



SCHOOL of
GRADUATE STUDIES
EAST TENNESSEE STATE UNIVERSITY

East Tennessee State University
Digital Commons @ East
Tennessee State University

Electronic Theses and Dissertations

Student Works

8-2010

Unfiltered?: A Content Analysis of Pro Athletes' "Twitter" Use.

Justin A. Shockley
East Tennessee State University

Follow this and additional works at: <https://dc.etsu.edu/etd>

 Part of the [Communication Technology and New Media Commons](#)

Recommended Citation

Shockley, Justin A., "Unfiltered?: A Content Analysis of Pro Athletes' "Twitter" Use." (2010). *Electronic Theses and Dissertations*. Paper 1729. <https://dc.etsu.edu/etd/1729>

This Thesis - Open Access is brought to you for free and open access by the Student Works at Digital Commons @ East Tennessee State University. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of Digital Commons @ East Tennessee State University. For more information, please contact digilib@etsu.edu.

Unfiltered? A Content Analysis of Pro Athletes' "Twitter" Use

A thesis

presented to

the faculty of the Department of Communication

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Master of Arts in Professional Communication

by

Justin Shockley

August 2010

John M. King, Chair

Dan Brown

T. Jason Davis

Keywords: Social Networking, "Twitter", New Media, Sports, Athletes, Content Analysis

ABSTRACT

Unfiltered? A Content Analysis of Pro Athletes' "*Twitter*" Use

by

Justin Shockley

As new media grow, so do the users who navigate the virtual world. People and organizations are forced to adapt in order to stay relevant in a technologically driven marketplace. The sports world has been changed drastically because of new media. Athletes no longer communicate with the general public solely through traditional media outlets such as newspapers. Social networking sites such as "*Twitter*" allow athletes to directly communicate with mass audiences. This direct communication raises several questions with regard to dynamics of communication and uses of Internet portals. A content analysis examined professional athletes' "*Twitter*" posts to help answer these questions. While some of the hypotheses were not supported, results were telling. Topics among the sample of posts included direct communication with "*Twitter*" members or links to videos and pictures, as well as "tweets" about each player's job. Findings suggested that professional athletes are mainly neutral overall when posting messages regarding their sport, team, peers, or fans. Limitations of the study and implications for future research are addressed.

ACKNOWLEDGEMENTS

This thesis would not have been possible without tremendous support, guidance, and friendship of many people. First, to my brother Eric: I look up to you in so many ways. I will always keep sacred the values that you have instilled in me and the support that you have given me. Thank you.

To my brother Marcus; when times are hard you always pick me up with your sense of humor. I will always respect your work ethic and respectful character.

To the Shook family: Your love and support have truly shown me what family means. Over the years we have laughed, cried, fought, played, and grown together. I cherish all of these experiences and I am eternally thankful for everyone accepting me wholeheartedly. To the Calloway family: Thank you for supporting and believing in me.

To my friends at MDI: whether it was a pep talk, a funny story, or just a helping hand, your friendship has been invaluable to me over the years. To Paul and Mike, my long-time friends: Thanks for the advice, the fun times, and your unyielding confidence in me.

Dr. John King: Thank you for your guidance and support and for challenging me to continually improve. Drs. Dan Brown and T. Jason Davis, thank you for your assistance and all of your keen insights. To Dr. Carrie Oliveira: Your teaching style, helpfulness, and incredible passion for life increased my faith in higher education. Thank you.

Finally, to Brooke: You are my soul mate, my best friend, and my shoulder to lean on. You make me a better person and I am truly blessed to have you in my life. Thank you for your support, your love, and your understanding. I am so grateful to be able to spend the rest of my life with you. I love you now and always.

CONTENTS

	Page
ABSTRACT.....	2
ACKNOWLEDGEMENTS.....	3
LIST OF TABLES.....	6
Chapter	
1. INTRODUCTION.....	7
2. LITERATURE REVIEW.....	9
Internet and Social Networking.....	9
Theoretical Framework.....	10
“Twitter”.....	13
Athlete Usage of Social Media Portals.....	15
Regulation of “Twitter” and Social Networking.....	18
Research Questions and Hypotheses.....	20
3. METHOD.....	22
“Twitter” Selection.....	22
Athlete Selection.....	22
Message Selection and Coder Training.....	28
4. RESULTS.....	37
5. DISCUSSION.....	46
Limitations.....	51
Recommendations for Future Research.....	53

6. CONCLUSION.....	55
REFERENCES.....	57
VITA.....	63

LIST OF TABLES

Table	Page
1. Sport Seasons.....	32
2. Original Topic Frequencies.....	37
3. Condensed Topic Frequencies.....	38
4. Topic Frequency by Sport.....	39
5. Condensed Sport and Topic Chi-Square.....	41
6. Competitive Status and Promotion Chi-Square.....	43
7. Gender and Tone Chi-Square.....	43
8. Past Controversy and Tone Chi-Square.....	44
9. Competitive Status and Tone Chi-Square.....	45

CHAPTER 1

INTRODUCTION

In a constantly changing world, the use of technology has become a pervasive way to communicate ideas. Technological advances not only allow us to communicate effortlessly with people far away but with great numbers of people. In fact technology has allowed our ability to communicate to outstrip our establishment of etiquette or protocol for these new venues (Kaplan & Haenlein, 2009).

One of these blossoming modes of communication is social networking. Social networking sites are widely used across the world as a way to relay information, articulate opinions, and form bonds with people great distances away. For example the social networking site “*Facebook*” had more than 175 million users as of January 2009 (Kaplan & Haenlein, 2009). In 2010 that number jumped to more than 400 million active users, with users spending more than 500 billion total minutes per month on the site (*Statistics*, 2010). Another popular social networking site called “*Twitter*” amassed more than 75 million users between its creation in 2006 and 2010 (Gaudin, 2010). With the rapid growth of new media such as “*Facebook*”, “*Twitter*”, and other social networking internet sites, their use by professional athletes has also grown in recent years (Emerick, 2009).

While there is little research that exists in the area of new media use and sports, the possibility for research is evident. Many athletes now use social networking websites such as “*Twitter*” to communicate with the public. Until recently the public had to rely on traditional media outlets to hear or read what athletes had to say (Pucin, 2009). The following research was an attempt to discover uses that are evident among “*Twitter*” use and that are open to detailed research and analysis. More specifically, how do athletes use new media, what are common

topics, and what factors may influence “Tweets” on “*Twitter*”?

A few questions that are readily apparent with regard to social networking and athlete usage are: Are athletes likely to use intimate self-disclosure on new media sites? Are the comments made on new media sites influenced by gender, specific sport, or past controversies? In essence what are athletes willing to say online? Does quick access to the general public change what athletes say or how they say it? In a largely unfiltered environment that is social media, athletes voice their opinions in entirely unique ways (Emerick, 2009).

A detailed content analysis of professional athletes and how they communicate with regard to online social networking environments provide insight into many of these questions. Many of the areas in question have a limited foundation of past research and are new and constantly changing. With this in mind, this research venture is very much an exploratory investigation. Before a methodology is presented, a literature review provides a foundation for a content analysis of professional athletes’ “*Twitter*” use.

CHAPTER 2

LITERATURE REVIEW

Scholarly research done in the specific area of new media regarding athletes' usage is limited, based on personal investigation of these areas and the uniqueness of the areas in question. However, there are several different aspects of new media, "*Twitter*", athletes, and other related topics that have been addressed by previous investigations and professional articles. With this in mind, the following review of literature is focused on several different categories including studies of social networking, research done concerning professional athletes and sports, and background information and statistics of new media.

Internet and Social Networking

To build the foundation of this research project, it is important to understand the pervasiveness of the Internet and social networking websites. In the last quarter of 2008, *Forrester Research*, an independent research company, determined that more than 75% of Internet users who surfed the web were enrolled in some type of social media website, including social networking sites, reading or writing on blog sites, engaging in fantasy sports, or writing reviews for online shopping sites. This number had increased by 56% in 2007 and early 2009 reports showed growth of up to 15% in these areas (as cited in Kaplan & Haenlien, 2009). The growth of social media portals has shown tremendous growth as well. More specifically, "*Twitter*", a micro-blogging social media site, surged from a little more than 2.2 million distinctive monthly users in October 2008 to more than 20 million by late July 2009 (Emerick, 2009). Based on statistics such as these, the prevalence of social media sites such as "*Twitter*" is considerable. Some of the exact uses of social networking sites in particular are also valid to this research.

Before discussing specific uses of social media, it is important to have a functional definition of what a social networking site is. Kaplan and Haenlien (2009) describe social networking sites as "...applications that enable users to connect by creating personal information profiles, inviting friends and colleagues to view these profiles, and sending e-mails and instant messages between each other" (p.63). With this in mind, research has suggested that much of the motivation behind using new media is to escape from reality, connect with friends and colleagues, show individuality, gain information, and generally pass time. A broader category that these uses fit into is *pleasure* (Kerr, Kucklich, & Brereton, 2006). Most of the research done in the area of new media has focused on determining the number of users or accesses and has failed to quantify what makes social networking pleasurable to users as well as other outlying usage factors. Additionally, because online social media and other nontraditional media are ever changing, expanding, and creating challenges and questions, there is a need to study different aspects and uses of new media (Kerr et al., 2006). While more research concerning new media is necessary, some existing research does give insights on the topic of social networking.

Theoretical Framework

Because new media and social networking are still relatively new when compared to other types of media such as radio, television, or newspapers, the research that has been done regarding it is insufficient. While new media has been subjected to less academic research than other more established media simply due to its lack of maturity, theories that have been used to evaluate more traditional forms of media can still be used as a theoretical underpinning for social media networking. For example the *Uses and Gratifications Approach* to looking at media consumption could be used to better understand why people in the public eye use social networking websites such as "*Twitter*" to communicate with fans, peers, and the online world in

general.

The *Uses and Gratifications Approach* of studying media consumption aims to identify what uses people have for specific types of media as well as what feelings or pleasures they get from using a particular type of media (Katz, Blumler, & Gurevitch, 1973). The approach can be used to evaluate almost all types of media and remains relevant because as time passes, people continue to have motives for using media. When the approach was first introduced as empirical research in the 1940s, researchers studied the motives behind why people listened to soap operas on the radio (Katz et al., 1973).

While media types have evolved and expanded, The *Uses and Gratifications Approach* is still used to understand the purposes and intentions of media consumption. Case in point, in 2009 Roy found six main categories of gratifications concerning internet usage with motivations including self-development, career opportunities, wide exposure, global exchange, user friendliness, and relaxation. Studies using the *Uses & Gratifications Approach* to determine uses of the internet have mostly been broad in category depiction as well as expansive in defining users as anyone who uses the internet. While these studies are relevant, they lack the narrow focus that could be implemented in a research project that focuses specifically on social media as well as an explicit type of user such as professional athletes or other categories of people.

Several investigations regarding social media websites and other new media have been almost entirely centered on user statistics. For example a *Forrester Technographics* 2007 study determined that over 25% of Internet users in the United States visit some type of social networking site (as cited in Spellman, 2008). Furthermore, a survey in early 2008 by the same company asked 17,000 Internet users to answer questions regarding the specific reasons they used social networking sites. From the results four main use categories were developed.

Research company *Universal McCann* found evidence to support that social media use is driven by four “I’s” of engagement: interaction, involvement, intimacy, and influence (as cited in Spellman, 2008). One researcher in this particular study explained the phenomenon of social media use: “Technology has created tools that appeal to humans’ innate need to seek out contact and connect” (Spellman, 2008, p.1). While professional athletes are different in many ways from the average human, some of their uses of social media outlets may be driven by some of the same needs that other people have.

Some studies have also been done with specific social networking sites such as “*Facebook*”. The widely popular social networking site “*Facebook*” has increased in popularity dramatically since its creation. A 2009 study of “*Facebook*” by Walther, Van der Heide, Hamel, and Shulman discovered unique factors concerning how users “make and modify impressions of others based in different types of information via the internet” (p. 248). This study was based mostly on a theory called the *Warranting Effect*, which states that people put more belief in information on the internet that is not able to be manipulated by the user but rather information that is posted by someone other than the user in question (Walther et al., 2009).

Third party advocacy in the field of public relations is also a relevant area of discussion with regard to how it relates to professional athletes, new media, and the *Warranting Effect*. Third party advocacy is a widely used public relations technique that uses a third party to advocate or promote a company or person’s product or cause. The third party is presented as someone who has no direct connections to the company, product, person, or industry. The *Media Education Foundation* gives a relevant example of this, stating “...the public wouldn’t trust a car manufacturer that said global warming isn’t a problem, but would more likely trust an atmospheric scientist saying the same thing” (*MEF Study Guide*, 2010, p. 10). The *Warranting*

Effect postulates that people are more likely to believe a third party rather than the individual or group in question; in much the same way, third party advocacy in public relations uses this to gain credibility among audiences (Walther et al., 2009).

A 2002 research project focusing on perceptions of extraversion found that perceivers' judgments about a person were mostly influenced by information that the subject themselves could not control (Walther & Parks). This study may be helpful for future research because it may provide some insight into why athletes self-disclose information on sites such as "Facebook" or "Twitter", as well as if the type of language athletes use, or what they convey to the world with regard to their personal life.

Another theory that may be relevant in the scope of social networking, new media, as well as celebrities such as professional athletes is the *Medium Theory*. This theory postulated that the medium was the actual message because each medium is so unique. "In medium theory, a medium is not simply a newspaper, the Internet, a digital camera and so forth. Rather, it is the symbolic environment of any communicative act. Media, apart from whatever content is transmitted, impact individuals and society" (*Medium Theory*, 2009, para. 2). Because social networking and more specifically "Twitter" are unique and pervasive, the content and perception of the medium could be a very provocative area for future research.

"Twitter"

Before discussing what kind of studies have been done concerning "Twitter" and what implications it has created for the technological world, a working definition of what the website is should be addressed. "Twitter" was created in 2006 to be used as a micro-blogging social-networking site, allowing users to post status updates of 140 characters or less and to be followed by their friends, family, and coworkers. These messages are called "Tweets" (Johnson, 2009).

What began as simply posting status updates about your day-to-day activities or current mood has greatly evolved. People now use the site to post not only their activities and mood but also to post URLs linking their followers to articles, pictures, music, and more. In addition people can follow athletes, politicians, and other celebrities, post news as well as opinion, and generally be completely linked to the world (Johnson, 2009). “*Twitter*” is now used by many businesses and corporations to send messages, stay connected to consumers, and even advertise. Companies can now offer to pay users to plug their product or brand. “*Twitter*” users who have at least 100 followers, have been a member for at least 2 months, and have updated their status 100 times are eligible to become sponsored Twitterers (Gregory, 2009). While questions regarding disclosure and other controversial topics abound in the area of sponsored “Tweets”, it is a clear sign that “*Twitter*” is enveloping the online world (Gregory, 2009).

While little research has been done thus far on “*Twitter*” specifically, one study centered on well-known “Tweeters” and their use of the site. The University of Maryland recently performed an investigation, looking at over 6,000 “Tweets” by politicians to determine their most common uses of this platform. The researchers sought to “determine whether the...arrival of “*Twitter*” had opened a new era of dialogue between elected leaders and the public” (de Vise, 2009, p. A13).

The results revealed potentially important information about people in the public eye. More than 80% of the postings of members of Congress were put into two groups: updates about themselves including self-serving links to articles and media releases already available to the general public and benign updates about monotonous daily activities (Golbeck, Grimes, & Rogers, 2010). Because this particular investigation found that most politicians use “*Twitter*” mostly as a self promoting platform, it may be useful to determine what other well-known people

use the new media portal for to help determine if this self-promotion is restricted to the political world or if it is a common theme for celebrities and public figures. In addition other uses and gratifications by these people may be determined with further investigation.

A study focused on discovering what content is available with a sample of more than 76,000 general “*Twitter*” users looked at a sample of messages from a 2-month period in 2007. One of the findings revealed that a main use of “*Twitter*” for the sample of users was “Tweets” concerning general day-to-day activities and other benign posts of a similar nature (Java, Song, Finin, & Tseng, 2007).

Most studies regarding professional athletes are focused on overall performance. For example a study from 2005 focused on determining the various stresses that athletes must endure. The results of the study yielded potential stressors such as high risk of injury, pressure to perform at a continuous high level, as well as many more (Hanton, Fletcher, & Coughlin).

A content analysis regarding athletes and the media was done to determine how influential and alluring professional athletes are to advertisers and if celebrity endorsements may be declining (Stone, Joseph, and Jones, 2003). Researchers examined randomly selected advertisements from 2 decades of *Sports Illustrated* magazines. Results showed that many advertisers continue to use elite professional athletes to endorse their products (Stone et al., 2003). Despite these academic studies, athletes’ uses of social networking platforms have been meagerly researched in the academic world. However, their use has been written about in magazines and newspapers.

Athletes’ Uses of Social Media Portals

Until social networking sites were created and gained major popularity several years ago, the way athletes communicated to the general public was primarily through the third party,

traditional media (Nicholson, 2007). News conferences, interviews, and quotes in newspapers were how fans and the general public were made aware of what an athlete said (Nicholson, 2007). Other than the occasional heated moment where an athlete would say something politically incorrect or detrimental to the team, most interactions were civil, often coached, and relatively harmless (Nicholson, 2007). With the introduction and rapid growth of online social media and networking sites, athletes now have the opportunity to speak to the public in an unfiltered setting.

With the invention of micro-blogging social networking website “*Twitter*”, the way athletes interact with the public, reveal news, articulate feelings, and generally communicate has changed in many ways. “*Twitter*” has become so popular with professional athletes that several websites have been created with the sole purpose of tracking the tweets of athletes so that the general public may easily bear witness to all professional athletes’ “*Twitter*” feeds. One up and coming site is actually a channel of the website sportsfanlive.com aptly titled *AthleteTweets.com*. The site does not require any membership to view athletes’ tweets nor does it require visitors to be a member of “*Twitter*” to view “Tweets”. The creator of the site, David Katz, explained the creation of the site in a recent interview; “The majority of sports fans are not on “*Twitter*”...but they would certainly be interested in what these athletes are doing and saying” (as cited in Shields, 2009, p.1).

Some people believe that “*Twitter*” has become so popular with professional athletes because its overall convenience as well as the candid nature of the website. A combination of factors encourages honesty including a culture focused on celebrity gossip, worldwide fan bases, as well as downtime that can be boring for an athlete with a fast-paced lifestyle. Additionally, professional athletes are often left feeling alienated from the world because of their lifestyle and

overall disconnect from the real world (Ronay, 2009). This honesty has created obstacles for not only athletes and their sport but also for the journalists who cover them. The technology and immediacy of sites such as “*Twitter*” have created a situation in which sports stars no longer need someone to be their voice to the public (Emerick, 2009).

Athletes who use “*Twitter*” many times do so to get their message out to the public, sometimes without thinking about the consequences. Because “*Twitter*” is immediate and has no filters, athletes can get into trouble by posting when they are upset, in a hurry, or before their organization has officially released something as news (Pucin, 2009). For example Kevin Love, a player in the *National Basketball Association* who plays for *The Minnesota Timberwolves* unwittingly released news that Coach Kevin McHale would not return as coach for the *Timberwolves* before the team had made an official announcement (Pucin, 2009). Despite the innocence of Love’s tweet, the fact remains that he posted relevant, newsworthy information on “*Twitter*”.

Athletes’ “Tweets” can also be extremely benign. During the *National Football League*’s training camp, tight end Chris Cooley “Tweeted” about having a six-inch sub for lunch and heading back to the *Redskins* practice facility (Kiesow, 2009). Shaquille O’Neal, who is the most followed athlete on “*Twitter*”, often “Tweets” about what he has for breakfast or what is on his schedule (Pucin, 2009). However, there are positive ramifications from athletes’ social media use that can be profound and meaningful.

The messages that professional competitors distribute through social media sites can also be positive in nature. For instance in the recent wake of the major earthquake in Haiti, athletes turned to “*Twitter*” and “*Facebook*” to raise money for the victims of the disaster. Pierre Garcon a player in the *National Football League* with ties to Haiti raised more than \$10,000 less

than a week after the incident through his “*Facebook*” and “*Twitter*” accounts. Even members of the professional athlete world without direct ties to Haiti, such as cyclist Lance Armstrong, have used “*Twitter*” to encourage followers to donate money to the insolvent country (Vinton, 2010). The convenience and immediacy of social networking also play a role in its popularity among professional athletes.

Another reason that athletes tend to find “*Twitter*” appealing is how well it fits into their lifestyle. The site is much more informal than many blogging sites and also takes much less time. (Lemke, 2009). Nancy Baym, an associate professor at the University of Kansas, has done research on “*Twitter*”. Her studies focused on the culture of the site with regard to sports fans, but little focus has been directed on uses by athletes (Lemke, 2009). With examples of how professional athletes can post messages on social media sites that range from negative to harmless to overwhelming helpful, it may be useful to study the overall tone of posted messages as well as categorizing the type of posts that are written. “*Twitter*” has become very popular among professional athletes and because of its pervasiveness and immediacy, many sports organizations have adopted regulations to which athletes must adhere.

Regulation of “Twitter” and Social Networking

Many sport organizations have adopted rules for how and when athletes use social networking sites such as “*Twitter*”. On August 31, 2009, *The National Football League* released an updated policy on the use of such technology. According to the new regulations, players, coaches, and all team personnel are restricted from using social media networks on game days from 90 minutes prior to a game until after the postgame interviews and other obligations are finished (Maske, 2009). Fines and suspensions are possible for violation of these guidelines. *The National Basketball Association* has a similar policy regarding social media platforms: No

social media usage an hour before all practices until an hour after, and 90 minutes before a game until postgame media time is complete (Young, 2009). While these are league wide policies, teams from the leagues are entrusted to determine any specific rules regarding new media use and have the authority to suspend or fines players as needed. *The New York Jets* fined player David Clowney in September after he complained about not getting the ball thrown his way (Young, 2009).

Additionally, international sports are not immune from regulations regarding “*Twitter*”. Tennis authorities recently warned all professional players that “*Twitter*” use may violate the anticorruption rules set forth by their sport. In addition to athletes being restricted from using the site while at matches, officials warned players and coaches that providing fans with sensitive information regarding matches such as injuries or postponements could affect gambling among the general public (Fendrich, 2009).

While much has been written about “*Twitter*”, little legitimate academic research concerning celebrities, and more specifically professional athletes, has been done. With the knowledge that has been presented, several hypotheses and research questions have been derived to provide direction for a research project focused on the phenomenon that is “*Twitter*” along with a sample of athletes who use this social networking site.

Several research questions, hypotheses, and exploratory questions have been created to help evaluate the prevalence of new media, how athletes use it, and what kind of information is divulged in these settings. It is predicted that postings to social networking sites will as a whole be more frequently negative because athletes may speak their minds more often, and social networking is readily available via the internet, cell phones, and other technological devices (Emerick, 2009). It is also important to understand the unit of analysis as well as all associated

variables with the study. The unit of analysis is each unique “*Twitter*” or “Tweet” readily available in the public timeline of the website for each professional athlete in the sample group for this project. The independent variables are as follows: the date of the post, the athlete’s sport, the athlete’s name, their history or nonhistory of past controversies, their gender, whether they are active or retired, and the coder of each “Tweet”. The dependent variables include the tone of the “Tweet” with regard to the athlete’s sport, team, peers, coaches or fans, the topic of the post, and the promotion type of the message, including self-promotion, no promotion, or promotion of others.

Research Questions and Hypotheses

There are four research questions, as well as three formulated hypotheses that have been developed for use in the proposed study. In addition two exploratory questions are used to gain more knowledge on the topic at hand. The first exploratory question and research question were developed to help gauge what topics are widespread among professional athletes.

EQ1: How will topic differ based what sport each athlete is associated with?

RQ1: What topics will be most prevalent in professional athletes’ “*Twitter*” posts?

The following questions and hypotheses focus on the type of promotion that may be present in the sample of messages. Prior research of Congressional members found self-promotion to be a main use of the “*Twitter*” (Golbeck, 2010).

RQ2: Will self-promotion differ in prevalence in retired professional athletes versus active professional athletes?

H1: Active professional athletes in the sample will practice self-promotion through “*Twitter*” significantly more than they demonstrate promotion of others or nonpromotion when compared to retired professional athletes.

The next questions and hypothesis deal with the overall tone of the “*Twitter*” messages posted by professional athletes. As stated previously, positive and negative tones have very specific definitions for the purpose of this research project and all posts are evaluated with these definitions in mind.

EQ2: Will tone differ based on gender?

RQ3: Will athletes with a history of controversies have an overall negative tone?

H2: Athletes with a history of publicized controversies will be significantly more negative when posting messages on “*Twitter*” about their team, coaches, teammates, organization, or sport when compared to athletes who have no publicized controversial issues of note.

RQ4: Will overall tone differ in retired professional athletes when compared to active professional athletes?

H3: Retired professional athletes will be significantly more negative than active athletes with regard to their sport, team, peers, or coaches.

While there are many new paths for discovery and questions that may develop with this type of research regarding athletes’ use of new media, the research questions and hypotheses stated above are starting points for academic research of these insufficiently studied topics.

CHAPTER 3

METHOD

With the information and knowledge of past research that has been done involving new media and athletes, a method for evaluating how athletes use new media and if it is positive, negative, or neutral in regards to their team, sport, peers, coaches, or fans has been created in addition to other criteria that will help determine the validity of the research questions and hypotheses. For an intimate look at what is being said by specific athletes content analysis was used. In the content analysis 31 elite professional athletes were tracked to gauge their use of new media. “*Twitter*” was the specific area of new media in which athletes’ usage was followed.

“Twitter” Selection

“*Twitter*” was selected as the area of new media to follow professional athletes for several key reasons. First, the micro-blog site, as previously established in the review of literature, is pervasive among the subculture that is the professional sporting world. “*Twitter*” has more than 25 million unique monthly users, many of whom follow professional athletes on the site (Emerick, 2009). Furthermore, “*Twitter*” is also easily accessible for purposes of following each athlete specifically as well as tracking each post the athlete makes because posts are in an open timeline (Java et al., 2007). In essence “*Twitter*” was selected for use in this particular study because of its simplicity of use by members including the ability to be a “follower” of any “*Twitter*” member. “*Twitter*” is widely used among athletes in part because of its micro-blog layout it is simple to post updates, fitting perfectly into a fast-paced lifestyle (Pucin, 2009).

Athlete Selection

Professional athletes have been selected because at the college level athletes are more

restricted in terms of social networking site usage (Emerick, 2009) and are seemingly more likely to be filtered when posting material onto the web. Elite athletes in the realm of new media are more likely to be known by the general population, many of whom may view what these athletes say and do therefore making the proposed study more warranted.

A purposive sample was used to select the athletes followed in the study largely due to the limitations at the time of the study, which is discussed later, as well as the exploratory nature of this research. Despite the technical definition of what a *purposive sample* is, very specific criteria has been developed by the researcher to facilitate the selection process that provides a usable and distinctive set of “Tweets” to study. Only elite professional athletes were used for the purpose of the analysis. Athletes were defined as elite based on the following criteria: that they are currently professional athletes or have been retired less than 10 years and they must have previously competed at a high level in their sport such as *Olympic Games, National Football League Playoffs*, etc. Retired athletes are being used in the study to gauge the possible differences in how professional athletes with regulations and obligations for their organization compare with those athletes who have little or no vested responsibilities to a team or organization.

Thirty-one athletes were used in the analysis, with many coming from major sports such as *The National Basketball Association, The National Football League, Major League Baseball, NASCAR*, as well as less mainstream sports such as cycling, tennis, ultimate fighting, and Olympic sports. There are several subcategories of the athletes in addition to sport and competitive status. Five of the athletes being studied are women; this will be used to measure potential gender differences among posts. Seven of the athletes are ones who have been embroiled in some type of major controversy in their career. Seven of the athletes in the study

are retired from their respective sport.

It is important to note that some athletes fit into more than one subcategory. For instance Jose Canseco is retired from baseball but he also has been involved in controversies that were highly publicized in the media. In addition all athletes selected must have an official “*Twitter*” page that has been verified by the website’s administrators to weed out any phonies or fan pages. Lastly, to be selected for use in the project, all athletes must have at least 3,000 followers and been active as a member of “*Twitter*” since January 1, 2010. Being active was defined as having at least one post per week during the established time frame, as established in a previous study involving “*Twitter*” users and the content of posts (Java et al., 2007). Exploring “*Tweets*” by athletes who meet these specific criteria reduced the availability of athletes to examine yet creates more validity and reliability for the investigation.

With this in mind, the athletes that have been selected were: Shaquille O’Neal (Basketball), Chris Paul (Basketball), Dwayne Wade (Basketball), Dwight Howard (Basketball), Stephen Curry (Basketball), Reggie Bush (Football), Chad “OchoCinco” Johnson (Football), Terrell Owens (Football), Larry Fitzgerald (Football), CC Sabathia (Baseball), Nick Swisher (Baseball), Serena Williams (Tennis), Danica Patrick (Motorsports), Amanda Beard (Swimming), Jennie Finch (Softball), Candace Parker (Basketball), Apolo Anton Ohno (Speed Skating), Lance Armstrong (Cycling), Amare Stoudamire (Basketball), Floyd Mayweather (Boxing), Helio Castroneves (Motorsports), Ian Poulter (Golf), Andy Roddick (Tennis), Michael Vick (Football), Bill Romanowski (Retired, Football), Kevin Johnson (Retired, Basketball), Bruce Bowen (Retired, Basketball), Michael Waltrip (Retired, Motorsports), Jose Canseco (Retired, Baseball), Emmitt Smith (Retired, Football) and Chuck Liddell (Retired, Mixed Martial Arts). All athletes who have been determined to have a history of highly publicized

controversies are discussed at length in the following paragraphs.

For this particular research inquiry involving professional athletes, one of the main goals was to gauge potential differences between athletes who have little or no significant publicized controversies with athletes who have had one or more highly publicized controversy. For the research project, 7 of the 31 athletes in the sample have been categorized as having some type of newsworthy controversy or controversies during or after their career. The athletes are as follows: Chad “OchoCinco” Johnson (Football), Terrell Owens (Football), Amanda Beard (Swimming), Helio Castroneves (Motorsports), Michael Vick (Football), Jose Canseco (Retired, Baseball), and Bill Romanowski (Retired, Football). These athletes are now discussed in regards to their controversies to create a better understanding and foundation for what highly publicized controversy means for the purposes of this study.

Chad “OchoCinco” has been one of the most outspoken players in The *NFL* in the last several years due to unorthodox and unruly on field celebrations, refusing to practice, missing normally mandatory parts of training camp, as well as lobbying for a trade because of his desire to be more active in the offense (Clayton, 2008). Maybe most notably, more than 2 years ago Johnson developed a new name for himself and used *Velcro* to attach it over his name on his jersey. Later the team’s quarterback ripped the name off during pregame warm ups, garnering national attention. ESPN columnist James Walker explains the name stating, “Johnson gave himself the moniker in reference to his uniform number 85 -- Ocho Cinco means "eight five" in Spanish” (2008, para. 3). In late 2008 Johnson had his surname officially changed to OchoCinco which caused even more of a stir because of the effects on memorabilia production (Walker, 2008). In addition to this and other attention getting attempts, Johnson announced in July 2009 that he planned to update his “Twitter” account during his games in the 2009-2010 season

(*Bengals' OchoCinco*, 2009). All of these controversial antics have established “OchoCinco” Johnson as an interesting part of the athlete sample for this research.

Terrell Owens, another widely outspoken player in the *National Football League*, has also had his share of publicized controversies on and off the field. There have been a wide range of incidents on the field that have gained negative publicity for Owens that range from elaborate celebrations to taunting fans and other players (Archer, 2009). One of the most infamous examples of an on-field controversy happened in December 2006 when he spit in the face of an opponent during a game and was subsequently fined 35,000 dollars by the *NFL* (*NFL Fines...*, 2006). Off field incidents that Owens has been associated with are also wide-ranging. For example, in an interview with *Playboy* magazine Owens questioned the sexual orientation of one of his peers, Quarterback Jeff Garcia (*Owens comments...*, 2004). Additionally, in 2006 Owens had an accidental overdose from the prescription painkiller Hydrocodone that was initially reported to be a suicide attempt (Archer, 2009). While Owens has had other contentious incidents during his career, the ones discussed above are relevant illustrations of what types of issues the football player has been involved in.

Amanda Beard is an Olympic Gold Medalist swimmer who has had much fewer controversial incidents during her career when compared with the other athletes in the sample who have been designated as having a history of controversies. However, Beard’s few controversies have been widely publicized. In 2007 Beard posed nude for *Playboy*, causing many people to publicly scrutinize her decision because she is a role model for young girls (Steinberg, 2008). In 2008 Beard again appeared nude in an advertisement for the animal rights organization *PETA*, again causing many to criticize her decision (Steinberg, 2008).

Helio Castroneves is an *Indy* race car driver from Brazil. Castroneves has won many

high profile car races during his career including the highly prestigious *Indy 500* three times. In 2008 Castroneves was indicted on several counts of tax evasion and tax fraud along with his manager and lawyer (*Castroneves Acquitted...*, 2009). In all Castroneves owed more than 2.3 million dollars for unpaid taxes between 1999 and 2004. Castroneves was forced to pay back the money but avoided jail time (*Castroneves Acquitted...*, 2009).

Despite the serious legal issues that Castroneves has been embroiled in, more severe criminal deeds have been a large part of another athlete's career. Michael Vick has had one of the most public controversies and heinous crimes of any professional athlete. Before Vick was thrust into international infamy for funding and participating in dog fighting, he was in the news for other controversies ranging from a \$10,000 fine for making obscene gestures with his fingers to fans at an *NFL* game, to being sued by a woman who said she contracted genital herpes from Vick and he had failed to inform her that he was infected (Jensen, 2009). Vick spent 18 months in federal prison stemming from dog fighting and animal cruelty charges to which Vick pleaded guilty. Dozens of pit bulls who could no longer fight or did not perform well were killed in various ways including electrocution and by hanging (Kruse, 2009). Kruse explains this public relations nightmare quite succinctly, "No active athlete has had this kind of public relations challenge. Ever." (2009, para. 2). Public outlash has been severe for Vick who is now in bankruptcy because of all of the fines and salary he had to repay as well as losing all of his advertising endorsements (Jensen, 2009).

Jose Canseco was a *Major League Baseball* player from the early 1990s until 2001. Canseco played in an era in baseball now designated as the steroid era and in 2005 wrote a highly controversial book highlighting his own steroid use as well as listing many other current and former professionals who had also used them (Eig, 2009). In addition to the media firestorm

that this created, he later testified in front of Congress and admitted many indiscretions involving drug use in baseball when others lied about it incessantly, which created more controversy for himself as well as the entire sport of baseball (Eig, 2009).

Another retired athlete also had several noteworthy controversies during his career. Bill Romanowski played in the *National Football League* for 16 years and was a part of many negative incidents along the way. Of his many indiscretions, some notable ones include spitting in the face of an opponent, kicking an opponent in the head, as well as breaking the eye socket of another (Bieler, 2008). Romanowski was later sued for more than \$3.5 million for breaking his teammate's orbital bone, an injury that apparently contributed to the end of Marcus Williams's career (*Ex-Raider...*, 2005). In addition Romanowski was linked to steroids through the BALCO Scandal, having received the drug through the now defunct company (*Ex-Raider...*, 2005). All of the athletes above show the nature of what is classified as notable controversies for the purpose of this research project. A thorough discussion of the message selection process as well as coder training and reliability will now be addressed.

Message Selection and Coder Training

In an attempt to ensure effectiveness, arbitrariness, and efficiency, several factors were considered for message selection. The unit of analysis was each available "*Twitter*" message posted within a 3-month period by 31 selected professional athletes with site verified accounts. To obtain a large enough sample to establish relevance within the study, 35 "Tweets" were randomly selected for each athlete. There are several important factors that rationalize this process. While each athlete had the same number of "*Twitter*" posts selected, availability of posts was limited due to technical inadequacies, and therefore every post by each athlete could not be considered for review.

Overall quantity disparity played a role in message selection. Case in point, Chad “OchoCinco” Johnson posted more than 5,000 “Tweets” on “Twitter” within the 3-month time frame, while *Major League Baseball* player Nick Swisher had fewer than 500 “Tweets” during this same period of time. If one thousand messages were randomly selected to examine, Johnson’s “Tweets” would have a greater probability of being chosen, thus skewing the data set. However, in a truly random sample, these factors would be acceptable and create a representative body of messages to examine. It should be noted that this research project employs a purposive sample in message and athlete selection. This is a limitation that is discussed later.

In a recent study examining the content of Congress members’ “Tweets”, a similar scenario came into play. If Congress members had more than 200 messages (the number chosen to examine) during the month of February, these messages were not reviewed because their inclusion would skew the overall dataset (Golbeck et al., 2010).

Lastly, the overall goal and scope of the investigation is not to report on the quantity of “Tweets” posted by the athletes in question. The content of the posts is much more essential for this study including self-disclosure, topic, tone, and promotion techniques. Technical constraints as well as overall project goals and a clear focus on obtaining a large enough sample all contribute greatly to the examination of 35 “Tweets” per athlete.

When athletes’ “*Twitter*” messages were copied and pasted to an external word document the posts were automatically numbered. After this process was completed for each athlete, each athlete’s number range from January 1, 2010, to April 1, 2010, inclusive was inserted into random numbering software and the resulting output was 35 randomly selected posts in which to study for each individual athlete. By selecting 35 “Tweets” per athlete to study, an overall sample of more than 1,080 messages was available for statistical analysis.

There were two coders for this particular research endeavor; one coder was randomly given 15 of the athletes and their randomized numbered posts to examine while coder two examined the posts from the 16 remaining athletes. Coders were referred to a previous study as a basis on what to look for with regard to the *promotion* variable in the current study. The study of Congress members' "Twitter" use found that self-promotion was a predominant topic. Self-promotion in this study was manifested by members of Congress openly promoting their own endeavors through "Twitter" (Golbeck et al., 2010). Both coders looked for similar self-promotion, promotion of others, or lack of promotion in professional athletes' "Tweets".

The process of coding the *tone* variable was a familiar process for both coders because as graduate students in a communication program, the coders were already aware that it is a common practice in mass communication studies to use positive, negative, and neutral *tone* to access different types of communication, especially in content analyses. For example Haigh, Bruce, and Craig (2008) used the concept of *tone* to examine newspaper coverage of the mad cow disease outbreak. The results of the study suggested that coastal newspapers were more negative than were newspapers located in the Midwest (Haigh et al., 2008). Using tone to evaluate communication has also been used in research involving sports. Case in point, an examination of newspaper coverage of the drug scandal in *Major League Baseball* revealed an overall negative tone towards the professional baseball industry (Haigh, 2008).

Three rounds of coder training were completed on sample "Tweets" dated from April 1, 2010, to April 11, 2010, outside the sampling frame, to achieve inter-coder reliability. Coders used a coding instruction sheet to evaluate posted messages that were created by the primary researcher to facilitate coding of the given variables. Coders examined each sample message with all variables in mind. Fifty messages were evaluated during three coder training rounds.

Ninety-five percent agreement was achieved during rounds one and two of coder training while 100% agreement on all variables was achieved during the last training round.

“*Twitter*” messages considered for the investigation were posted within a 3-month period, January 1, 2010, to April 1, 2010, inclusive for several distinct reasons. First, “*Twitter*” messages are not readily available much further back than 3 months due to the overall high quantity of “Tweets” by most of the professional athletes considered for review as well as lack of a complete archiving system. “*Twitter*” only archives approximately 5,000 “Tweets” and after that it is simply not available through “*Twitter*”, *AthleteTweets.com*, or other similar sites that track professional athletes’ posts based on personal exhaustive research. In addition, a 3-month period is still likely to display variation in topic and tone despite the limitations created by not studying a whole year of postings. In an e-mail with a site administrator for *Athletetweets.com*, it was additionally made apparent that messages are not archived for long periods of time (V. Chi, personal communication, February 24, 2010).

While the time frame is not ideal, it is a usable sample for purposes of this particular investigation for several reasons. One of the main reasons that this is a feasible sample of an entire year is because all sports involved have overlapping seasons at some point during the 3-month period.

Table 1 has been created to show the overlap between sports seasons and to further display that the indicated is functional for the specific purposes of this study. Therefore, using a 3-month period in which to gather posts is a suitable time frame. Limitations do exist, however, with using any time frame that is less than 1 calendar year. It should be noted that *Major League Baseball’s* schedule does include spring training in which all athletes are required to participate in practice as well as preseason games (*Reporting dates...*, 2010). In addition, sports such as

speed skating have tournaments nearly all year in which athletes can participate and thus have been designated as year-round sports.

Table 1
Sport Seasons

Sport	Season Dates	Source
NBA-Basketball	10/27/09-4/14/10	http://www.nba.com/schedules/
NFL-Football	9/9/09- 1/2/2010	http://www.nfl.com/schedules
MLB-Baseball	2/19/10-10/3/10	http://www.springtrainingonline.com/features/reporting-dates.htm http://mlb.mlb.com/mlb/schedule/?tcid=mm_mlb_schedule#date
NASCAR	2/6/10-11/21/10	http://www.nascar.com/races/cup/
Formula 1/Indy Car	2/24/10-10/2/10	http://www.indycar.com/schedule/
PGA-Golf	1/7/10-12/12/10	http://www.pgatour.com/r/schedule/
ATP/WTP-Tennis	Year Round	http://www.atpworldtour.com/Tournaments/Event-Calendar.aspx
WBA-Boxing UFC-MMA	Year Round	http://www.wbaonline.com/ http://mmajunkie.com/
Swimming	Year Round	http://www.usaswimming.org/USASWeb/DesktopDefault.as
Cycling	Year Round	http://www.cyclingnews.com/races/calendar/
Speed Skating	Year Round	https://webpoint.usspeedskating.org/wp/events/ListPastMeet

While most sport seasons overlap, one sport in which a considerable portion of the time frame in question falls during the off season is professional football. While the regular season ends at the beginning of January, several of the athletes in this category were active participants in the playoffs that continue into February (*NFL Schedule*, 2010). Furthermore, *The NFL* has a

very small window that can be truly considered an off season. Pat Kirwan, a senior analyst with *NFL.com*, addresses this bluntly, stating that “The term "offseason" no longer applies in the NFL” (2009, para. 1). While Kirwan is speaking mostly of business deals during the “off season”, this aspect of the sport can greatly affect professional athletes’ livelihoods, keeping them in a work related state of mind for much the year (2009).

NFL players must be focused on retaining their skill set as well as acquiring new skills, keeping up with their conditioning, and being focused on keeping their spot on their team’s roster especially during the off season (Kirwan, 2009). Additionally, the *NFL* draft and the free agent signing period both fall during the designated off season, which furthers the motivation for *NFL* players to continuously be focused on their sport because possible competition for their roster spot (Kirwan, 2009). *NFL* players also receive compensation for voluntary workouts during the off season (Kirwan, 2009). The time frame in question is suitable for purposes of the study for other reasons as well.

There are additional reasons why studying “*Twitter*” messages during a 3-month period is still a valid sample other than technological limitations and staggered sport seasons. For instance, seven of the athletes selected for the study, almost one quarter of the entire athlete sample group, are retired from their respective sport. Because these athletes are retired, the current sport season would have little bearing on the overall scope of the messages being examined. Other academic research focused on “*Twitter*” messages are also relevant examples of using a time frame that is less than 1 year but still suitable and functional period of time to examine considering all the limitations.

As discussed in the review of literature, researchers at the University of Maryland studied “*Twitter*” messages of U.S. Congress members and found that more than 80% of their posts

were either self-promotional updates or external links that were also self-serving or “Tweets” about general day-to-day activities (Ventsias, 2009). For this aspect of the study, only messages from the month of February were evaluated. After the initial study, researchers did a follow-up analysis from postings in June 2009 as well as August 2009 finding similar results in each month (de Vise, 2009). Due to technical limitations only 200 “Tweets” per user were retrievable for the study, yet for the overall goal of the study, which was to look at content of posts during the months that were examined, still provided a legitimate sample (Golbeck et al., 2010). While “*Twitter*” has made improvements in regards to what is readily archived and available, many limitations still exist (Makice, 2009).

Another example of an investigation conducted concerning “Twitter” and its users that focused on an abbreviated time frame due to technical limitations and overall scope of the project is important to note here. The researchers focused on a 2-month period, April 1, 2007 through May 30, 2007, inclusive and looked at content of “Tweets” from more than 76,000 users (Java et al., 2007). Overall, due to technological inefficiencies and constraints of “*Twitter*” and the overall scope of the study using a 3-month period is a suitable and feasible time frame to focus on. In addition, professional athletes will most likely be in a similar mindset throughout the year because seasons are nearly year round due to exhibition games, compensated voluntary workouts, the need for retention of skills, and season overlap in the time period in question, therefore, using only posts from January 1, 2010 through April 1, 2010, inclusive is suitable for this particular investigation. The definition of what is defined in this study as positive, negative, or neutral is addressed next.

What these elite athletes posted on “*Twitter*” had to be coded so that a statistical analysis could be performed later in the study. Before documenting what was said in this type of

medium, a working definition of what was considered positive, negative, or neutral had to be established. With regard to tone positive, negative, and neutral are commonly used in mass communication studies to evaluate content within various types of communication. For instance for purposes of the study a positive quote or post was one that was parallel with the views and mission of that athlete's sport, team, organization, and teammates. In addition, a positive entry was one that was that was not detrimental to the athlete or showed sportsmanship.

Negative “Tweets” and quotes were defined as ones that are damaging to the reputation, mission, or views of the athlete's sport, organization, peers, themselves or is socially unacceptable and include things such as vulgar or offensive language, insubordination, bad sportsmanship, hate speech, and any other types of speech that is harmful in nature for the general image of themselves or those they are associated with. The term “neutral” was defined as all items that do not fit into either the positive or negative categories and were inconsequential to the parties involved.

The investigation could assist in determining just how filtered or unfiltered athletes are when speaking through new media outlets. Until recently the general public had to rely on traditional media outlets to read and hear what athletes were saying. With the invention of social networking sites such as “*Twitter*”, athletes now have a more direct avenue in which to communicate with fans and the general public. While there are many new paths for discovery and questions that may develop with this type of research regarding new media related to professional athletes, the research questions and hypotheses explained above as well as the methodology for examining the content of new media are starting points for more academic research regarding these topics.

There are many implications for this particular research endeavor. For example it will be

helpful to know what information is more likely to be honest representations of athletes, what kind of self-disclosure is prevalent, as well as how gender and past controversial issues may play a role in this disclosure. The general public, sports professionals, and the academic realm involved with communication and media may also find this study very useful because of the potential for gains in knowledge concerning not only what athletes will say in a less restricted environment but also what they project through these social media portals. Certain types of communication that are more prevalent in the online realm may reveal more information with regard to the topic of social media use among athletes. There is also a great amount of room for expansion in this field of study. Because online social media is so new and relevant, the possible studies in this category are numerous. If the study results suggest that athletes practice more self-disclosure and are more apt to be honest, divulge personal information, and not hold anything back on new media sites, it may change regulations within sports, how sports are covered, as well as what fans believe to be accurate.

The pervasiveness and popularity of new media, the popularity of sports figures, and lack of research concerning these two factors make this an interesting and worthy research venture. In addition as new media grows and changes, there is a need to look deeper into issues than how many users are on a site or the overall growth of social networking sites, which is where much of the existing research on new media has investigated. The landscape of both the media world and the sporting world may be altered if athletes are more apt to use new media to disclose information, cause more controversy, and have more direct communication with fans than traditional media can provide.

CHAPTER 4

RESULTS

It is important to note the prevalence of topics for the sample of “Twitter” messages that were coded to provide insight concerning the first exploratory question and research question. The first research question focuses on topic, looking for which topics were most widespread among athletes. The research question was stated as follows:

RQ1: What topics will be most prevalent in professional athletes’ “Twitter” posts?

Table 2 represents all original topics and frequencies.

Table 2
Original Topic Frequencies

Topic	Frequency	Percent
External link/response to fellow “Twitter” member	352	32.5
Player's Team/Coaches/Peers/Sport/Fans/Organization	193	17.8
Business Endeavors/Money/Promotions	145	13.4
Practice/Exercise	65	6.0
General Sports	58	5.4
Family/Friends	45	4.2
Entertainment	40	3.7
Social Media/Social Networking/Internet	37	3.4
Food/Drink/Sleep	31	2.9
Social Events (Weddings, Parties, etc.)	28	2.6
Greetings/Farewells/Quotations	23	2.1
Weather	17	1.6
Religious/Spiritual	13	1.2
Travel/Vacation	10	.9
Health/Medical Issues	9	.8
Media (News, Interviews, Reporters)	6	.6
Vehicles/Driving	5	.5
Politics	3	.3
Other	1	.1

Note: n=1083

There were numerous empty cells during the initial statistical analysis, so some topics had to be condensed together to obtain a more accurate representation of the figures collected.

For instance, topics such as weather, food, drink, or sleep, as well as greetings and farewells were grouped together because they are daily activities or small talk. Topics were then condensed into seven distinct categories, grouped by topics that had similar characteristics. These topics are: 1) Messages about the player’s sport, team, peers, coaches, or fans, 2) practice, exercise, and sports in general 3) daily activities, 4) business, entertainment, and social events, 5) family, friends, religion, or spiritual posts, 6) travel, driving, vacation, or vehicles, and 7) external links to websites, pictures, videos, or responses to fellow “*Twitter*” members. Condensed topics and their overall prevalence within athletes’ posts are indicated in Table 3.

Table 3
Condensed Topic Frequency

Topic	Frequency	Percent
1)External Link/Response to “Twitter” Member	352	32.5
2)Business/Entertainment/Social Events	213	19.7
3)Player’s Team/ Coaches/Peers/Fans	193	17.8
4)Daily Activities/Small Talk	127	11.7
5)Sports/Practice/Exercise	123	11.4
6)Family/Friends/Religious/Spiritual	60	5.5
7)Travel/Vacation/Driving/Vehicles	15	1.4

Note: n=1083

The first exploratory question was posed to determine how topics were distributed within each sport. Table 4 has been established to show the connection of sport to each topic.

EQ1: How will topic differ based on what sport each athlete is associated with?

Sport Key:

- 1= External Link/Response to “Twitter” Member
- 2= Business/Entertainment/Social Events
- 3= Player’s Team/ Coaches/Peers/Fans
- 4=Daily Activities/Small Talk
- 5=Sports/Practice/Exercise
- 6=Family/Friends/Religious/Spiritual
- 7=Travel/Vacation/Driving/Vehicles

Table 4
Topic Frequency by Sport

Topic	1 Link	2 Bus./Ent.	3 Player's	4 Daily	5 Sports	6 Family Religio n	7 Travel
Sport							
Basketball	97 (30.8%)	67 (21.3%)	57 (18.1%)	40 (12.7%)	31 (9.8%)	19 (6%)	4 (1.3%)
Football	73 (30%)	67 (27.6%)	44 (18.1%)	24 (9.9%)	18 (7.4%)	16 (6.6%)	1 (0.4%)
Baseball & Softball	50 (35.7%)	17 (12.1%)	25 (17.9%)	19 (13.6%)	13 (9.3%)	11 (7.9%)	5 (3.6%)
Motorsports	39 (37.1%)	16 (15.2%)	26 (24.8%)	7 (6.7%)	7 (6.7%)	7 (6.7%)	3 (2.9%)
Boxing & Ultimate Fighting	29 (41.4%)	18 (25.7%)	14 (20%)	5 (7.1%)	2 (2.9%)	1 (1.4%)	1 (1.4%)
Swimming	10 (28.6%)	2 (5.7%)	1 (2.9%)	7 (20%)	11 (31.4%)	3 (8.6%)	1 (2.9%)
Cycling	9 (25.7%)	6 (17.1%)	4 (11.4%)	5 (14.3%)	11 (31.4%)	0 (0%)	0 (0%)
Tennis	27 (38.6%)	9 (12.9%)	10 (14.3%)	12 (17.1%)	10 (14.3%)	2 (2.9%)	0 (0%)
Golf	11 (31.4%)	4 (11.4%)	6 (17.1%)	3 (8.6%)	10 (28.6%)	1 (2.9%)	0 (0%)
Skating	7 (20%)	7 (20%)	6 (17.1%)	5 (14.3%)	10 (28.6%)	0 (0%)	0 (0%)

Note: n=1083

Topics from sport to sport were very similar in frequency. Case in point, many athletes from the various sports often tweeted about their team, fans, peers, or coaches. Athletes from motorsports tweeted about their team, sport, organization, peers, or fans 24.8% of the time. Boxers and ultimate fighters messaged about their sport 20% of the time. The sports of basketball, football, baseball, golf, and skating messaged about this topic between 17.1% and 18.1% of the time. In cycling and tennis athletes, this topic came up less than 14.5% of the time, while swimming showed the most disparity with only 2.9% of “Tweets” being on this subject.

In addition a sizable percentage of all “Tweets” from every sport in the study were a link

to an external website, video, picture, or a response to a fellow “*Twitter*” member. Boxing and Mixed Martial Arts had the highest percentage in this category, at 41.4%, while skating had the lowest total percentage of tweets regarding this topic at only 20%. All other sports’ percentages fell within this range.

There were also other differences in sport and their topics. For example posts about business, entertainment, and social events were very prevalent in sports such as football (27.1%), boxing and ultimate fighting (25.7%), basketball (21.3%), and speed skating (20%), while this topic was apparent only 5.7% of the time in the sport of swimming. Additionally, swimming and baseball professionals posted “Tweets” related to family and friends or that were religious or spiritual in nature 8.6% and 7.9% of the time respectively, yet cycling and boxing and ultimate fighting had zero and 1.4% respectively in this category.

The most prevalent topic in this study were posts that were links to external web pages, videos, or pictures as well as responses to fellow “*Twitter*” members with 32.5% of all posts falling in this category. The second most frequent topic was messages regarding business endeavors, entertainment, and social events at 19.7%. Table 4 elaborates on the other topics as well as their frequency.

In order to determine if the correlation between different sports and topic were statistically significant, a Chi-Square test was performed. However, there were too many empty cells within the table to provide an accurate measurement of statistical significance; therefore, sports were condensed into two categories: individual sports and team sports.

A cross tabulation of the condensed sport and condensed topic list showed that the topic of external links to pictures, video, or websites and responses to “*Twitter*” members (which provides a link to the “*Twitter*” account of the receiver of the response) was the most prevalent

topic among individual and team sports. Athletes from team related sports fell into this category 34.3% of the time, while individual sport athlete messages fell into this category 31.5% of the time. Business, social events, and money was another predominant condensed topic with team sport athletes posting about this subject 21.6% of the time and individual sport athletes messaging about this topic 16.1% of the time.

“Tweets” about the player’s sport, team, coaches, peers, fans or organization was similar in prevalence in both team and individual sports with 18.1% and 17.4% respectively. In addition, a Chi-Square test revealed significance among the variables of topic and sport type, with a p value less than .002. Table 5 shows topic prevalence among individual and team sports in more detail.

Table 5
Condensed Sport and Topic Chi-Square

Topic	1)External Link Or Response	2)Business Social Money	3)Player’s Coaches Peers Team	4) Daily Activities Small Talk	5)Sports Practice Exercise	6)Family Friends Religion Spiritual	7)Travel Driving Vacation Vehicles
Sport							
Team	220 (31.5%)	151 (21.6%)	126 (18.1%)	83 (11.9%)	62 (8.9%)	46 (6.6%)	10 (1.4%)
Individual	132 (34.3%)	62 (16.1%)	67 (17.4%)	44 (11.4%)	61 (15.8%)	14 (3.6%)	5 (1.3%)

Note: n=1083; Chi-Square= 19.07; df=6; p< .01

The next research question and hypothesis involve the type of promotion that was present in the “Tweets” within the sample. The research question was formed to better understand if self-promotion differs in retired versus active athletes.

RQ2: Will self-promotion differ in prevalence in retired professional athletes versus active professional athletes.

There were differences in types of promotion in active versus retired professional athletes. Active athletes practiced self-promotion through “*Twitter*” 28% of the time, while

retired athletes only promoted themselves 23.3% of the time. There was an even larger disparity in how often promotion of others was present. Active athletes promoted other people and endeavors only 19.5% of the time, while retired athletes promoted others through “*Twitter*” 34.4% of the time. The first hypothesis was postulated to determine if active athletes are mainly self-promotional when using “*Twitter*” when compared to retired athletes.

H1: Active professional athletes in the sample will practice self-promotion through “*Twitter*” significantly more than they demonstrate promotion of others or nonpromotion when compared to retired professional athletes.

Despite the statistically significant chi-square, the data are not consistent with the hypothesis because the expectation was that athletes would generate more self-promoting messages than either nonpromoting or other-promoting messages. The data indicate that the vast majority of athlete’s “Tweets” were not promotional in nature. However, data also indicate that of the “Tweets” that were promotional in nature, active athletes did generate more self-promoting (28%) than other-promoting messages (19.5%) when compared to retired athletes. Athletes who are no longer active practiced self-promotion 23.3% of the time while promoting others 34.4% of the time.

As a whole, more than 50% of athletes’ “Tweets” were nonpromotional in nature. Self-promotional posts were evident 27.1% of the time and promotion of others came in at 22.4%. Table 6 illustrates these findings in more detail.

Table 6
Competitive Status and Promotion Chi-Square

Status	Self-Promotional	Non-Promotional	Promotion of Others
Active	243 (28%)	456 (52.5%)	169 (19.5%)
Retired	50 (23.3%)	91 (42.3%)	74 (34.4%)

Note: n=1083; Chi-Square= 22.15; df= 2; p< .01

The next exploratory questions, research questions, as well as hypotheses explore the tone of athletes towards their team, sport, peers, coaches, or fans within “*Twitter*” messages and how their history of controversy, active or retired status, and gender play a role in this tone towards their team, peers, coaches, organization, and fans.

EQ2: Will tone differ based on gender?

Based on previously established definitions of tone for purposes of the study, tone was found to have some variance within gender. Female athletes were positive about their sport, team, coaches, peers, or fans 23.3% of the time, while male athletes were positive in this manner 20.4% of the time. As a whole posts were mostly neutral in tone with 74.4% of women’s “Tweets” and 75.3% of men’s posts being neutral. Negative posts came more often from men than women, at 4.3% versus 2.3% respectively. However, the Chi-Square test showed no significant differences, as shown in Table 7.

Table 7
Gender and Tone Chi-Square

Gender	Positive Tone	Neutral Tone	Negative Tone
Male	185 (20.4%)	683 (75.3%)	39 (4.3%)
Female	41 (23.3%)	131 (74.4%)	4 (2.3%)

Note: n= 1083 Chi-Square= 2.13 df= 2 p= n.s.

The third research question focuses on athletes with a history of highly publicized controversies and the tone of their messages towards their team, sport, peers, coaches, or fans.

RQ3: Will athletes with a history of controversies have an overall negative tone?

Athletes with a record of controversies were overwhelmingly neutral or positive in regards to their team, sport, coaches, peers, or fans. Seventy-five percent of “Tweets” posted by these athletes were neutral, while 16.8% were positive in nature. This means that only 8.2% of tweets by these athletes were negative; however, how this compares to athletes with little noteworthy controversies is the topic of the following hypothesis.

H2: Athletes with a history of publicized controversies will be significantly more negative when posting messages on “*Twitter*” about their team, coaches, teammates, organization, or sport when compared to athletes who have no publicized controversial issues.

Athletes with a controversial past were more negative than athletes with no such history. A Chi-Square test was performed to test this hypothesis. The value of the chi-square indicated that the data were consistent with the hypothesis that athletes with highly publicized controversy were more negative in their tone (8.2%) than were athletes who did not have highly publicized controversy (2.7%). Table 8 displays this Chi-Square test and the frequencies associated with it.

Table 8
Past Controversy and Tone Chi-Square

Controversy	Positive Tone	Neutral Tone	Negative Tone
History of Controversies	41 (16.8%)	183 (75%)	20 (8.2%)
No History of Controversies	185 (22.1%)	631 (75.2%)	23 (2.7%)

Note: n=1083; Chi Square= 16.66; df=2; p< .01

The final research question was developed to better understand possible variance in tone when comparing active to retired professional athletes. The research question was stated

previously as follows:

R4: Will overall tone differ in retired professional athletes when compared to active professional athletes?

Active athletes were primarily neutral, producing neutrally-toned “Tweets” 78% of the time. Only 3.2% of active athletes’ “Tweets” were negative, while 18.8% of these athletes’ messages were positive. Retired athletes were only neutral 63.7% of the time, while they posted negative tweets seven percent of the time. Retired athletes were more positive than active athletes, posting positive messages 29.3% of the time.

The final hypothesis of this research project was developed in order to understand if athletes are more filtered when active in their sport when compared to retired athletes who have little or no obligations to their former sport, team, peers, coaches, or fans.

H3: Retired professional athletes will be significantly more negative than active athletes in regards to their sport, team (or former team), peers, coaches, or fans.

Retired athletes were more negative than active athletes in their “*Twitter*” messages. Seven percent of tweets authored by athletes retired from their respective sport were negative in nature compared to only 3.2% total negative postings by active athletes.

Table 9 shows the overall percentages of positive, negative, and neutral “Tweets” by retired and active athletes. Another Chi-Square test was also appropriate here to test the overall significance of these findings.

Table 9
Competitive Status and Tone Chi-Square

Status	Positive Tone	Neutral Tone	Negative Tone
Active	163 (18.8%)	677 (78%)	28 (3.2%)
Retired	63 (29.3%)	137 (63.7%)	15 (7%)

Note n=1083; Chi Square=19.92; df=2; p<.01

CHAPTER 5

DISCUSSION

After the process of coding and statistically analyzing a total of 1,083 “*Twitter*” messages, known as “Tweets”, from the officially verified accounts of 31 professional athletes, several interesting results were discovered. It is essential to thoroughly discuss these findings, including meanings of results regarding the current study, implications and needs for future research, magnitude within the fields of new media and professional athletes, as well as limitations of the current project.

Each exploratory question, research question, and hypothesis was postulated to better understand professional athletes’ use of new media, discover how filtered or unfiltered messages that are posted on the pervasive social networking website “*Twitter*”, as well as what other factors may influence overall use, topics, and tone.

A representative illustration of these goals is the first exploratory question that asked how topics differ from sport to sport. Many sports showed marked similarity in topic of messages such as authoring posts concerning the player’s sport, team, peers, coaches, or fans. Five sports were within 1% of one another regarding this topic, with all but one sport posting more than 11% of “Tweets” on this topic. While topics did vary from sport to sport in some way, many topics were prevalent across the sporting world, including authoring posts that were either links to external sites, pictures, or videos or responses to other members of “*Twitter*”. The topics that were widespread throughout each sport suggest that athletes have similar motives for using “*Twitter*” such as talking about their sport, posting links to items they are interested in elsewhere on the Internet or responding to fellow “*Twitter*” members as well as posting messages about their business endeavors and events in which they are involved.

The first research question goes even further to distinguish that topics are common among professional athletes' "Tweets". After a condensed list of topic categories was developed, three main topics were evident, 1) Links to external websites, pictures, or videos, or responses to other "Twitter" members, 2) Tweets about the player's sport, team, coaches, peers, or fans, and 3) Posts about business happenings, entertainment, and social events. In fact, 70% of all tweets fell into these categories which are very revealing regarding what athletes tweet about.

With a heavy percentage of tweets coming in the form of external links and responses to other *Twitterers*, athletes seem to have a strong interest in allowing others to view what they view on the Internet as well as responding to their followers directly. By using "Twitter" as a platform to respond to fans and followers, it shows in some manner that athletes are directly communicating with the general public. While it is more difficult to determine how filtered these messages may be, it is apparent that communication from athletes can go beyond the genre that is traditional media as they have a more convenient way to communicate with the outside world by using social media such as "Twitter".

Athletes also seem to have their jobs on their minds quite often because they "Tweet" about something related to their profession almost 20% of the time. This may help show that athletes do not have much of an off season no matter their sport which could be because of long seasons including preseason and postseasons. The need to retain skills and be in good physical condition may also contribute to short off seasons for professional athletes.

The *Uses and Gratifications Approach* may be significant in the area of motives for "Twitter" use by athletes. It has been found that a main use of the Internet is for job opportunities (Roy, 2009). Because athletes in the current study focus many of their "Tweets"

on their job, this may mean that athletes also use new media for job related activities, from current job to future job in mind. The third most prevalent topic involved the players' various business endeavors, how they are entertained, and social events it may relate with the other research question and hypothesis that focused on self-promotion on "*Twitter*".

Specific sports were also condensed much the same way topic categories were to help determine the significance of correlations between sport and topic among messages. Sports were condensed into two categories: team sports and individual sports. A Chi-Square test revealed significance among these variables. The results from a cross tabulation showed that many topics were very similar in overall prevalence in both team and individual sport athlete messages. This may be in part because no matter what sport or type of sport professional athletes are a part of, the career itself may be similar in what goes on in their lives. For example, business endeavors, money, and social events were the second most prominent topic group overall. This may be because as professional athletes, much of their lives are focused around money, social events, and business transactions. This thought process can also be applied to the other topics in the study. The results of this study suggest that athletes share many similarities in mindset when authoring messages on "*Twitter*".

The second research question was posed in order to better understand if the goals and self promotion techniques of athletes vary depending on whether they are active or retired from their sport. A common observer may believe that active athletes may be less promotional because they simply would not need to promote themselves as often because they are still getting paid for playing a sport, they are presumably spoken about more on television, as well as other factors.

The frequencies concerning this research question showed that active athletes promoted themselves and their own endeavors nearly 5% more regularly than did retired athletes. Possibly

more telling about the motives of retired athletes compared to active athletes was the percentage of messages that promoted others. Nearly 35% of “Tweets” by retired athletes were promotional of other people and events compared to just more than 19% by active professional athletes.

Active athletes may be more self-involved because they are in the media more often, or it may be possible that retired athletes feel that they have been in the spotlight long enough and now feel it is time to promote others. It does seem that professional athletes are less self-promotional in general than are members of Congress based on face validity of the numbers from this study compared with the numbers from the project focused on Congressional members performed by Golbeck et al., 2010.

Hypothesis number 1 also focused on possible self-promotion among elite professional athletes. While retired athletes practiced promotion of others more than active athletes promoted others, most “Tweets” from active and retired players were not promotional in nature. More than 50% of posts, in fact, did not show any type of promotion. In all, 27.1% of “Tweets” were self-promotional. However, with a large majority of authored messages being nonpromotional in nature it seems that other motives beyond self-promotion are evident in the sample. From the analysis of the research sample, simply responding to other “*Twitter*” members is a main use by athletes which was not expected.

The second exploratory question centered on tone when compared to gender of each athlete. While tone did not vary greatly within gender, women were slightly more positive when authoring messages. This could be the result of two main factors regarding the sample. First, there were only five women in the sample of athletes. This could cause variation among tone in the women’s “Tweets” when compared to men’s “Tweets”. Additionally, of the seven athletes who were established to have a history of media controversies, only one was a woman which

could cause discrepancy in tone among women.

Professional athletes within the sample who do have notable past controversies were also a main focus of the research venture. The overall tone of “Tweets” within this category of athletes was the topic of another research question. The results of the study showed that only a little more than 8% of the “Tweets” by these athletes were negative, with most being neutral in nature. With a relatively low percentage of negative posts among troubled athletes, coaching by various people in their lives to protect against another setback is a prominent possibility. However, “Tweets” by these athletes were still more negative than athletes without past controversies by nearly 6%. While troubled athletes may be coached more often during their use of “Twitter”, their overall attitude is still more negative than other athletes. “*Twitter*” and similar platforms may be more difficult to police than other communication outlets because of their immediacy and pervasiveness.

The competitive status of athletes was the subject of the final research question with differences in tone among retired and active athletes studied. While retired athletes presumably have fewer obligations to their former team, sport, peers, and fans from a professional standpoint than do active athletes thus being less likely to be punished by an organization, they are still primarily neutral or positive when authoring “Tweets” on “*Twitter*”. Nearly 30% of posts by retired athletes were positive toward their former sport, team, coaches, peers, or fans. Active athletes were positive nearly 11% less of the time in their “Tweets”.

The final hypothesis postulated that retired athletes would be significantly more negative than active athletes. As stated above, more than 8% of posts by retired athletes were negative while only a little more than 3% authored by active athletes were negative. Retired athletes were also more positive than were active athletes, showing that retired athlete messages were more

polarized in nature when compared to currently active athletes. These “Tweets” were more often positive or negative rather than neutral. This helps substantiate that retired athletes with fewer possible consequences for their actions may be more likely to post *unfiltered* or candid messages when compared to active athletes.

It should be noted that 7 of the 31 athletes in the sample were retired, while the others were active, which could be cause for variation in tone among the two groups. Additionally, retired athletes may be in much different social worlds and contexts than active athletes are. Furthermore, retired athletes who no longer compete may still be employed in their sport in various jobs including broadcasting, general manager, team owner, and many others. The messages authored by these retired athletes could vary greatly from retired athletes who have little or no role within professional sports after retiring. Other limitations of the study will now be addressed.

Limitations

Despite the interesting findings of the current study, several limitations exist. First, there were several limitations regarding the sample. While a random sample of professional athletes would be the best representation of content among tweets, many professional athletes do not have a “*Twitter*” profile. Additionally, even fewer pro athletes have “*Twitter*” accounts that have been verified by the site’s administrators. Because it was important to obtain accurate information from verified accounts, the sample was reduced.

Moreover, the possible athlete sample was reduced even further by other selection criteria. Athletes were required to be active members of “*Twitter*” every week from January 1, 2010 and many athletes who do have verified accounts were not active enough to be considered. In an effort to study athletes who were popular, they were also required to have at least 3,000

followers which narrowed the possible sample pool even more. By definition, this research endeavor employed a purposive sample of athletes creating a limitation that must be addressed in future studies. In an ideal study athletes should be randomly selected and more athletes should be studied to get a more comprehensive data sampling of content among posts.

Selection of athletes in subcategories also had limitations. For example while 31 athletes were involved in the sample, only 7 of these athletes were categorized as having past controversies. Optimally, a more even distribution of athletes and subcategories should be used. In much the same way, only five of the athletes in the sample were female. A larger sample of retired professional athletes would create a more representative sample as well.

Limitations also existed in the process of message selection. Randomly selected tweets from every athlete within the study would have been the optimal way to select messages to code. However, some athletes posted thousands more tweets than did some other athletes in the sample. Odds are greater that messages from athletes who posted more often would be selected, which would skew the data.

The sample time frame also has limitations in the current study. The most advantageous time frame to use would be at least 1 year in order to better understand content of the “Tweets”, as well as account for fluctuations in quantity and content. However, approximately 5,000 “*Twitter*” messages are archived and after that are no longer tracked. With this in mind, only 3 months worth of messages were retrieved, numbered, and coded for purposes of the study. In addition, using an entire year’s worth of tweets would better gauge the content of posts because sport seasons are staggered, possibly creating fluctuation in overall content and quantity of “Tweets”.

Recommendations for Future Research

There are several recommendations for future research in the areas of both new media use as well as professional athletes. In future research it is important to obtain a larger sample of professional athletes in which to study. Gaining a larger pool in which to sample from may create more validity within the area of professional athlete media consumption. The current research venture used athletes that are known and compete mostly in the United States and North America. Athletes should be included from around the world to better gauge how athletes use new media throughout the world and how regions of the world compare.

Another broad recommendation for future research is to sample messages from at least an entire year to help account for both quantity and content of messages. Additionally, the current study did not focus on quantity of posts that for some athletes seemed to be very high. It also may be useful for future research to examine when athletes post messages and compare their usage statistics to the rules or stipulations in their respective sport.

In the current study it was discovered that a prevalent use of “Twitter” among professional athletes was to post links to something on the Internet including pictures and videos, as well as responding to fellow “*Twitter*” members and followers. In fact, almost a third of all “Tweets” fell into this category. In future research an analysis of why professional athletes post links for others to view as well as why they communicate with other “Twitter” members could help shed light on why they use new media as well as what motives are present for direct communication.

The use of new media and more specifically “*Twitter*” should be explored with regard to how athletes communicate with the public in these environments with how they communicate with people in other environments. How athletes communicate through traditional media such as

press conferences and interviews may differ from how they communicate on “*Twitter*” and other social networking platforms. Moreover, it may be useful to focus on how much athletes are coached on what to say when using new media, when to use it, as well as how to communicate with fans from a public relations perspective.

CHAPTER 6

CONCLUSION

The technological world is constantly changing and advancing and with this ways in which people communicate and use this technology also transforms. Because the topic of social media is still relatively new when compared with other types of media, limited research is available on the topic. However, some studies focusing on social networking sites such as “*Facebook*” and “*Twitter*” have focused on both usage statistics as well as content among users.

Studies involving professional athletes and their use of new media are even sparser. However, some studies were done to help understand the content of posts among people in the public eye. In the current study content of “*Tweets*” among a sample of professional athletes showed some interesting results regarding topic, tone towards their sport, team, peers, or fans, as well as how gender, past controversies, and competitive status played a role in their messaging practices.

While some of the hypotheses were not supported, many of the frequencies and collected data are a very provocative insight into why professional athletes use “*Twitter*” and other social networking websites. There is expansive room for future research in this area including more focus on quantity of messages, regulation effects on messaging, and traditional media communication comparisons with new media communication from professional athletes as well as social networking users in general.

Some limitations did exist in the format and process of the current study due to sample, technological constraints, and other factors. However, this exploratory research endeavor can be used as a foundation for more detailed research in the area of new media use among ordinary users, people in the public eye, or professional athletes specifically. Overall, the process and

conduction of this research project goes a long way to help further the body of research done in all fields of new media and its users.

REFERENCES

- About us (2010). Retrieved January 27, 2010 and March 19, 2010 from <http://twitter.com/about>
- Archer, T. (2006 March 6). Dallas Cowboys' Jerry Jones says Owens release was about change. *Dallas Morning News*. Retrieved from <http://www.dallasnews.com/sharedcontent/dws/spt/football/cowboys/stories/03009dnsocowlede.3ec0014.html>
- ATP Calendar (2010). <http://www.atpworldtour.com/Tournaments/EventCalendar.aspx>
- Beiler, D. (2008 September 15). 2-4-6-8 Who do we love to hate? *Washington Post Online*, 6-8.
- Castroneves acquitted of tax evasion (2009). Retrieved from <http://sports.espn.go.com/rpm/racing/indycar/news/story?id=4077286>
- Clayton, J. (2008). Time for Bengals to heal themselves, excise Johnson. Retrieved from http://sports.espn.go.com/nfl/columns/story?columnist=clayton_john&id=343986.
- Competition schedule (2010)
<http://www.usaswimming.org/USASWeb/DesktopDefault.aspx>
- de Vise, D. (2009, September 20). Tweeting their own horns; Study finds posts by lawmakers boastful or boring. *Washington Post*, p. 13. Retrieved February 15, 2010 from <http://www.lexisnexis.com/ezproxy.etsu.edu:2048/us/lnacademic>.
- Eig, J. (2009, July 5). The jerk who saved baseball. *The Washington Post*. p.1-3. Retrieved from <http://www.washingtonpost.com/wp-dyn/content/article/2009/07/02/AR2009070201736.html>
- Emerick, T. (2009, July 30). "Twitter" leaves news reporters out in the cold. *USA Today*. p. 3C. Retrieved from <http://www.lexisnexis.com/ezproxy.etsu.edu:3254/us/lnacademic>.

- Events (2010) from <https://webpoint.usspeedskating.org/wp/events/ListPastMeet.com>
- Fendrich, H. (2009). Tennis stars told: Watch what you tweet. Retrieved December 16 2009, from <http://wwos.ninemsn.com/article.aspx?id=855777>
- Gaudin, S. (2010) "Twitter" now has 75 million users, most asleep at the mouse. Para 1-16.
From
[http://www.computerworld.com/s/article/9148878/"Twitter"_now_has_75M_users_most_asleep_at_the_mouse](http://www.computerworld.com/s/article/9148878/)
- Golbeck, J., Grimes, J., Rogers, A. (2010). "Twitter" use by the U.S. Congress. 1-21.
- Gregory, S. (2009, October 5). Brought to you by "Twitter". *Time*, 174, 64.
- Haigh, M.M. (2008). "The cream", the clear", BALCO and baseball: An analysis of MLB players' image. *Journal of Sports Media*. 3(2), 1-24. Retrieved from Communication Abstracts East Tennessee State University on June 29, 2010.
- Haigh, M. M., Bruce, M., Craig, E. (2008). Mad cow coverage more positive in midwest papers. *Newspaper Research Journal*, 29(1), 50-62.
- Hanton, S., Fletcher, D., Coughlan, G.. (2005 October). Stress in elite sport performers: comparative study of competitive and organizational stressors. *Journal of Sport Sciences*, 23(10), 1129-1141. Retrieved from InfoTrac OneFile. East Tennessee State University on January 3, 2010.
- Injured ex-raider raises issues of "roid rage". (2005). Retrieved from <http://sports.espn.go.com/nfl/news/story?id=1976461>
- Kaplan, A. M., Haenlein, M. (2009). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons: Kelley School of Business*, 53, 59-68. Retrieved from ScienceDirect. East Tennessee State University on January 15, 2010.

- Katz, E., Blumler, J.G., Gurevitch, M. (1973). Uses and Gratifications Research. *Public Opinion Quarterly* 10 (2), 74-102. Retrieved from InfotracOneFile East Tennessee State University on April 5th, 2010.
- Kerr, A., Kucklich, J., Brereton, P. (2006). New media- New pleasures? *International Journal of Cultural Studies*, 9(1), 63-82. Retrieved from InfoTrac OneFile. East Tennessee State University on January 11, 2010.
- Kirwan, P. (2009). Even in the offseason, NFL education never ends. Retrieved April 18, 2010, from <http://www.nfl.com/news/story?id=09000d5d8085ee3e&template=with-video&confirm=true>
- Kirwan, P. (2009). Expect a busy offseason with the potential of an uncapped 2010 season. Retrieved April 18, 2010, from <http://www.nfl.com/news/story?id=09000d5d80e9c6f7&template=without-video-with-comments&confirm=true>
- Kruse, M. (2009, May 21). Now, the hard part for Vick. *St. Petersburg Times*. E5.
- Java, A., Song, X., Finin, T., Tseng, B. (2007). *Why we "Twitter": Understanding microblogging usage and communities*. Paper presented at the Proceedings of the 9th WebKDD and 1st SNA-KDD 2007 Workshop on Web mining and social network analysis, New York, NY.
- Jensen, M. (2009, August 15). Michael Vick's problems started before dog fighting episode. *The Philadelphia Inquirer*.p 1-2. Retrieved from <http://www.deseretnews.com/article/705323733/Mike-Jensen-Michael-Vicks-problems-started-before-dogfighting-episode.html>
- Johnson, S. (2009). How "Twitter" will change the way we live [Electronic Version].

Time, 1-9. Retrieved February 15, 2010, from
<http://www.time.com/time/business/article/0,8599,1902604,00.html>

Makice, K. (2009). *“Twitter” API: Up and running*. Sebastopol: O’Reilly Media.

Maske, M. (2009). NFL announces restrictions on “Twitter” use on game day
 [Electronic Version]. *Washington Post Online*, D06. Retrieved January 5,
 2010.

McLuhan, M. (1978). The brain and the media: The ‘Western’ hemisphere. *Journal of
 Communication*, 28(4), 54-60.

Media Education Foundation (n.d.) MEF Study Guide. Retrieved June 9, 2009 from
http://www.mediaed.org/assets/products/119/studyguide_119.pdf

MLB Schedule. (2010) Retrieved from
http://mlb.mlb.com/mlb/schedule/?tcid=mm_mlb_schedule#date

MMA Events (2010) from <http://www.mmajunkie.com>

NBA Schedule (2010). From <http://www.nba.com/schedules/>

NFL Schedules. (2010). from <http://www.nfl.com/schedules/>

Nicholson, M. (2007). *Sport and the media: Managing the nexus*. Burlington, MA:
 Jordan Hill, Linacre House.

Owens comments to Playboy “ridiculous, untrue” (2004). Retrieved from
<http://sports.espn.go.com/nfl/news/story?id=1856715>

PGA Schedules. (2010) Schedule <http://www.pgatour.com/r/schedule/>

Pucin, D. (2009, June 18) Athlete’s turn to Twitter to get their message out. *The Los
 Angeles Times*. Retrieved from [http://latimes.com/2009/jun/18/sports/sp-kevinmchale-
 ”Twitter”.com](http://latimes.com/2009/jun/18/sports/sp-kevinmchale-

 ”Twitter”.com)

Races calendar (2010) from <http://www.cyclingnews.com/races/calendar/>

Reporting dates (2010) from <http://www.springtrainingonline.com/features/reporting-dates.htm>

Ronay, B. (2009, December 31) What we learned this year...3. Twitter is where athletes are honest. *The Gaurdian*. 10.

Roy, S. K. (2009). Internet uses and gratifications: A survey in the Indian context. *Computers in Human Behavior*, 25(4). Retrieved March 8, 2010 from http://find.galegroup.com.ezproxy.etsu.edu:2048/gtx/infomark.do?&contentSet=ACDocuments&type=retrieve&tabID=T002&prodId=ITOF&docId=A200850062&source=gale&srcprod=ITOF&userGroupName=tel_a_etsul&version=1.0

Schedule (2010). from <http://www.indycar.com/schedule/>

Shields, M. (2009, April 23) Site collects athletes' tweets. *Mediaweek*. Retrieved from adweek.com.

Spellman, T. (2008). Never judge a facebook by its cover. *Financial Adviser*, 10(4), 23-26.

Statistics. (2010). from <http://www.facebook.com/press/info.php?statistics>

Steinberg, D. (2008 August 8). Amanda Beard talks about being naked. *Washington Post*. Retrieved from http://voices.washingtonpost.com/dcsportsbog/2008/08/amanda_beard_talks_about_being.html

Stone, G., Joseph, M., Jones, M. (2003). An exploratory study on the use of sports celebrities in advertising: A content analysis. *Sports Marketing Quarterly*, 12(2), 94-102.

- Ventsias, T. (2009). UM study shows congressional use of Twitter falls short. Retrieved April 3, 2010, from <http://www.newsdesk.umd.edu/culture/release.cfm?ArticleID=1964>
- Vinton, N. (2010). Athletes using Twitter, Facebook to aid victims of earthquake in haiti. Retrieved February 5, 2010, from <http://www.newyorkdailynews.com/fdcp?1265389523195>
- Walther, J. B., & Parks, M. R. (2002). Cues filtered out, cues filtered in: Computer-mediated communication and relationships. In M. L. Knapp & J. A. Daly (Eds.), *Handbook of interpersonal communication* (3rd ed., pp. 529-563). Thousand Oaks, CA: Sage.
- Walther, J. B., Van Der Heide, B., Hamel, L.M., Shulman, H.C. (2009). Self-Generated statements and impressions in computer-mediated communication: A test of warranting theory using Facebook. *Communication Research*, 36(2), 229-253.
- World Boxing Association. (2010). Boxing title fights. Retrieved March 10, 2010, from <http://www.wbaonline.com/>
- Young, C. (2009, September 30). Knock it off, tweet de suite; Here's the new rule for professional athletes, 140 characters or less: No Twitter while working. *The Toronto Star*, p. S02.

