18	.21		Full Mediation
Peer Group			-.11	
Management				
Log Design				
Tradition				
Venue				
Pride in Place	-.09	-.17		Full Mediation
<b>Level 3 Outcomes</b>				
<b>Twitter Usage (Before or After Watching Game)</b>			.73	Mediator
F	135.499	28.162	33.206	
R <sup>2</sup> Adjusted	.89	.63	.68	

※ Note: Standardized Regression Coefficient given if significant at .05 or less

No mediation exists if the regression coefficient in Step 1 or Step 2 is not significant. No mediation exists if the regression coefficient in Step 3 (or Step 4) is not significant. Partial mediation exists if the regression coefficient in Step 1 and Step 3 (or Step 4) is significant. Full mediation exists if a regression coefficient in Step 1 is significant but not in Step 3 (or Step 4).

### Summary

This chapter summarized how to use Twitter in general and related to a sport team from the response data. Moreover, results from the correlation analysis and multiple linear regression (MLR) analysis were presented.

## CHAPTER FIVE

### DISCUSSION AND CONCLUSION

#### Introduction

This chapter is divided into three sections. The first reports the results from the major findings and the hypotheses tests, while the second discusses the theoretical and practical implications of these findings. The final section considers the limitations of this research, including recommendations for future study.

#### Summary of the Findings

The purpose of this research was to investigate the role of Twitter in the formation of fan allegiance using the framework of the revised PCM and to examine the fan allegiance of the individuals attending Clemson men's home baseball games. The study also examined the mediation effect of Twitter usage in relation to allegiance for a college sport team. Specifically, the primary focus was the analysis of how individuals interact with a sport team via Twitter and how those interactions then form allegiance.

According to the literature, the development of allegiance is the process of creating a charismatic, complex psychological connection. This study provides evidence that fans' attitude toward a specific sport team is well formed, and these attitudes lead them to be connected a strong psychological relationship with the team in sport context. For example, the highest level of commitment for a specific team, the passionate or enthusiastic level, is formed though the functional and symbolic/emotional meanings created by the thoughts, ideas, and images related to it. Previous empirical evidence

supports that the revised Psychological Continuum Model as a platform links a sport consumer's psychological and behavioral perspectives toward a team. Below each hypothesis test is discussed, and the results analyzed in relation to previous research.

### Testing the Hypotheses

The testing of the hypotheses was divided into two categories based on chronology: an investigation of the data obtained while the participants were Twitter usage watching a baseball game and Twitter usage before or after watching a baseball game.

H1: There is a significant relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attribute and benefits) as a result of Twitter usage during a baseball game.

H1-1: There is a significant relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attribute and benefits) as a result of Twitter usage before or after a baseball game.

As proposed, Hypothesis 1 posits that the relationship between Allegiance and the Level 2 outcome of Attraction during Twitter usage while watching a baseball game will be significant. A one-way ANOVA test revealed that there was a statistically significant difference in the mean score of the relationship between Allegiance and this outcome as seen in Table 5.1. This result suggests that allegiance may improve through attraction variables and Twitter usage while watching a baseball game. Hence, the null hypothesis was rejected, and it was concluded there is a significant relationship between Allegiance

and the Level 2 outcome of Attraction during Twitter usage while watching a baseball game.

*Table 5.1*  
ANOVA for Hypothesis 1 (Twitter Usage during a Baseball Game) (N = 212)

Model	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P</i>
H1	322.135	13	24.780	24.588	.000
Error	199.540	198	1.008		
Total	521.675	211			

Similarly, as seen in Table 5.2, a one-way ANOVA test found that there was a statistically significant difference in the mean score of the relationship between Allegiance and the Level 2 outcome of Attraction during Twitter usage while fans before or after watching a baseball game, using the same analysis as for Hypothesis 1. Thus, the null hypothesis was rejected at the 95% level of significance, and the Level 2 outcome, Attraction, Twitter usage while before or after watching a baseball game was found to have a significant correlation with team allegiance.

*Table 5.2*  
ANOVA for Hypothesis 1-1 (Twitter Usage Before or After a Baseball Game) (N = 212)

Model	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P</i>
H1-1	373.287	13	28.714	28.162	.000
Error	201.883	198	1.020		
Total	575.170	211			

H2: There is a significant relationship between Level 2 outcomes (attributes and benefits) and Level 3 outcomes (i.e., knowledge, importance, and affect) related to attitude strength properties as a result of Twitter usage during a baseball game.

H2-1: There is a significant relationship between Level 2 outcomes (attributes and benefits) and Level 3 outcomes (i.e., knowledge, importance, and affect) related to attitude strength properties as a result of Twitter usage before or after a baseball game.

The second hypothesis examined the relationship between the Level 2 outcomes of attributes and benefits and the Level 3 outcomes of knowledge, importance, and affect in relation to attitude strength properties during Twitter usage while fans watching a baseball game. The results of the one-way ANOVA test for this hypothesis can be seen in Table 5.3. Once again, the null hypothesis was rejected, and it was concluded that there is a significant relationship between the Level 2 outcomes of attributes and benefits and the Level 3 outcomes of knowledge, importance, and affect in relation to attitude strength properties during Twitter usage while fans watching a baseball game.

*Table 5.3*  
ANOVA for Hypothesis 2 (Twitter Usage during a Baseball Game) (N = 212)

Model	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P</i>
H2	317.380	13	24.414	131.876	.000
Error	36.655	198	.185		
Total	354.036	211			



Similar to Hypothesis 2, Hypothesis 2-1 examined the extent that there is a significant relationship between the Level 2 outcome of attitudes and benefits and the Level 3 outcomes of knowledge, importance, and affect in relation to attitude strength properties during Twitter usage while before or after watching a baseball game. The results, which are displayed in Table 5.4, indicated a significant difference for the relationship between Level 2 and Level 3 outcomes during Twitter usage while before or after watching a baseball game.

*Table 5.4*  
ANOVA for Hypothesis 2-1 (Twitter Usage Before or After a Baseball Game) (N = 212)

Model	SS	df	MS	F	P
H2-1	327.415	13	25.186	135.499	.000
Error	36.803	198	.186		
Total	364.218	211			

H3: The relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attributes and benefits) is mediated by the attachment process as a result of Twitter usage during a baseball game.

H3-1: The relationship between Allegiance (i.e., behavior and commitment) and Level 2 outcomes (attributes and benefits) is mediated by the attachment process as a result of Twitter usage before or after a baseball game.

Hypotheses 3 and 3-1 posit that the relationship between Allegiance and Level 2 outcomes is mediated by the Attachment process during Twitter usage while watching a

baseball game and before or after watching a baseball game. The one-way ANOVA test for both hypotheses revealed significant differences in the mean scores seen in Table 5.5 and Table 5.6. Based on these results, the null hypotheses were rejected, and it was concluded that the mediating effect of the Attachment process as these two different times is a significant connection between Allegiance and Level 2 outcomes.

*Table 5.5*  
ANOVA for Hypothesis 3 (Twitter Usage during a Baseball Game) (N = 212)

Model	SS	Df	MS	F	P
H3	351.667	14	25.119	29.017	.000
Error	170.007	197	.863		
Total	521.675	211			

*Table 5.6*  
ANOVA for Hypothesis 3-1 (Twitter Usage Before or After a Baseball Game) (N = 212)

Model	SS	Df	MS	F	P
H3-1	403.979	14	28.856	33.206	.000
Error	171.191	197	.869		
Total	575.170	211			

### Implications

This research is a first attempt not only to conceptualize the development of sport fans' allegiance but also to be examined the mediating effect of Twitter usage on the process of Allegiance development. As such it generates several theoretical and practical implications, the most important being investigating which attributes and benefits

variables affiliated with a specific team are required for reaching Level 3 outcomes but not necessary for achieving Allegiance outcomes. It seems logical that sporting events are associated with distinctive elements that influence the attachment process involving a sport team or object. Even though numerous previous studies have examined improving attraction toward a sport team based on what fans like (Funk & James, 2006; Trail & James, 2001; Wann, 1995), current research focuses on the interest in a specific team involving “the presence of core versus contextual motives,” for example male sport teams compared to female ones (Funk et al., 2003).

As shown in Tables 4.20 and 4.21, the statistical evidence and the results from the research reported here indicated that the three motives of Team Identification, Nostalgia, and Success were fully mediated by the attitude outcomes from Level 3 formation but not sufficiently so to predict Allegiance outcomes. In other words, the findings showed that these three motives linked with strengthening self-esteem, recalling thoughts of the past, and accomplishing the advantage or the goal are crucial and adequate in the development of sport fan allegiance.

A significant current issue is whether Twitter usage plays a significant role in the development of sport fan allegiance. To explore this topic, this study was conducted at two times, one involving Twitter usage while watching a baseball and the other, Twitter usage before or after watching a game, both of which appear to have some impact on the development process of allegiance. The findings revealed that the factors, Team Identification, Nostalgia, and Success, demonstrated distinctive possibilities as influences on the Allegiance outcomes including both commitment and behavior aspects (Backman

& Crompton, 1991). Therefore, these results suggest that Twitter usage in connection with a favorite team can be studied to determine the development of individual awareness and emotions while watching or before or after watching a game in relation to generating Allegiance. However, it still remains to determine whether the Attachment process creates meaning which has an independent, preservative, and multi-applicative effect.

To provide a fuller understanding of the necessary and sufficiency issues, a comparison of demographic characteristics such as gender and age of Twitter users in relation to a sports team should be considered. Its usage by males and females may be different in the Attachment process. In addition, this process may be different based on the age of the Twitter user in relation to a specific team. It may also be possible that features related to other sports, not baseball, may be meaningful in the development of Allegiance.

Based on social-structural constraints such as lifestyle, culture, race or other demographic characteristics, the development of Allegiance also merits study. For instance, the specific rationales for each country's baseball leagues, for example the United States Major League Baseball, the Korean Professional Baseball League, and the Japanese Professional Baseball League may be different. Furthermore, examining what transforms nostalgia or tradition into symbolic meaning would also be constructive. According to James and Ridinger (2002), identification with a specific team is more prevalent among men than women. Trail et al. (2003) indicated that it seems likely that gender, culture, and age influence the motives for attending a sporting event as well as identification with a particular team. Using attachment theory, Bowlby (1980) conducted

research on how adult attachments formed during childhood transform into adulthood, and make a strong affectionate bonds between an individual and a favorite team within the sport context.

The revised Psychological Continuum Model (PCM) was used here to explore the statistical evidence and the results from the data analysis. This model provided a hierarchical-based one for investigating sociological and psychological factors. The consumer behavior of sport fans reflects the unconscious use of a number of psychological processes including motives and attitudes. Although the revised PCM models the complex developmental progression to Allegiance, it may be important to determine the consumers' level of psychological connection, and subsequently, the results of this study combined with such information as gender, age, culture or other demographic characteristics can be used to more fully understand this complex process.

Twitter, a dominant global trend in sport communication, allows sport marketers and organizations to attract and reach their fans easily by sharing images, videos, and news. Before the advent of Twitter, the primary way to access up-to-date news about games or athletes was by attending an event. Twitter allows immediate access to favorite teams or players through posts about specific topics, interactions that form an identification with a specific team (Hecht, Collier, & Ribeau, 2003). This team identification could lead to Allegiance, an outcome that is directly related to Twitter usage.

The finding presented here help provide empirical evidence to aid in understanding collegiate baseball fan allegiance, thus addressing the initial research

questions. These results showing how Twitter usage impacts the formation of Allegiance for a favorite team have several implications. This study suggests that people's interaction on Twitter can be studied to determine the development of individual awareness and emotions through watching a sporting event, progressing to their allegiance for a specific team. In addition, this study will aid sport marketers and managers in understanding sport consumer online behaviors, needs, and motivation, helping them to shape their internet marketing communications.

The results of this study demonstrate that there is a significant relationship between Twitter usage and team allegiance as a high level of psychological connection to a specific team. Thus, practitioners can identify a unique market segment that they could appeal to through Twitter. For example, they could target users with a low level of Twitter usage to promote more frequent use and, hence, increase their allegiance. Additionally, participants at a high level of Twitter usage could be targeted with strategies to maintain this level of connection as applied to a specific sport context. Ultimately, sport marketers and managers need to better understand Twitter users and their wants and see as this medium is an integrated part of their lifestyle.

This study revealed that highly involved or attached sport fans use Twitter frequently, probably because this mode of social media allows its users to express their thoughts and opinions constantly about the most up-to-date information. Thus, sport team administrators should focus on their Twitter fans since they are not only an engaged but a dramatically growing segment, one with great market potential. In addition, using

Twitter in unique ways can enhance the relationship between the teams and their fans, further increasing the market potential.

These results found here are of interest not only to other college sport teams in different conferences but also to professional sport teams by extension. They may be used to help study fan motives and the level of identification and allegiance in their conference members. It is also significant for professional sport teams to grasp the difference or concurrence with collegiate sport from a practical standpoint. Therefore, college athletic departments and professional sport franchises are able to apply that based on these findings.

#### Limitations

This research and its results are specific to fans attending Clemson men's home baseball games, a scope suggesting several limitations. The first concerns the sample. Although many sport fans have and use a Twitter account, a random sample of Clemson men's baseball fans may not be representative of all fans and of all sports. In addition, this study is based on the 212 participants of the 412 responses having Twitter accounts. While this number is large enough to provide accurate data based on the literature, a larger sample would enhance the accuracy and generalizability of the results.

A second limitation is that this study was restricted to Clemson University, which belongs to the Atlantic Coast Conference (ACC), National Collegiate Athletic Association (NCAA) Division 1-A. In addition, the topic, Clemson men's baseball game, represents not only one conference and division but also only one collegiate sport outlet.

To gain a broader perspective, data from other sports in other conferences and professional leagues are needed.

The sample time frame is another limitation of this study. The data were collected from this past year over insert the number of months here; it would be beneficial to examine trends over an extended period of time to determine if they or the management techniques continue or change over time. The optimum time frame would be at least 6 months since Twitter information quickly changes in both quantity and content. The Twitter user-interaction levels reported here describe the current interaction but were not controlled for any type of covariate, for example time of day.

Finally, the research design and methodology, specifically the use of questionnaires, also involved limitations. It is possible that the questions or the answer choices were misinterpreted or incorrect information was supplied by the participants as the data were self-reported. This study used the Fan Allegiance and Twitter Survey, asking participants questions regarding both general and sport-related Twitter use and the Team Association Scale (TAS) related to the Psychological Continuum Model (PCM). Because thoughts of participants are often sensitive and difficult for questionnaires to capture, potential participants may not have answered certain questions or they may have refused to participate in the study.

#### Future Research

In a short amount of time, social media has become an important force and a dominant global trend in sport communication, both in the sharing and in the creation of news and information. Specifically, Twitter allows sport marketers and organizations to



attract and reach their fans easily through images, videos, and news. Before the advent of Twitter, the primary avenue for accessing up-to-date news about games or athletes was by attending an event. Twitter allows immediate access to favorite teams or players through posts on specific topics, interactions that help form identification with a specific team (Hecht, Collier, & Ribeau, 2003). This team identification leads to allegiance, an outcome that has been found to be directly related to Twitter usage. As a result, sport markets and organizations can no longer ignore advantages of Twitter and the necessity to actively utilize it. This final chapter provides some guidance to help with the integration of social media and sports.

First, this study should be considered as a starting point for estimating the mediating effect of Twitter usage and the development of team allegiance by fans attending Clemson men's baseball games. Continuing and extending this research is important for both news media as well as collegiate, and potentially professional, sports teams given the current emphasis on social media. Therefore, future research could further explore the development of individual identity with a team, in either the amateur or professional context, for research and marketing activities.

Second, future research could be conducted using a larger sample of collegiate sport fans to increase the validity of the results and the conclusions drawn from Twitter usage. The current study focused on only Clemson men's baseball fans and did not include other sport fans or conferences. Thus, further studies could extend the sample pool to include a broader fan base to determine how often and for what purpose collegiate sport fans use Twitter.

Adapted from both Gladden and Funk's (2002) Team Association Scale (TAS) and Matthew's (2011) Twitter and Sport Consumption, the Fan Allegiance and Twitter Survey used in this study has some of their issues related to the measurement of Allegiance outcomes and Twitter usage needing further refinement. The TAS measurement by Gladden and Funk (2002) requires investigation to determine whether behavior and commitment should be investigated independently (e.g., Butcher, Sparks, & O'Callaghan, 2001). In addition, the Twitter and Sport Consumption questionnaire requires the development of a more accurate measurement than what is found in the current instrument. Thus, further research could result in the creation of a new survey, one with closed questions related to allegiance as a line of scholarly inquiry.

Another aspect of sport fans' Twitter usage in relation to collegiate sports that should be examined is the potential use of qualitative methods to compensate for the disadvantages of quantitative research methods. The most recent studies of fan allegiance have used quantitative research methods. However, these methods alone are not the best ones for examining allegiance and may not help operationalize this construct more fully and specifically. Qualitative research methods using personal interviews and focus groups could provide important baseline data, leading to a deeper understanding of this aspect in the collegiate sport context. Thus, future research should integrate both qualitative and quantitative research methods into the studies.

Finally, future research focusing on the relationship between Twitter usage and fan allegiance toward sport teams and facilities could use actual fan Tweets to increase applicability to specific teams. Moreover, researchers could investigate the Twitter usage

of a specific organization to better understand how current teams can engage their fans via Twitter. Research in this area could also focus on other social media such as Facebook and Linked-In as well as Twitter, extending this area of investigation to include the impact of these new forms of social media on sport organizations and fans.

In conclusion, the current research explored the mediating effects of Twitter usage on the formation of fan allegiance using the revised Psychological Continuum Model (PCM), which reflects fans' psychological development toward allegiance to a particular sport team. It is believed that a more comprehensive understanding of the relationship between Twitter usage and fan allegiance will help sport scholars and experts shape Internet marketing communication, especially important in this digital age.

## APPENDICES

Appendix A

Institutional Review Board (IRB) Approval Letter

<b>To:</b>	Sheila Backman <BACK@clermson.edu>, Sukjoon Yoon <suky@clermson.edu>
<b>From:</b>	Nalinee Patin <NPATIN@clermson.edu>
<b>Subject:</b>	Validation of IRB2012-291
<b>Body:</b>	<p>Dear Dr. Backman,</p> <p>The chair of the Clemson University Institutional Review Board (IRB) validated the protocol identified above using exempt review procedures and a determination was made on <b>October 11, 2012</b>, that the proposed activities involving human participants qualify as Exempt from continuing review under category <b>B2</b>, based on federal regulations 45 CFR 46. You may begin this study.</p> <p>Please remember that the IRB will have to review all changes to this research protocol before initiation. You are obligated to report any unanticipated problems involving risks to subjects, complications, and/or any adverse events to the Office of Research Compliance (ORC) immediately. All team members are required to review the “Responsibilities of Principal Investigators” and the “Responsibilities of Research Team Members” available at <a href="http://www.clemson.edu/research/compliance/irb/regulations.html">http://www.clemson.edu/research/compliance/irb/regulations.html</a>.</p> <p>We also ask that you notify the ORC when your study is complete or if terminated. Please let us know if you have any questions and use the IRBnumber and title in all communications regarding this study.</p> <p>Good luck with your study.</p> <p>All the best, Nalinee</p>

## Appendix B

### Recruitment Script



#### *Fan Allegiance and Twitter Survey*

#### *An Examination of Twitter's Role in Sports Fan Allegiance Formation Using the Revised Psychological Continuum Model (PCM)*

Dear Participant,

You are invited to participate in a research study (IRB# 2012-291) conducted by Sukjoon (SJ) Yoon for his master's degree. Sukjoon (SJ) Yoon behind Dr. Sheila Backman and the Department of Clemson Athletics is inviting you to take part in a research study. Dr. Sheila works in the Department of Parks, Recreation, and Tourism Management at Clemson University. Sukjoon (SJ) Yoon is 2<sup>nd</sup> year a master's candidate at Clemson University, running this study with the help of Dr. Sheila.

**Purpose:** The purpose of this study is to examine the role that Twitter plays in the formation of fan allegiance toward a team. The primary focus will be to see how fans interact with a sports team via Twitter. The information gathered will provide information in support of the department of collegiate athletics for fan services and programs.

**Description of Your Part in It:** Your part in the study will be to complete online survey. I will send my questionnaire to you tonight or tomorrow. These email, [suky@clemson.edu](mailto:suky@clemson.edu) / [beckhamysj@gmail.com](mailto:beckhamysj@gmail.com), are not junk mail.

Alternately, you may type the following address in your browser:  
[https://clemsonhealth.qualtrics.com/SE/?SID=SV\\_d4phJtcNL9eL06p](https://clemsonhealth.qualtrics.com/SE/?SID=SV_d4phJtcNL9eL06p)

**Protection of Privacy and Confidentiality:** You may be assured of complete confidentiality. The questionnaire has an identification number for sending email purposes only. The number is used so we can check your name off the mailing list when your online questionnaire is submitted, ensuring we do not send you additional invitations. Your name will never be linked to your responses.

Your responses to the survey will help to inform us as to where you stand on these important issues. YOU are one of a small number of anglers that were chosen to participate in this study. Your response to this survey is completely voluntary. You are in no way obligated to participate if you do not feel comfortable doing so. However, we would appreciate your taking the few minutes necessary to complete the questionnaire. Your answers will remain anonymous and completely confidential. Only aggregated results will be reported. Once the study is complete, all names and addresses will be destroyed. We WILL NOT sell or distribute your name and address to any other party. The questionnaire should take approximately 20 minutes to complete.

If you have any questions or concerns about your rights in this research study, please contact the Clemson University Office of Research Compliance (ORC) at 864-656-6460 or [irb@clemson.edu](mailto:irb@clemson.edu). If you are outside of the Upstate South Carolina area, please use the ORC's toll-free number, 866-297-3071.



We thank you in advance for the opportunity to get valuable information on this project.

*Sincerely,*  
Sukjoon (SJ) Yoon  
M.S. Student  
[suky@clemson.edu](mailto:suky@clemson.edu), (864) 986-2444  
243 P&AS Building

Dr. Sheila J. Backman  
Professor (Advisor)  
[back@clemson.edu](mailto:back@clemson.edu), (864) 656-5236  
273 Lehotsky Hall



Appendix C

Initial Email Sent to Fan Allegiance and Twitter Survey

<b>To:</b>	[Email Address]
<b>From:</b>	Researcher's Email address
<b>Subject:</b>	Fan Allegiance and Twitter Survey
<b>Body:</b>	<div style="text-align: center;"> <b>CLEMSON</b> PARKS, RECREATION AND TOURISM MANAGEMENT</div> <div style="text-align: center;"> <b>CLEMSON</b> ATHLETICS</div> <p>Greetings Participant,</p> <p>We hope you had a great time for the Clemson Men's Baseball game against Virginia.</p> <p>The Department of Clemson Athletics is committed to providing you with the best possible experience during your time at Clemson University. One of our goals is "to promote sports fan satisfaction and allegiance" in which our department has been charged with assessing and implementing. In order for us to provide the best possible experience for you, please take a few moments to complete the survey (IRB# 2012-291) at the link below. Your responses and comments will be completely confidential. The questionnaire should take approximately 10~15 minutes to complete.</p> <p><b>Follow this link to the Survey:</b></p> <p><a href="#">Take the Survey</a></p> <p>Or copy and paste the URL below into your internet browser: <a href="https://clemsonhealth.qualtrics.com/WRQualtricsSurveyEngine/?Q_SS=6nU31qRlu6WxYyh_e tCEmWimnfvQfrv&amp;_e=1">https://clemsonhealth.qualtrics.com/WRQualtricsSurveyEngine/?Q_SS=6nU31qRlu6WxYyh_e tCEmWimnfvQfrv&amp;_e=1</a></p> <p>Follow the link to opt out of future emails: <a href="#">Click here to unsubscribe</a></p> <p>If you have any questions or concerns about your rights in this research study, please contact the Clemson University Office of Research Compliance (ORC) at <a href="tel:864-656-6460">864-656-6460</a> or Sukjoon (SJ) Yoon at <a href="tel:864-986-2444">864-986-2444</a>. If you are outside of the Upstate South Carolina area, please use the ORC's toll-free number, <a href="tel:866-297-3071">866-297-3071</a>.</p> <p>Thank you for your input, feedback and support on this decision. Have a great weekend!</p>

Appendix D



Follow Up Email Sent to Fan Allegiance and Twitter Survey

<b>To:</b>	[Email Address]
<b>From:</b>	Researcher's Email address
<b>Subject:</b>	Fan Allegiance and Twitter Survey
<b>Body:</b>	<div style="text-align: center;"> </div> <p>Dear Participant,</p> <p>A few days ago, we sent you an email requesting your participate in an online survey regarding your sports allegiance in Clemson. As of today we have not yet received your completed questionnaire. If you have recently completed the questionnaire, please accept our thanks.</p> <p>The success and accuracy of our survey depends on you and the others who have not yet responded. You and the other anglers who have not responded may have different opinions and may represent a completely different segment of collegiate sports fans than those who have sent in their questionnaire. <b>We need to hear from you!</b></p> <p>We are conducting this survey to understand how fans interact with a sports team via Twitter. In planning for the future, managers need to consider you, the angler. Your responses to our questionnaire are as important to you as they are to us because of their impact on future collegiate sports management decisions.</p> <p>You may be assured of complete confidentiality. The questionnaire has an identification number for mailing purposes only. The number is used so we can check your name off the mailing list when your questionnaire is submitted, ensuring we do not send you additional invitations. Your name will never be linked to your responses.</p> <p>Your responses to the survey will help to inform us as to where you stand on these important issues. YOU are one of a small number of anglers that were chosen to participate in this study. Your response to this survey is completely voluntary. You are in no way obligated to participate if you do not feel comfortable doing so. However, we would appreciate your taking the few minutes necessary to complete the questionnaire. Your answers will remain anonymous and completely confidential. Only aggregated results will be reported. Once the study is complete, <u>all</u>names and addresses will be destroyed. We <b>WILL NOT</b> sell or distribute your name and address to any other party. The questionnaire should take approximately 15 minutes to complete.</p> <p>To access the questionnaire online, please click here: <a href="#">\${1://SurveyLink?d=Take the Survey}</a></p> <p>Or copy and paste the URL below into your internet browser: <a href="#">\${1://SurveyURL}</a></p> <p>If you have any questions or concerns about your rights in this research study, please contact the Clemson University Office of Research Compliance (ORC) at 864-656-6460</p> <p>Thank you in advance for your help.</p>



Appendix E

Reminder Email Sent to Fan Allegiance and Twitter Survey

<b>To:</b>	[Email Address]
<b>From:</b>	Researcher's Email address
<b>Subject:</b>	Reminder: Fan Allegiance and Twitter Survey
<b>Body:</b>	<div style="display: flex; justify-content: space-around; align-items: center;"><div style="text-align: center;"><b>CLEMSON</b> PARKS, RECREATION AND TOURISM MANAGEMENT</div><div style="text-align: center;"><b>CLEMSON</b> ATHLETICS</div></div> <p>Fan Allegiance and Twitter Survey</p> <p>Dear Participant,</p> <p>Recently, we mailed you a letter inviting you to participate in an online survey regarding your sports allegiance in Clemson. If you have already completed the questionnaire to the Parks, Recreation and Tourism Management and the Department of Clemson Athletic, please accept our thanks. If you haven't already completed the questionnaire, please do so at your earliest convenience. We understand that you are busy and may not have yet had a chance to complete the questionnaire. Can you do me a favor?</p> <p>We are looking forward to your feedback.</p> <p>Follow this link to the Survey: \${1://SurveyLink?d=Take the Survey}</p> <p>Or copy and paste the URL below into your internet browser: \${1://SurveyURL}</p> <p>Follow the link to opt out of future emails: \${1://OptOutLink?d=Click here to unsubscribe}</p> <p>Thank you for your assistance.</p>

Appendix F

Fan Allegiance and Twitter Survey Questionnaire



*Fan Allegiance and Twitter Survey*

*An Examination of Twitter's Role in Sports Fan Allegiance Formation  
Using the Revised Psychological Continuum Model (PCM)*

Dear Participant,

You are invited to participate in a research study conducted by Sukjoon Yoon for his master's degree. The purpose of this study is to examine the role that Twitter plays in the formation of fan allegiance toward a team. The primary focus will be to see how fans interact with a sports team via Twitter.

We are requesting your participation, which will involve completing a questionnaire, which takes approximately 10 minutes to fill out. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. All participants must be at least 18 years old. The questionnaire is anonymous. The records of this study will be kept private and confidential to the extent permitted by law. The results of the study may be published but neither your name nor your individual answers will be known.

If you have any questions or concerns about this study or if any problems arise, please contact any instructor listed below. If you have any questions or concerns about your rights in this research study, please contact the Clemson University Office of Research Compliance (ORC) at 864-656-6460 or [irb@clemson.edu](mailto:irb@clemson.edu). If you are outside of the Upstate South Carolina area, please use the ORC's toll-free number, 866-297-3071.

***Return of the completed questionnaire will be considered your consent to participate.***

Sukjoon(SJ) Yoon  
M.A. Student  
[suky@clemson.edu](mailto:suky@clemson.edu), (864) 986-2444  
243 P&AS Building

Dr. Sheila J. Backman  
Professor (Advisor)  
[back@clemson.edu](mailto:back@clemson.edu), (864) 656-5236  
273 Lehotsky Hall

Continue to Survey

## Fan Allegiance and Twitter Survey

We are interested in understanding Twitter users. We appreciate your time in completing the survey.

### 1. Twitter

1. Do you have a Twitter account that you use?

- Yes → Go to Question 2.
- No → Go to Section 3

2. How long have you had a Twitter account?

- Less than 6 months
- 6-12 months
- 1-2 years
- 3-4 years
- 5-6 years

3. On a typical day, how many times do you Tweet?

- None
- 1-5
- 6-10
- 11-15
- 16-20
- Over 20

4. Have you tweeted while watching a sporting event (live)?

- Yes → Go to Question 5.
- No → Go to Question 6.

5. How many times do you tweet about the event while watching a sporting event?

- Never
- Less than once per month
- A few times a month
- Once a week
- A few times per week
- About once a day
- Many times a day

6. How many Twitter followers do you have?

- None
- 1-10
- 11-20
- 21-40
- 41-60
- 61-80
- 81-100
- More than 100

7. How many people / organizations do you follow on Twitter?

- None
- 1-10
- 11-20
- 21-40
- 41-60
- 61-80
- 81-100
- More than 100

8. How many people / organizations that you follow are sports related?

- None
- 1-10
- 11-20
- 21-40
- 41-60
- 61-80
- 81-100
- More than 100

9. How do you check your Twitter account? (*Please check all that apply.*)

- Phone
- Computer
- Tablet PC
- Other (*please specify*): \_\_\_\_\_

**2. The question in the next sections asks you about your Twitter usage and sports.**

1. Do you follow the Clemson Men's Baseball Team's official Twitter account?

- Yes
- No

2. Do you follow the Clemson Men's Baseball Team's coaches on Twitter?

- Yes
- No

3. Do you follow players on Clemson Men's Baseball Team?

- Yes → If yes, how many players do you follow on Twitter? \_\_\_\_\_
- No

4. Do you follow sports writers that cover Clemson Men's Baseball Team on Twitter?

- Yes
- No

5. How often do you tweet while watching Clemson Men's Baseball game?

- None
- 1-3
- 4-7
- 8-10
- Over 10

6. How often do you tweet about the Clemson Men's Baseball game?

- Never
- Many times a day
- About once a day
- A few times per week
- Once a week
- A few times a month
- Less than once per month

7. How often do you visit the Clemson Men's Baseball Team **website**?

- Never
- Many times a day
- About once a day
- A few times per week
- Once a week
- A few times a month
- Less than once per month

8. How often do you read **online articles** about the Clemson Men's Baseball Team?

- Never
- Many times a day
- About once a day
- A few times per week
- Once a week
- A few times a month
- Less than once per month

9. How often do you read **print articles** about the Clemson Men's Baseball Team?

- Never
- Many times a day
- About once a day
- A few times per week
- Once a week
- A few times a month
- Less than once per month

**3. This next section is connected with your relationship with the Clemson Men's Baseball Team.**

1. Which of the following best describes how you feel about the Clemson Men's Baseball Team?

Not at all a fan	Not really a fan	Indifferent	Somewhat a fan	Very much a fan
1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. How important is being a fan of Clemson Men's Baseball to you?

Very unimportant	Unimportant	Neutral	Important	Very important
1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. During the season how often do you follow this team in person or through any media?

Never	Once a month	Once a week	Several time a week	Daily
1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### 4. TAS (Team Association Scale) related to Psychological Continuum Model (PCM)

##### Attributes and Benefits

		<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
SUC 1	It is important whether Clemson Men's Baseball team wins	1	2	3	4	5
SUC 2	It is important to me that Clemson Men's Baseball team reaches the post-season	1	2	3	4	5
SUC 3	It is important to me that Clemson Men's Baseball team competes a league championship	1	2	3	4	5
SP 1	Clemson Men's Baseball team have some star players that I like to watch	1	2	3	4	5
SP 2	I like to watch Clemson Men's Baseball team's star players	1	2	3	4	5
HC 1	I like Jack Leggett of Clemson Men's Basketball team	1	2	3	4	5
HC 2	Jack Leggett is well known throughout the collegiate baseball	1	2	3	4	5
HC 3	Jack Leggett does a good job	1	2	3	4	5
MGT 1	The Clemson Men's Baseball staff does its best to field a good team	1	2	3	4	5
MGT 2	Clemson Men's Baseball team's staff does a good job of running the team	1	2	3	4	5
MGT 3	The Clemson Men's Baseball staff makes wise player personnel decisions	1	2	3	4	5
LOG 1	I like the colors of Clemson Men's Baseball team	1	2	3	4	5
LOG 2	I like the logo of Clemson Men's Baseball team	1	2	3	4	5
LOG 3	Clemson Men's Baseball team's uniforms are attractive	1	2	3	4	5
VEN 1	The architecture of Doug Kingsmore Stadium is attractive	1	2	3	4	5
VEN 2	Doug Kingsmore Stadium has "character"	1	2	3	4	5
VEN 3	Doug Kingsmore Stadium enhances the enjoyment of attending games	1	2	3	4	5
PD 1	Clemson Men's Baseball team's games are exciting	1	2	3	4	5
PD 2	Clemson Men's Baseball team's games are entertaining	1	2	3	4	5
PD 3	Clemson Men's Baseball team's games are enjoyable	1	2	3	4	5
TRD 1	Clemson Men's Baseball team has a history of winning	1	2	3	4	5
TRD 2	Clemson Men's Baseball team has a rich history	1	2	3	4	5
TRD 3	Clemson Men's Baseball team has good history					
ESC 1	Watching the Clemson Men's Baseball team provides a temporary escape from life's problems	1	2	3	4	5
ESC 2	Watching the Clemson Men's Baseball team helps me forget my day-to-day problems	1	2	3	4	5
ESC 3	Watching the Clemson Men's Baseball team takes me away from life's hassles	1	2	3	4	5
ID 1	It is important that my friends see me as a fan of Clemson Men's Baseball	1	2	3	4	5
ID 2	My friends and family recognize me as a fan of Clemson Men's Baseball	1	2	3	4	5
ID 3	When someone praises Clemson Men's Baseball team, it feels like a compliment	1	2	3	4	5
ID 4	When I talk about the Clemson Men's Baseball team, I usually say "We" rather than "They"	1	2	3	4	5
PGA 1	It is important to follow the only my friends	1	2	3	4	5
PGA 2	I follow Clemson Men's Baseball team because my friends like the same team	1	2	3	4	5



NOS 1	Thinking of Clemson Men's Baseball team brings back good memories	1	2	3	4	5
NOS 2	I have fond memories of following Clemson Men's Baseball team	1	2	3	4	5
NOS 3	I have fond memories of following Clemson Men's Baseball team with friends and/or family members	1	2	3	4	5
PIP 1	Clemson Men's Baseball team helps its citizens be proud of where they live	1	2	3	4	5
PIP 2	Clemson Men's Baseball team helps elevate the image of its community	1	2	3	4	5
PIP 3	Clemson Men's Baseball team brings prestige to the community	1	2	3	4	5

### Attachment Properties

		<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
IMP 1	Being a fan of Clemson Men's Baseball team is important to me	1	2	3	4	5
IMP 2	Compared to how I feel about other collegiate teams, Clemson Men's Baseball team is very important to me	1	2	3	4	5
KNW 1	I possess a great deal of knowledge about the Clemson Men's Baseball team	1	2	3	4	5
KNW 2	If I were to list everything I knew about the Clemson Men's Baseball team, the list would be quite long	1	2	3	4	5
KNW 3	Compared to other sport teams, I consider myself an expert about the Clemson Men's Baseball team	1	2	3	4	5
AFF 1	Do you feel "Wise" about the Clemson Men's Baseball team?	1	2	3	4	5
AFF 2	Do you feel "Good" about the Clemson Men's Baseball team?	1	2	3	4	5
AFF 3	Do you feel "Beneficial" about the Clemson Men's Baseball team?	1	2	3	4	5
AFF 4	Do you feel "Strong" about the Clemson Men's Baseball team?	1	2	3	4	5

### Loyalty

		<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
BEH 1	I have purchased more Clemson Men's Baseball team's tickets and products over the last several years than other teams	1	2	3	4	5
BEH 2	I consider Clemson Men's Baseball to be my favorite team	1	2	3	4	5
BEH 3	Clemson Men's Baseball team has been my primary team for the past few years	1	2	3	4	5
COM1	I have developed a closer business relationship with Clemson Men's Baseball team than other teams	1	2	3	4	5
COM2	I really like doing business with Clemson Men's Baseball team, better than other teams	1	2	3	4	5
COM3	I am willing to put in more effort to purchase tickets and products from Clemson Men's Baseball team than other teams	1	2	3	4	5
COM4	I want to remain a customer of Clemson Men's Baseball team more than other teams because we enjoy our relationship with them.	1	2	3	4	5

**Please tell us a little about yourself by checking or filling out the appropriate response:  
Demographics**

1. What is your gender?

- Male
- Female

2. What is your age? \_\_\_\_\_

3. What is your marital status?

- Single
- Married
- Divorced
- Widowed
- Other

4. How many people in your household?

- 1
- 2
- 3-4
- 5-6
- 7-8
- 9 or more

5. What is the highest level of education you have completed?

- Less than High School
- High School / GED
- Some College
- 2-year College Degree
- 4-year College Degree
- Masters Degree
- Doctoral Degree
- Professional Degree (JD, MD)
- Other (please specify)

6. How would you describe your ethnicity?

- White / Caucasian
- African American
- Hispanic
- Asian
- Native American
- Pacific Islander
- Other (please specify)

7. What is your occupation?

- |  |   |
|--|---|
| <input type="checkbox"/> Forestry, fishing, hunting or agriculture support | <input type="checkbox"/> Real estate or rental and leasing                        |
| <input type="checkbox"/> Mining  | <input type="checkbox"/> Professional, scientific or technical services           |
| <input type="checkbox"/> Construction                                      | <input type="checkbox"/> Management of companies or enterprises                   |
| <input type="checkbox"/> Manufacturing                                     | <input type="checkbox"/> Admin, support, waste management or remediation services |
| <input type="checkbox"/> Wholesale trade                                   | <input type="checkbox"/> Educational services                                     |
| <input type="checkbox"/> Retail trade                                      | <input type="checkbox"/> Health care or social assistance                         |
| <input type="checkbox"/> Transportation or warehousing                     | <input type="checkbox"/> Arts, entertainment or recreation                        |
| <input type="checkbox"/> Information                                       | <input type="checkbox"/> Accommodation or food services                           |
| <input type="checkbox"/> Finance or insurance                              | <input type="checkbox"/> Other services (except public administration)            |
| <input type="checkbox"/> Student   | <input type="checkbox"/> Unclassified establishments                              |

8. How much is the annual income of family?

- below \$ 20,000
- \$20,000-\$39,999
- \$40,000-\$59,999
- \$60,000-\$79,999
- \$80,000-\$99,999
- \$80,000-\$99,999
- \$100,000-\$149,999
- \$150,000-\$199,999
- above \$200,000

9. Are you season ticket holder for Clemson Baseball games?

- Yes → If yes, how many years do you have the season ticket? \_\_\_\_\_
- No

10. Are you a member of the IPTAY & the student IPTAY club?

- Yes
- No

## Appendix G

### Team Association Scale (TAS) Measures

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<b>Definition</b>	
<b>Attributes &amp; Benefits</b>	
Success	Winning, making the playoffs and competing for championships
Star Player	The presence of a player who is outstanding; often defined by all-star appearances.
Head Coach	The presence of a head coach that has a record for success and/ or possesses significant charisma.
Management	The extent to which an organization garners trust from consumers; a belief that management is doing its best to satisfy consumer needs.
Logo Design	Use of a corporate logo and/or mark(s) to establish and reinforce an image.
Venue	The extent to which the facility in which a team plays enhances the consumption experience.
Product Delivery	The extent to which a team satisfies a consumer's need for entertainment.
Tradition	Whether or not a team possesses a history of winning or behaving in a certain manner.
Team Identification	A team provides a vehicle (often representing success) with which consumers can affiliate.
Peer Group Acceptance	The ability of a team to provide a vehicle which generates broad social approval when followed.
Escape	Following a team provides an escape from one's daily routine.
Nostalgia	A sport team conjures up feelings and fond memories from the past.
Pride in Place	A team provides a rallying point for civic pride.
<b>Attachment properties</b>	
Importance	Psychological significance or symbolic value of a sport team.
Knowledge	Functional knowledge that an individual has related to a sport team.
Affect	Emotions elicited from an evaluative response of the team.
<b>Allegiance</b>	
Behavior	Number of games attended and watched on television; monthly media usage, and participation in team-related activities.
Commitment	Resistance to change and persistence.

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Source: Gladden and Funk (2001, 2002).

Appendix H

Means, Standard Deviations, and Reliability Measures for Attributes & Benefits, Attitude Properties, and Loyalty for Clemson men's baseball 4 games (N = 412)

	Clemson men's baseball 4 games (N = 412)*		
	Mean (M)	SD ( $\delta$ )	$\alpha$
<b>Attributes &amp; Benefits</b>			
Star Player	3.65	0.80	.90
Product Delivery	4.29	0.64	.90
Nostalgia	3.77	0.85	.89
Tradition	3.72	0.97	.90
Logo Design	4.45	0.64	.90
Success	4.18	0.71	.90
Head Coach	3.82	0.91	.89
Pride in place	3.64	0.84	.90
Venue	4.24	0.76	.90
Management	3.84	0.77	.90
Achievement (Identification)	3.62	0.80	.89
Escape	3.64	1.00	.90
Peer Group Acceptance	2.50	0.80	.91
<b>Attachment Properties</b>			
Knowledge	3.18	1.05	.90
Importance	4.00	0.89	.89
Affect	3.55	0.84	.91
<b>Allegiance</b>			
Loyalty	3.45	1.16	.90

\* Responses given on a seven-point Likert scale

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