AUSTRALIAN SPORT FANDOM ONLINE:
the online shaping of
demographic, geographic
and social characteristics of the
Australian sport community

Dissertation draft as of 1 February 2011

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In defining sport and looking at how fans express allegiance in an Australian sport context, much of it predates or ignores the online fan community. While the connection between online activity and sport is not clearly defined in the literature about Australian sport, it can be simply defined: Favorito (2007) says the Internet is a platform that allows "casual fans to connect with their individual favorite athlete more regularly." Berg & Harcourt (2008) talk about how analysis of sport fandom online offers what can not be done in other situations: providing context for sport fan behavior. Berg & Harcourt (2008) also claim that studying sport fandom online also helps to give a "more well-rounded understanding of sports fandom and its expression by illuminating new areas for understanding and for studying both online and offline fandom." Online activity and sport fandom are connected by this desire to connect to, and demonstrate allegiance to athletes, clubs, leagues and the sport by an attempt to connect with those groups and other fans of those groups. They provide insight into how sport fandom functions online and

In addition it has shown that across smaller and less popular services and web sites, there has been no behavior change; the controversy has had a null effect in that no one removed content or interests, nor created content and added interests. For larger sites such as Facebook, Twitter and Wikipedia, there has been a gain in followers, viewers and interactions. Eighteen days out from the initial incident, a long tail increase in views and interactions exists when compared to the period prior to the controversy. While some of the initial burst of activity and interest could be a consequence of negativity publicity, the long tail interest two to three weeks out is much harder to attribute to solely to wanting to watch a controversy for the sake of entertainment. The results are irrelevant in the context of more real world indicators like match attendance, television viewers, radio listeners and product sales. The Internet community is an expression of fandom. Clubs should take away from this a call to action to think of ways to convert controversy attained fans into fans who watch the games live, on television, listen on the radio and buy merchandise. If a club can use that elevated interest and maintain it at higher levels, the club should be able to leverage to increase club membership and sponsorship deals, especially as they apply to their online presence, because they have successfully used the controversy to grow their fan base. The behaviors of fans demonstrate that have been given an incentive to express their loyalty and solidarity with the team.Google, the Melbourne Demons,

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Introduction

The online ecosystem is expanding the definition of sport fandom, changing how teams engage with their fans, and causing potential demographic and geographic shifts for Australian athletes, clubs and teams. These three components of sport fandom are inextricably linked and are worth studying to understand how sport fandom behaves and what Australian sport fandom will look like in the future.

There are currently four operational definitions of sport fandom. Each definition originates from and is used by a different group based on the needs and interests of the group.

Sports marketers and managers, broadly speaking, define sports fandom around potential for spectatorship. Stewart (1983), Shilbury, D., Quick, S., & Westerbeck, H. (2003) and Sullivan (2004) discuss various aspects of this, including the goal of teams to sell tickets to matches. They sometimes diverge from this definition to talk about spectator related behaviors that can be monetized including merchandise sales, radio listeners, and television viewership, as well as streaming online audio and video, and live game updates.

Sociologists and historians offer the second definition. This group tends to define sports fandom as a form of identity and as a product of a specific culture. Cashman (2002) looks at sport fandom in Australia as an extension of a wider Australian national identity. Collins (2005) looked at sport as a component of people's identity as it pertains to the rest of the world: Australian and inward looking or international and outward looking.

Sport fans and the media provide a third definition of sport fandom. They define sport fandom around allegiances and in-the-moment activities that demonstrate these allegiances. This includes events such as having a sport club themed wedding.

Popular culture studies scholars like Jenkins (2006) and Hills (2009) offer the fourth definition of sport fandom. Jenkins and Hills define fans as an active population who engage in activities related to an object produced by the larger popular culture. This production includes activities such writing fan fiction, creating costumes, producing fanvids and organizing fan conventions. Popular culture academics also define fans as possessing a sense of ownership of their product that is removed and distinct from the official one, that they view actors, athletes, copyrighted and trademarked materials as communally owned by fans.

None of these definitions, perspectives in themselves, tells the whole story in the increasingly online-based world of Australian sport. Fans can more easily be monetized by teams that do not rely on getting people into the stadium. Identity continues to play a role in fandom but this is evolving as the Internet allows teams to draw a more interstate and international audience. In the moment activities can often extend out years as fans maintain large fansites and become more actively involved in organizations dedicated to but independent of their team. How fans express allegiance also is changing. No longer is it just based on club membership and being kitted out in a club's jumper or scarf. Fans can and do express allegiance by following their clubs on social networks, checking in on geolocation based social networks, creating message boards and fan pages, attending events organized on social networks in order to meet their fellow fans, and creating content related to their clubs to distribute across various networks like Facebook, LinkedIn, LiveJournal, Twitter, and YouTube. How fans change their allegiances is changing. When fans stop supporting clubs online, they stop checking the club's website regularly, unfollow them on Twitter or stop using Twitter altogether, do not post as often to team related fan sites and ignore team updates on Facebook.

The definitional expansion means more fans than ever could potentially be counted as barrackers for a club. The potential exposure to a club is greater than ever as fans hear about teams and athletes from their friends, family and coworkers on social networks, as a result of online content that has gone viral, or seeking it out in response to major sport related controversies or events. The confluence of changing definitions and increased exposure to new sport potentially means that a sport or club has a different demographic population than the one historically associated with it. Why? The demographic characteristics of the Australian community are sometimes at odds with populations described by sport historians and sociologists. The exploration, for sport historians, as to why and how Australian sport communities function the way they do necessitates the benchmarking of the community as it exists in the period of 2010 and 2011 in order to observe the ongoing demographic changes in a club's future fandom population.

Hess (2000) and Cashman (2002) both elude to the traditional gender patterns of sport allegiances in Australia, with AFL, Australian Rules Football, generally having gender equity in their fan base. In contrast, the NRL, National Rugby League, is described by sport historians as being dominated by male barrackers, who compose 90% of the population. As the research will show, this has changed with some NRL clubs having a female fan base of around 40% while a new AFL expansion team has an initial online male fan base of 81%. These shifts and the causes for them are not explained in the literature that this dissertation will attempt to answer these questions.

The study of sport fandom is grounded in sport sociology, history and culture. It is complimented by a framework of popular culture studies, sociology, history and other areas in social sciences.

Much of previous research involving Australian sport fans, and specifically AFL fans, has focused on offline populations, and was conducted using survey research, observational work or historical work. This is the case for Stewart (1983) where the methodology was based on around club history and observations of match attendance. A population study done by the marketing agency Roy Morgan Research (2009) relied on a telephone survey. To the knowledge of this dissertation's author, no large-scale study documenting the characteristics of Australian sport fans and why fans change loyalties has been completed. Studies that have been completed focus on attendance and club membership; this dissertation will examine internet data in an effort to determine how the internet affects these.

Most social media research uses one or more of ten methodologies identified by the author of this dissertation. These research types are:
1. Individual case studies involving how a business uses social media and the web;
2. Search and traffic analytics analysis;
3. Sentiment analysis and reputation management;
4. Content analysis;
5. Usability studies;
6. Interaction and collaboration analysis;
7. Relationship analysis to try to determine how people interact and to identify key influencers;
8. Population studies;
9. Online target analysis of behavior and psychographics; and
10. Predictive analysis.

These research methods have been used for analyzing online group behavior and content. The most popular methods include case studies, content analysis, usability studies, influencer identification, reputation management, and interaction and collaboration analysis. Based on my preliminary research, the last three are ones least likely to be done.

When population studies are done, they tend to be short, do not detail methodology, focus on one particular site on the Internet and do not compare different populations. The reason for this is there are few automated tools to measure population characteristics of several sites at once. Of the existing tools, most are focused on providing information related to other methodologies including interaction and collaboration analysis, sentiment analysis, and search and traffic analytics analysis. These tools generally do not provide demographic and geographic population related data. Those that do offer demographic information tend to focus only on one site such as Twitter or Facebook, while this dissertation shall expand on those two.

The existing methods and the reliance on automating data collection around a single site acts as an intellectual and practical barrier in doing large-scale population studies across multiple sites. My research will help provide a methodological framework for doing a population study online, and demonstrate how the three components of sport fandom are inextricably linked and will enhance the understand how sport fandom behaves and what Australian sport fandom will look like in the future. This methodology will encompass populations across different networks and subgroups as most current research focuses on Twitter, Facebook and club fansites. The framing of this research in the context of events that taking place in sport fandom will create a narrative that not only will help understand existing characteristics of a fandom but begin to explain why shifts in the fan population take place. The approach will be useful in terms of laying a framework exploring the methodology for online target analysis, psychographics and predictive analysis as it pertains to demographic and geographic characteristics. This methodology will further validate quantitative analysis as a valid method for understanding how fan communities function.

<center>**Review of Literature**</center>

The review of literature explores how others define what fans and sport fandom are, and examines how sport fans show allegiance to clubs they barrack for. The definitions of fandom and fans are keys to understanding how and why people express interest in a team online. The literature review will look at population studies and characterizations of Australian sport communities that will be discussed in this dissertation. This chapter will look at demonstrations of club allegiance by fans. Finally, this chapter will explain how all the definition of sport fandom, the historical characteristics of sport fandom and demonstration of sport fandom fit together in the context of online fandom.

The Definition of Sport Fandom

Having a definition is fundamental to understanding the underlying assumptions that scholars make when critiquing and analyzing the sport fan community. It is also important in terms of understanding the author's own construction of sport fandom as it pertains to the assumptions made in this dissertation. The purpose of this section is to identify definitions that others have used and to construct a working definition of sport based upon them.

There are very few works focusing on the definition of fandom as it pertains to sport. Most literature presupposes that its readers understand what the concept means and then proceeds to examine some aspect of sport fandom. [1] While researching sports fandom and its definitions, four different groups were identified as offering their own perspective on how to identify and define fandom. The first group includes sports marketers and managers, who define sports fandom around potential for spectatorship. The second group involves sports sociologists and historians; they tend to define sports fandom as a form of identity and as a product of a specific culture. The third group involves the media and sports fans, where the definition involves the expression of allegiance to a club that is often grounded in the moment or the short term. A fourth group was identified as doing research about sport fandom. This group includes popular culture studies academics, who tend to focus on fan interaction with the team and the game, and who focus on sport fandom as a smaller subcomponent of fandom.

Sport marketers and managers.

Sport marketers and managers encompass authors who are active in the management or marketing of clubs, athletes or leagues. In this section, authors are also considered managers and marketers if the intended audience for their text is managers and marketers.

Stewart is an Australian rules historian and academic, and his work is often useful in the context of providing sport management students historical context for future management decisions. Stewart (1983) wrote for an audience of VFL fans, while providing a great deal of information regarding the organization of the league, its financial situation and other information that would be of more interest to people interested in sports marketing. Fans are frequently described based on their proximity to stadiums, training grounds and the location found in a team's name.   These descriptions were used to explain the potential for spectatorship: "The Club has little local support -- there are few private dwellings in the vicinity -- and most of its

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[1] See *Urge to Merge* (Ridley, 2002), *Sports publicity: a practical approach* (Favorito, 2007), and "Take the game to the north: the strategic and demographic imperative facing Australian rules football" (Nicholson, 2004) in M. Nicholson, R. Hess, & B. Stewart (Eds.), *Football fever: grassroots* for a few examples of this.

supporters are centred in the outer south-eastern suburbs." (p. 41) In a few cases, fans are all described based on their economic status and how fans of other teams perceive them: "It is thought that while the affluent eastern suburbs residents are appreciative of the team's success, they prefer to spend Saturday afternoon in active leisure activities like tennis or gardening." (p. 40)

Shilbury, D., Quick, S., & Westerbeck, H. (2003) are sport management academics based out of Deakin University. They published a book about sports marketing. Much of the content is focused on fans from the perspective of generating revenue for a club, league or sport and converting online fans into spectators and consumers of merchandise related to the organization and its sponsors. The authors do not create their definition of fan. Rather, the authors (p. 70) borrow from Smith and Stewart (1999) to define categories of fans: passionate fans, champ followers, reclusive partisans, theatergoers and aficionados.

Sullivan (2004) writing for an audience of potential sport marketers. The author said "the term fan will be used in the broadest sense and will, therefore, imply a range of attachments." (p. 131) Sullivan then characterized fans as spectators and consumers of various media who could be profiled using three key factors: Geographic, demographic and behavioral factors. The discussion around these factors involved how they impacted the potential for spectatorship and the consumption of media related to a team.

Nicholson (2004), a sport management academic at La Trobe University, wrote to reflect on the problems the AFL faces in becoming a national game. The geographic population imbalance between clubs in Queensland and New South Wales compared to Victoria was a major problem: The league was not balancing team location with population areas, nor was it financially sponsoring player development. The author rarely used the word fans to describe these problems: Spectators, the market and television audience are used instead.

Sport marketers and managers define around spectatorship, market and audience. Identity may play a role in definitions but only in the context of how to improve other elements.

Sports sociologists and historians.

Sport sociologists and historians are often academics who write to explain how sport works. Their intended audience is not necessarily athletes, club and league management. Their works are often accessible for and marketed at sport fans and other academics.

Collins (2005), a professor of social history at Leeds Metropolitan University, wrote for an audience interested in the history and evolution of several football codes in Australia. In describing a proposal to merge rugby league with Australian rules football, the different codes were described as appealing to two different views about Australia's place in the world: transnational versus nationalistic. These differences point to a definition of sports fandom relating to identity.

Like Collins, Cashman (2002) is a sport historian. He teaches at the University of New South Wales and was writing for an audience of those interested in history. Cashman (2002) differs in that his history focused on more on the connection between Australian sport and other issues in Australian life including identity, culture and parallel Australian history. Both authors connected sport to national identity. In the case of Cashman, the term fan is almost never used in the text. Words like crowds, interest, Australian with adjectives further identifying spectator culture and sport participants are used instead. Again, the author's undefined use of fandom involves identity.

Adair, D. & Vamplew, W. (1997) are sports historians who tried to debunk some historical myths about sports culture in Australia. One of these myths involved the defining of Australians as sports obsessed. This definition, where fans are defined as people obsessed with sports, is reinforced by talking about match attendance compared to the total population, and by the consumption of sport on television. Spectatorship plays a role in the definition with less frequency than that of the identity of a nation obsessed with sports and as an important component of Australian popular culture.

Hess (2000) is an academic at Victoria University. He wrote specifically about the history of female fans of Australian rules football. In his text, he offered a topology of the female fan types. These included women as passive onlookers, voyeurs, socialites, barrackers, civilizers. Hess (2000) claims it is possible to "categorize female spectators on the basis of their behavior and their seating arrangements" (p. 127) but "it should also be noted that it was certainly acceptable for different social groups of women to be present at football games". (p. 127) The author uses the term fan, spectator, supporter and barracker almost interchangeably. The definition that gets offered often ties into the type of fan to other types of identities such as class, social standing and occupation. Spectatorship plays a role in these definitions but often in the context of where female fans sit relative to those other identities.

Stewart (2005, p. 117) wrote for an audience Australian sport historians interested in the Australian Football League. In this work, for this audience, he referred to fans based on their sense of identity, their relationships with management and the behaviors they expressed. Like sport marketers, he too borrowed from Smith and Stewart (1999) to offer a paradigm for classifying fans. Stewart argues that there was a paradigm shift from away using the term barrackers and supports that occurred during the 1980s and 1990s. (Stewart, 2005, p. 115) The term fan was used to distinguish define the type of supporter and loyalty to the club. This type of issue had an impact on how Australian sport historian and sociologists used the term in their own research.

Sport sociologists and academics define sport fandom around concepts of identity, and offer models to differentiate between types of fans. Some of their definitions are based around the concept of local and national identity. They look at sport fandom as an expression of the specific culture relative to the wider culture in which it is placed.

The media and sport fans.

Sport fans are at the root of sport fandom. Their views are often reflected in the media.

The Canberra Times (2009, September 12) defines fandom based around personal identity of individual fans. They reference scholars who talk about supporting a club being similar to having religious experiences. The article goes on to talk about how modern fans express their identity. The actions they describe are fixed in short term expressions of allegiance: Buying and wearing a jersey, attending a match, crying or cheering depending on a club's performance.

Monteverde (2010, October 11) wrote about the Harry Kewell's fans in the Courier Mail (Brisbane). In the article, he talks about how fans responded to Kewell's performance at two specific events: An A-League match and the World Cup, not on fan allegiance across Kewell's career. Actions that were described were also temporal: Getting items signed, cheering for Kewell as he did things on pitch and applauding Kewell when he took the field.

The Gold Coast Bulletin (2010, October 9) described fans using a short-term indicator of Melbourne Heart fans getting heart when the Heart beat the Melbourne Victory. The Central Coast Express Advocate (2010, October 8) also used fans in a context of an extremely limited time period when the newspaper talked about how fans had been promised that the pitch would be in good condition for an A-League match. Garvey (2010, October 10) in The Sunday Age had an article titled, " 'Rekindled' does enough to keep his fans interested." This title supports the idea that sport fandom is defined by newspapers around short term events.

Sport fans and the media define fandom as expression of allegiance to a club. These expressions often take place during limited events, similar to how loyalty is expressed at a wedding or how fans behave during a match.

Popular culture studies academics.

Popular culture studies scholars like Jenkins (2006) and Hills (2009) offer the last definition. Jenkins is a Provost Professor of Communication, Journalism, and Cinematic Arts, a joint professorship at the USC Annenberg School for Communication. Hills is a reader in Media and Cultural Studies at the University of Cardiff. While both have occasionally written about sport fandom, it is not the focus of their research. Rather, their research involves media fandom. In this context, these scholars define fans as an active population who engage in activities related to an object produced by the larger popular culture. This production includes activities like writing fan fiction, creating costumes, producing fanvids and organizing conventions. The act of production helps in constructing a new identity. (Bennett, 2010) Hills (2009) uses this definition of sport in an article about radio fandom when writing for other academics about how radio fandom is marginalized inside media fandom studies. He describes radio fandom based around an online community for Terry Wogan's Radio 2 breakfast show, Wake up to Wogan. The description focuses on the creation of a specific culture on a specific fansite for the show and discusses how the community organizes internally. The relationships in the article are premised as being "spectators" of the show, but deviates in that "spectatorship" is secondary to group interactions amongst fans and the separate culture they have created that connects to but is distinct from the show. Popular culture academics also define fans as possessing a sense of ownership of their product that is removed and distinct from the official one, that they view actors, athletes, copyrighted and trademarked materials as communally owned by fans.

Sport fandom definition.

Sport fandom definitions are often conditional to the audience sport fandom is defined for. These definitions come from disciplines such as sport sociology, sport history and sport culture. Alternative definitions come from popular culture studies, sociology, history and other areas in social sciences.

Almost all the definitions of sport fandom provided by different groups predate the rise and importance of the Internet. More recent definitions do not refer to the Internet based fandom or provide a framework for understanding how this community exists in the context of wider sport fandom.

In trying to determine what a sport fan is in the context of online fandom, bits and pieces need to be borrowed from the four definitional categories. This includes identity issues as expressed by sport sociologists, expressions of support as defined by fans and the media, groups that can be monetized by sport clubs and organizations. For this dissertation, sport fandom is

defined as the collective group of fans organized, formally or informally, around a particular sport, club or athlete where individual members identify as fans and express that allegiance in a way that can be observed by outsiders. Identity and allegiance online are defined by following their clubs on social networks, checking in on geolocation based social networks for team related events, creating message boards and fansites, creating fan pages on Facebook, and creating Twitter accounts specifically to publish updates about their team. Allegiance and identity are also expressed by creating content related to their clubs to distribute across various networks like Facebook, LinkedIn, LiveJournal, Twitter, and YouTube.

Sport fandom is not defined as the consumption of sport related social media product. This is because searching for and consuming content related to sport does not imply allegiance or a desire to have identity twined with a club. These types of activities are not defined by any of definitions available as being part of sport fandom. In an online context, consumption of sport related content includes such things as watching a video on YouTube, searching for a club on Google, or reading an article about a club on Wikipedia. While these activities are not included as part of the definition of sport fandom, they are noteworthy because they can signal wider interest in a sport scandal or other event. The wider consumption patterns of peak interest can help provide context for activities that take place in sport fandom.

Population and Characteristics of Australian Sports Fandom

While there are many definitions and underlying assumptions as to what a fan is, there has been less work done looking at what makes these communities demographically distinct populations, and why and how the characteristics of these communities change. Much of the work done approaches the issue from the perspective of comparing the population of different sports or leagues. When specific clubs are looked at, the literature tends to focus less on research done about fans of those teams than it does on repeating traditional narratives about fan allegiances that may date back one hundred years. Rarely are explanations offered as to why historical characteristics of fan bases for clubs have changed. Much of the research tends to be qualitative in nature or, if quantitative, fails to explain the methodological approached to arrive at the stated conclusions. This section looks at historical characteristics of several of the clubs that will be discussed in proceeding chapters. The sports and leagues looked at include the Australian Football League (AFL), National Rugby League (NRL), Australian soccer and Australian cycling.

General sports.

Delpy & Bosetti (1998) conducted a demographic study of sports fans online that found sports fans were 6% more likely to be female (36% compared to 30%) and were 1.3 years older (34 compared to 32.7) than the whole population of the Internet.

Adair, D. & Vamplew, W. (1997) cite a study that found that during the 1970s, 28 percent of men and 21 percent of women in Australia were regularly attending professional sporting events as spectators.

Cycling.

Australian cycling fandom has been described as burgeoning. (De George, 2010, September 29).

Soccer.

The early history of soccer fandom in Australia was dominated by British expatriates, both as players, administrators and barrackers. (Thompson, 2003) British barracking continued on into the 1950s when their supporters began to dwindle in comparison to other ethnic tribes. (Moore & Jones, 1994) During most of the 1960s, 1970s, 1980s and 1990s, soccer fandom in Australia was dominated by ethnic tribalism with the major barracking groups being composed of Serbians, Croatians, Italian, Portuguese, Greeks and Macedonians. (Hallinan, Hughson & Burke, 2007) (Crawford, 2003) (Moore & Jones, 1994) Some of the barracking during that period involved regional and city pride in clubs. Much of this took place in Newcastle. (Hallinan, Hughson & Burke, 2007) The patterns of ethnic tribalism began to dissipate with the emergence of the A-League in 2004. (Hallinan, Hughson & Burke, 2007) Regional allegiances began to develop around clubs like the Melbourne Victory. (Hallinan, Hughson & Burke, 2007) Ethnic tribalism continued to exist for soccer clubs in Australia after the creation of the A-League but it was relegated to the regional club levels in cities like Melbourne, where it this fan support was much less obvious to outsiders. (Hallinan, Hughson & Burke, 2007)

The New South Wales and National Rugby League (NSWRL and NRL).

Rugby league became popular in Australia in the early part of the 20th century. (Collis & Whiticker, 2010) The move to professionalism and the more formal organization of clubs helped to grow the game's fanbase in Sydney. (Collis & Whiticker, 2010) A game between New South Wales and New Zealand in 1907 attracted 20,000 fans. (Collis & Whiticker, 2010) The game's fan base became increasingly decentralized as the New South Wales Rugby League (NSWRL) and later the National Rugby League (NRL) expanded and added new teams from areas such as Manly, Parramatta, Canberra, Illawarra, Penrith, Brisbane, Newcastle, Gold Coast, Melbourne, Auckland and Townsville. (Collis & Whiticker, 2010) Much of the expansion has been behind the Barassi-line, as documented in *A National Game.* (Hess, Nicholson, Stewart, & De Moore, 2008).

Each club in the NRL has its own history, attracting its own distinct fanbase. This is often an issue of geography and class. One team in the NRL discussed in the research is the Canberra Raiders. The club was founded in 1982. (Collis & Whiticker, 2010) They gained entry into the NSWRL by arguing the local community was diverse, fast growing and on national display because it is Australia's capital city. (Collis & Whiticker, 2010) During the first season, the club averaged over 10,000 fans in attendance per home game. (Collis & Whiticker, 2010) During the 1980s, the fans were described as being rather insulated, with their team not being subjected to much negative criticism that the team faced in the Sydney media market. (Collis & Whiticker, 2010)

Collis & Whiticker (2010) describe the Melbourne Storm as having won over Melbourne based fans by 1999, when, in the club's second year in existence, they won premiership. The team is described as having lost credibility with their fans in 2010, when massive salary cap violations were discovered. (Collis & Whiticker, 2010) The Melbourne Storm managed to get fans to the games, with 21,522 people showing up to the club's first true home game in the 1998 season. (Collis & Whiticker, 2010) The team's last home game of that season had attendance of 12,592 and the team saw an average of "just above 13,000". (Collis & Whiticker, 2010) In 1999, the club set a record for most people attending a Grand Final, when 107,999 people attended the game against St George Illawarra. (Whiticker & Collis, 2010) In 2001, the club was averaging 9.081 fans per game at home. (Collis & Whiticker, 2010)

The Victorian and Australian Football Leagues (VFL and AFL).

The VFL and AFL have been attributed with having historically high levels of female fans, both as spectators and barrackers, when compared to other football codes in Australia and around the world. During the late 1800s and early 1900s, female spectatorship was between 30 and 50 percent. (Cashman, 2002, p. 48) This contrasts with Australian, specifically New South Wales, rugby which is characterized as being conservative, middle class, patriarchal and often containing strains of misogyny that discouraged the growth of female spectatorship. (Cashman, 2002, p. 52) Both codes were described as having large white spectator bases. (Cashman, 2002, p. 56) For much of the history of Australian rules football, it was characterized as being a fundamental part of life in Melbourne. This began to change in the 1960s and 1970s as the game became more commercialized. (Stewart, 2005, p. 114) The geographic boundaries for the game in comparison to similar space occupied by rugby league put Australian rules strong holds in Western Australia, South Australia, Tasmania, Victoria, and the Northern Territory. (Hess, Nicholson, Stewart, & De Moore, 2008) The traditional boundaries between the two codes can be seen using the Barassi-line. (Hess, Nicholson, Stewart, & De Moore, 2008).

Characteristics of VFL/AFL fan communities have historically differed by club. Part of this is a result of geographic location of clubs, the history of the development of sport in specific regions around the country, and the historical demographic composition of a club's original zones.

The Fitzroy Lions, who eventually became the Brisbane Lions, were originally from an area where their fan base drew heavily from a population middle-class white-collar workers. (Shaw, 2006, p. 115) During the 1940s, Fitzroy Lions were similar to their counterparts at Collingwood and North Melbourne in terms of fan composition. Shaw (2006, p. 79) describe fans as being drawn from the working classes and prone to violence similar to that of future British football hooligans. In 2001 and 2003, a nationwide survey was conducted of football fans to identify who Australians supported.[2] (Stewart, 2005, p. 111) The survey was done over the phone and was intended to get a composite sample of the whole Australian population. The results were then calculated to determine how the sample reflected nation wide. Surveys conducted in 2001 and 2003 by Roy Morgan show that the Brisbane Lions respectively had 798,000 and 1,331,000 supporters. (Stewart, 2005, p. 111) (Roy Morgan Research, 2009, July 19). The 2009 team ranked second for total fans, with 861,000 fans. (Roy Morgan Research, 2009, July 19).

Early in the history of the Carlton Blues, most of their fans were from the Carlton area and represented the major population found there: "middle-class white-collar workers and the occasional silvertail." (Shaw, 2006, p. 115) The Carlton Blues had one of the largest fan bases during the 1940s. According to Shaw (2006, p. 101), they could draw crowds irrespective of their on-field performance. According to a 2001 and 2003 national survey, the Carlton Blues respectively had 603,00 and 596,000 supporters. (Stewart, 2005, p. 111) (Roy Morgan Research,

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[2] The survey asked based around barracking and support. The barracking totals do not appear to be connected to match attendance, merchandise purchasing or television viewing. (Roy Morgan Research, 2009, July 19).

2009, July 19). The 2009 team ranked seventh for total fans, with 493,000 fans. (Roy Morgan Research, 2009, July 19).

In the period around the Magpies founding in 1892, fans were bootmakers and working in the footwear industry. (Grow, 1998, p. 69, 77) During the early part of the 20th century, the Collingwood Magpies fans were predominantly from Collingwood. They matched the demographics of the neighborhood: Semi-skilled members of the working class that were mostly Irish Catholics. (Shaw, 2006, p. 115) The Collingwood Magpie fans are characterized as having "strong working-class origins". (Stewart, 1983, p. 35) The club has historically enjoyed strong local support, both in terms of developing a fan base and with local businesses.   During the early part of the 1900s, 70 percent of the club supporters were local and 80 percent were members of the working class. (Sandercock, 1981, p. 199) In the decade around 1900 to 1910, fans were described as being drawn from the working class. (Shaw, 2006, p. 79) During the 1940s, the club had one of the largest fan bases in terms of game attendance. Shaw (2006, p. 101) said the team could draw crowds irrespective of their on-field performance. During the 1960s and 1970s, there was a geographic shift in the fan base where the fan base extended out to Melbourne's northeast suburbs. (Stewart, 2005, p. 113)   There was a demographic shift by the 1970s, with over 50 percent of the local population being foreign born and not Anglo-Irish-Australian; instead, the local fan base was composed largely of Southern Europeans. (Sandercock, 1981, p. 200) The characterization by sport historians of these fans possessing working class values continued on despite these changes. According to a 2001 and 2003 national survey, the Collingwood Magpies respectively had 688,000 and 749,000 supporters. (Stewart, 2005, p. 111) (Roy Morgan Research, 2009, July 19). Roy Morgan Research (2009, July 19) said the modern team has the third largest AFL fan base, with over 731,000 fans.

During the 1870s and 1880s, Essendon was one of the three big clubs in terms of the number of paying fans. (Grow, 1998, p. 55) During the early part of the 20th century, Essendon Bombers' fans were drawn from the local area. (Shaw, 2006, p. 116) Essendon Bomber fans were from the "moderately affluent north-west suburbs" that had a reputation "for being conservative and responsible." (Stewart, 1983, p. 36) A 2001 and 2003 national survey revealed the Essendon Bombers respectively had 862,000 and 796,000 supporters. (Stewart, 2005, p. 111) (Roy Morgan Research, 2009, July 19).   The team has the fourth largest AFL fan community in 2009 with 638,000 barrackers. (Roy Morgan Research, 2009, July 19).

During the 1870s and 1880s, Geelong was one of the three big clubs in terms of the number of paying fans. (Grow, 1998, p. 55) According to a 2001 and 2003 national survey, the Geelong Cats respectively had 357,000 and 345,000 supporters. (Stewart, 2005, p. 111) (Roy Morgan Research, 2009, July 19). The team has the eighth largest AFL fan community in 2009 with 488,000 barrackers. (Roy Morgan Research, 2009, July 19).

During the 1980s, Hawthorn Hawks fans were from the affluent eastern suburbs, but who were not as interested in attending matches as fans of other teams. (Stewart, 1983, p. 40) According to a 2001 and 2003 national survey, the Hawthorn Hawks respectively had 362,000 and 390,000 supporters. (Stewart, 2005, p. 111) (Roy Morgan Research, 2009, July 19).   The 2009 club ranked tenth in the AFL for most fans, with 381,000. (Roy Morgan Research, 2009, July 19).

The Melbourne Demons historically have not been able to draw local support, with most of the barracking for the team being "centred in the outer south-eastern suburbs." (Stewart, 1983, p. 41) Roy Morgan Research's 2001 and 2003 national survey showed that the Melbourne Demons respectively had 226,000 and 205,000 supporters. (Stewart, 2005, p. 111) (Roy Morgan Research, 2009, July 19). The team had the fewest people barracking for them of any team in the AFL during the 2009 season; only 187,000 people identified themselves as fans in research conducted by Roy Morgan (2009, July 19).

The North Melbourne Kangaroos fans during the early part of the 20th century are described as being from the working class and being a precursor of the British football hooligans. (Shaw, 2006, p. 79) During the 1900s and 1910s, many barrackers and players were butchers. (Fiddian, 1977, p. 132) During the 1920s, this occupation continued to compromise an important part of the team's supporter base. (Shaw, 2006, p. 83) According to a 2001 and 2003 national survey, the North Melbourne Kangaroos respectively had 268,000 and 249,000 supporters. (Stewart, 2005, p. 111) The 2009 club ranked second to last in the AFL for most fans, with 219,000. (Roy Morgan Research, 2009, July 19).

Port Adelaide Power membership peaked in 1998 with 38,305 members. (Ruccie, 2010, October 7) A 2001 and 2003 national survey showed that the Port Adelaide Power respectively had 274,000 and 315,000 supporters. (Stewart, 2005, p. 111) (Roy Morgan Research, 2009, July 19). The 2009 club ranked thirteenth in the AFL for most fans, with 245,000. (Roy Morgan Research, 2009, July 19).

At the Richmond Tigers founding in 1885, fans were characterized as being larrikins who threatened the club's existence by keeping away paying customers. (Grow, 1998, p. 72) During the early 20th century, Richmond Tigers fans were mostly semi-skilled Irish Catholic members of the working class. (Shaw, 2006, p. 115) The Richmond Tigers supporters are characterized as "defiant and arrogant." (Stewart, 1983, p. 42) Prior to the 1950s, being born in Richmond meant being a Richmond Tigers fan. This pattern of fans being located close to the historical home of the team changed with in the post war era. (Sandercock, 1981, p. 183) A 2001 and 2003 national survey showed that the Richmond Tigers respectively had 398,000 and 401,000 supporters. (Stewart, 2005, p. 111) The 2009 team ranked ninth for total fans, with 392,000 fans. (Roy Morgan Research, 2009, July 19).

During the 1870s and 1880s, South Melbourne was one of the three big clubs in terms of the number of paying fans. (Grow, 1998, p. 55) The South Melbourne Football Club, that eventually became the Sydney Swans, began with most of their supporters being aspirational members of the lower middle class. (Shaw, 2006, p. 116) During the 1930s, the club was considered a Catholic one. (Shaw, 2006, p. 116) A 2001 and 2003 national survey by Roy Morgan Research said that the Sydney Swans respectively had 1,305,000 and 1,341,000 supporters. (Stewart, 2005, p. 111) During 2009, the club ranked first in the AFL with 1,217,000 fans. (Roy Morgan Research, 2009, July 19)

During the 1880s, St. Kilda fans were described as being stockbrokers. (Grow, 1998, p. 69) During the 1960s and 1970s, there was a geographic shift in the location of St. Kilda's

supporters where the fan base extended into the southern bayside suburbs. (Stewart, 2005, p. 113) According to a 2001 and 2003 national survey, the St. Kilda Saints respectively had 321,000 and 282,000 supporters. (Stewart, 2005, p. 111)   The 2009 team ranked twelfth for total fans, with 311,000 fans. (Roy Morgan Research, 2009, July 19).

During the 1930s, when the Western Bulldogs were known as the Footscray Bulldogs, the team's fan base was extremely local to Footscray; much of this was owed to the fact that players came from the immediate area. (Kingston, 2005, p. 43) A 2001 and 2003 national survey showed that the Western Bulldogs respectively had 198,000 and 254,000 supporters. (Stewart, 2005, p. 111) The 2009 club ranked fourteenth in the AFL for most fans, with 226,000. (Roy Morgan Research, 2009, July 19)

Not much research has been done regarding contemporary characteristics of VFL/AFL fans by club. Modern research tends to focus on the relative size of one fan population to another. Much of the understanding of current VFL/AFL club fandom is based on historical patterns related to Melbourne's population during the early and middle part of the twentieth-century.

Demonstrating Club Allegiance

Demonstrations of club allegiance can and do differ by club and league. There are some practices that are done in the AFL that are not done in the National Rugby League (NRL). In the AFL, cheersquads have historically played an important role. In the NRL, wearing of team jerseys has not been an important expression of sport fandom affiliation. Understanding how fans demonstrate their allegiance is important as it plays a role in the definition of sport fandom and can be used to conceptualize how allegiances are expressed on the Internet.

In the AFL, fans have historically expressed their allegiance to their clubs in a variety of ways. Two of the key areas for expression have involved cheersquads (Andrews, 2005) and the production of fanzines. (Wilson, 2005) Beyond that, club supporters have their own unique ways of demonstrating club loyalty.

Cheersquads have played an important role in Australian rules football and date back to the 1880s. Cheersquads would create giant paper banners with inspirational messages for players to run through. (Andrews, 2005) Cheersquads also waved giant floggers. (Andrews, 2005) These were eventually phased out and replaced with patties, giant pompons on a small stick. (Andrews, 2005, p. 88)   The 1970s saw a decrease in the ability of cheersquads to make and display signs as they interfered with signage by advertisers at the park. (Andrews, 2005, p. 84) By the 1980s and 1990s, fan control of cheersquads had been severely diminished as clubs and the leagues exerted increasing influence over them. (Andrews, 2005, p. 83) Despite the heavy restrictions that were eventually placed on cheersquads, membership in them is still viewed as extremely important part of barracker identity for many fans.

Many expressions of allegiances are easier to understand: Up until about thirty years ago, if the Collingwood Magpies performed poorly, no one would buy *The Sporting Globe*. (Shaw, 2006, p. 117) The morale of the city of Geelong is said to be dependent on the club's performance. (Shaw, 2006, p. 116) During the 1920s, the North Melbourne Kangaroos were

called "The Shinboners" because, according to Shaw (2006, p. 83), many fans from the area the team drew from were butchers and "would attach royal blue ribbons to animals' shinbones and use them as window displays before North Melbourne home games." (Shaw, 2006, p. 83) According to Stewart (2005, p. 128), Hawthorn Hawks fans were so opposed to a proposed merger with the North Melbourne Demons that some traveled from Tasmania for the merger meeting.

According to the Canberra Times (2009, September 12), demonstrating allegiance to a rugby club by wearing a team jersey is a relatively new expression. Prior to this change, wearing a jersey and not being on the pitch was rather taboo. This demonstration of allegiance came into being as a club's fan base decentralized and was less structured around a specific geographic area.

Rowe (2005) talks about the role of sport journalists, and if their work is more akin to being a fanclub than a form of journalism. Rowe argues that in contemporary society, newspapers and other media organizations face a battle between providing entertainment, informing readers and offering an important critique of what takes place in society. This battle is highlighted in media coverage of sport. Sport journalists are on one hand expected to provide impartial and accurate accounts of matches. On the other hand, journalists are celebrated for cheering for their clubs, and acting as "partisan sport supporters." (Rowe, 2005, p. 126) Rowe (2005) says, "Sports-people, therefore, can be regarded as mobile canvases onto which fans project their aspirations, fantasies and identities." (p. 127) Sports journalist can be seen as expressing their fandom by reporting on their team. This aspect of journalists as fans who express their interest through reporting can mean that serious sport related investigations that may harm a team may not be done, as sport journalists do not feel they have the time, nor inclination to do this type of research. (Rowe, 2005, p. 130) In Australia, this situation is particularly bad where many journalists see themselves as belonging to a fanclub related to the sport, league or club. (Rowe, 2005, p. 131) The closer sport journalists are to a team, by being in a smaller market or in a single team market, the more pressure journalists feel to write from the perspective of fans. (Rowe, 2005, p. 132-134) This pressure can be more intense when the publication is a major sponsor of a local club side. (Rowe, 2005, p. 132-134)

Australian sporting allegiances are expressed through the production of fanzines, by participating in organizations and events related to the club, by cheering for a club during matches, by wearing team colors and clothing, and by not buying club related materials when the club is performing poorly.

The Connection between Sport Fandom and Online Activity

In defining sport and looking at how fans express allegiance in an Australian sport

context, much of it predates or ignores the online fan community. While the connection between

online activity and sport is not clearly defined in the literature about Australian sport, it can be

simply defined: Favorito (2007) says the Internet is a platform that allows "casual fans to connect

with their individual favorite athlete more regularly." Berg & Harcourt (2008) talk about how

analysis of sport fandom online offers what can not be done in other situations: providing context for sport fan behavior. Berg & Harcourt (2008) also claim that studying sport fandom online also helps to give a "more well-rounded understanding of sports fandom and its expression by illuminating new areas for understanding and for studying both online and offline fandom." Online activity and sport fandom are connected by this desire to connect to, and demonstrate allegiance to athletes, clubs, leagues and the sport by an attempt to connect with those groups and other fans of those groups. They provide insight into how sport fandom functions online and offline.

Methodology

Types of Social Media Research

        The author of this dissertation has identified ten general methods used to gather and analyze data used in researching social media research. These methods were identified after having read many sport and social media related blogs, academic papers, white papers and books. These are:

11. Individual case studies for how a business uses social media and the web;
12. Search and traffic analytics analysis;
13. Sentiment analysis and reputation management;
14. Content analysis;
15. Usability studies;
16. Interaction and collaboration analysis;
17. Relationship analysis to try to determine how people interact and to identify key influencers;
18. Population/demographic studies;
19. Online target analysis of behavior and psychographics; and
20. Predictive analysis.

        This section provides (A) a brief summary of each method, (B) explains how to conduct this type of research and (C) gives examples using the methodology.

        1. Individual case studies for how a business uses social media and the web.
A.   Case studies on social media usage are often done to measure the effectiveness of specific actions taken by an organization. Bronwyn et al. (2005) say case studies "typically examine the interplay of all variables in order to provide as complete an understanding of an event or situation as possible. This type of comprehensive understanding is arrived at through a process known as thick description, which involves an in-depth description of the entity being evaluated, the circumstances under which it is used, the characteristics of the people involved in it, and the nature of the community in which it is located."
B.   This methodology often incorporates components of some or all the other methods discussed in this chapter. The specific methods often depend on the goals of the person or organization conducting the case study.
C.   Vincenzini (2010) did a case study regarding the use of the social media by the NBA in an attempt to define why they have been successful in using it to promote the league. The author used quantitative analysis to measure the size of the community, the volume of content they were viewing on sites like YouTube and the volume of content they were creating on sites like Twitter. The quantitative analysis was synthesized with explanations from NBA employees to explain their practices in the context of their own business decisions as they pertained to social media. This was followed up with an explanation as to what worked and what did not worked and offering advise for others involved with sport and social media to help them leverage their own position.

Case studies are a mixed methodology approach, borrowing from other approaches. The major difference is that the case study focuses on a narrower perspective with the goal of tracking behavioral changes, or in advising others on how an organization changed practices and how those lessons can be applied elsewhere.

2. Search and traffic analytics analysis.

A.   Search engine and traffic analytics generally is done internally to determine how to optimize a site in order to increase the amount of visitors a site gets and the total number of pages that they view. This method involves identifying how people arrive at a specific site and the pages they visit while at the site. Traffic analytics analysis often includes six different components: Search engine visitors, paid search advertisements, pay per click, organic traffic, direct traffic and internal site traffic. Ramos and Cota (2009) define traffic analytics as "Tools that analyze and compare customer activity in order to make business decisions and increase sales. Analytics tools can report the number of conversions, the keywords that brought conversions, the sites that sent converting traffic, conversion by campaign, and so on."

B.   There are a number of different methods and tools that allow for this type of analysis. Early in the history of the Internet, one of the most popular tools and methods involved analyzing web server log files. (Jansen 2009) Another popular early method of analysis was page tagging, which involved embedding an invisible image on a page, which, when the image is triggered, "triggers JavaScript to send information about the page and the user back to a remote server." (Jansen 2009) These earlier tools have advanced and now include tools like Quantcast and Google Analytics. Kaushik (2010) recommends Google Analytics, a free tool that involves putting a bit of code on all pages of a site. Kaushik (2010) points out that various types of traffic analysis can be done using the various tools provided by Google Analytics. The author claims that Google Analytics allows you to break the analysis down into "three important pieces: campaign response, website behavior, and business outcomes." (Kaushik 2010)

C.   Fang (2007) completed a case study at the Rutgers-Newark Law Library in order to track library website usage, track visitor behavior and determine how to improve the website to better serve users. Earlier work done by the library had involved surveys handed out to patrons, analysis of log files, and the use of counters. (Fang 2007) The author changed methods because of some inherent flaws in using those methods to analyze website needs. They used Google Analytics in order to track user activity on the library's website. The library "found out how many users were accurately following the path we had designed to reach a target page." (Fang 2007) This sort of path following navigation was one of the goals they had when they designed their site. They also found that "Visitor Segmentation showed that 83% of visitors were coming from the United States. About 50% of U.S. visitors were from New Jersey, and 76% of these were from Belleville and Newark. These results matched our predictions for patrons' geographical patterns." (Fang 2007) The results of this analysis enabled the library to make changes to improve their website.

This type of methodology lends itself more to a case study approach and often requires the consent of the website involved in order to get private logs. It can be used in conjunction

with other methods, but should be used in a more targeted analysis of highly specific research areas.

3. Sentiment analysis and reputation management.

A. Sentiment analysis involves identifying content related to a topic and identifying the emotion connected to that content. In a sport context, sentiment analysis could involve determining if newspapers are providing positive or negative coverage of a team. In a social media context, sentiment analysis would involve determining attitudes being expressed on Twitter in individual tweets. Reputation management goes one step further: After sentiment has been determined, a decision needs to be made on if and how negative and positive sentiment content should be responded to. Sentiment analysis is passive analysis where non-stakeholders can conduct analysis. Reputation management is active analysis that is primarily conducted by stakeholders as part of ongoing activities to improve a brand, be it personal or corporate.

B. While sentiment analysis and reputation management are similar in their desire to monitor a response to a situation, the tools available vary differently for each type. There a variety of different tools for sentiment analysis. One of the tools for conducting sentiment analysis are freely available lists of words "that evoke positive or negative associations." (Wanner et al. 2009) Sterne (2010) suggests that content being ReTweeted on Twitter can be seen as a tool to measure positive sentiment. Sterne (2010) suggests that the ratio of follows/followers is not an effective tool for measuring sentiment on Twitter. Reputation management tools include Trackur. It allows you to "set up searchers and the system automatically monitors the Web for key words that appear on news sites, blogs, and other social media." (Weber 2009)

C. Wanner et al. (2009) did a sentiment analysis of RSS feeds that focused on the 2008 United States presidential elections. They selected 50 feeds connected to the elections and collected updates to these feeds every 30 minutes for one-month starting 9 October 2008. For each item they collected from the feeds, they also recorded the date, title, description and feed id. (Wanner et al. 2009) After that, they eliminated all noise, which mostly consisted of non-content like URLS. (Wanner et al. 2009) The next step was to filter out all items that did not contain one of the following terms: "Obama", "McCain", "Biden", "Palin", "Democrat" and "Republican". (Wanner et al. 2009) Sentiment was then analyzed using freely available lists "that evoke positive or negative associations." (Wanner et al. 2009) The results were then visualized. Five events that happened during this period were chosen for a more detailed visual examination. They found that the news regarding possible abuse of power by Sarah Palin in Alaska resulted in many negative posts. They also found that the debates resulted in low sentiment scores for both candidates as the candidates attacked each other. The authors concluded that the visual tool they created would be useful for monitoring public debates.

This methodology can overlap with influencer identification (Weber 2009) as part of reputation management involves determining which people are worth responding to. It can also overlap with psychographics. Despite the obvious overlaps, this type of research often appears independently and not as part of a larger study.

4. Content analysis.

A. Content analysis involves looking at the individual components of something larger and analyzing it. In a social media context, the content could be comments on a Facebook fanpage, or all the tweets made by a person or group. Content analysis can be either qualitative or quantitative, depending on the purpose of the research.

B. With content analysis, the researcher views data as "data as representation not of physical events but of texts, images and expressions that are created to be seen, read, interpreted, and acted on for their meanings, and therefore be analyzed with such uses in mind." (Krippendorff 2007) Krippendorff (2007) defines the basic methodology used in content analysis as unitizing, sampling, recording, reducing, inferring, and narrating.

C. An example of content analysis is a 2009 study by Kian, Mondello, & Vincent. It looked at ESPN and CBS's internet coverage of men and women's NCAA basketball tournament, also called March Madness. The methodology was spelled out by the authors as: "All 249 (N D 249) byline articles from CBS SportsLine and ESPN Internet were read, coded, and content analyzed to determine the descriptors in Internet articles." (Kian, E., Mondello, M., & Vincent, J., 2009) The authors used multiple coders to help prevent bias in terms of interpretation of gendered language. The two sites in the sample were chosen because they were the largest. All types of March Madness content was included. Only the text of the content was included. Titles and authors were not. Categories for encoding gendered language were based on previous research by sport media researchers. Only descriptors were used for encoding.   Totals for gendered descriptors were then calculated and an analysis was completed.

This method of analysis is can be done with other forms of analysis like sentiment analysis, as part of a usability study or collaboration study. It can also be done separately. It often appears most successful when done separately as part of a larger study to help provide context for other data analysis.

5. Usability studies.
A. In a social media context, usability studies look at how people use some aspect of the Internet or software that connects to it.

B. According to Sweeney, Dorey and MacLellan (2006), one of the purposes of a usability study is "point out specific usability problems with your Web site interface in line with how well your Web site speaks to your audience and their goals." Jerz (2002) cautions that "Simply gathering opinions is not usability testing -- you must arrange an experiment that measures a subject's ability to use your document." That caution also explains the general methodology of a usability study outlined by Jerz (2002): Collect both quantitative and qualitative data. The quantitative should involve some type of measurement. The qualitative should allow testers to express their opinions. Jerz (2002) suggests that you use at least five tests for the first run. Then, after fixing errors and problems based on tester feedback, you get another five testers to test the site to determine that those errors have been fixed.

C. An example of a usability study is one conducted by Sturgil, A., Pierce, R., & Wang, Y. (2010). The study tried to determine how much content readers of Internet news sites really wanted. The methodology involved conducting a focus group, and think-aloud sessions. In both cases, the researchers observed participants using Internet

news sites. They also asked them questions regarding what content they visited and why. The methodology relied heavily on qualitative analysis with a small quantitative component.

Usability studies can be done in conjunction with traffic analysis and search analytics as the purposes are often similar: Improve the user experience and try to get users to complete certain tasks.

6. Interaction and collaboration analysis.
A. Interaction and collaboration analysis focuses on how people work together in an online environment. Collaboration analysis often looks more at how people work together to create something, such as contributing to a wiki or to create an event like an unconference, where everyone is working towards a common goal. Interaction analysis tends to focus on how people engage each other when there is no common goal in the group.
B. Software Services, Dale Carnegie & Associates, Inc., & Shedletsky, L. (2000) explain the methodology for interaction analysis. They encourage researchers to look at topics discussed, purposes of individuals' utterances, structure of conversation, and how properties of talk affect outcomes when completing an interaction analysis. The researcher should determine the setting for which this type of analysis will be conducted: In a controlled setting such as a laboratory, by selecting samples of existing conversations, or by examining all conversation that the research is capable of overhearing. The researcher needs to determine if they will use prompted or unprompted interaction. They also need to determine how they will record conversations and if their analysis will be quantitative or qualitative in nature. Once these things have been determined, then a methodology for data collection can be figured out.
C. Viégas et al. (2007) did a collaboration analysis focusing on Wikipedia. The purpose of their work was to examine historical editing patterns and how editing practices have evolved over time. They built on work done by Viégas, Wattenberg and Dave in 2003. The methodology they used involved getting the editing history of articles across several different Wikipedia namespaces. The history of the articles was then examined using several visualization tools, metrics and methods depending on the established cultural practices for that namespace. One tool they used was a history flow visualization application. A method they used was the manual classification of "all user posts in a purposeful sample". (Viégas et al., 2007) Metrics they used included count of horizontal rules, signed user names, new indentations levels, votes in polls and total "references to internal Wikipedia resources." (Viégas et al., 2007) These tools, metrics and methods allowed them to examine how collaboration and interaction had changed over time.

This type of analysis often stands alone. It could be used as part of a usability study or relationship analysis to provide context for the results of those analysis types.

7. Relationship analysis.
A. Relationship analysis involves examining the relationships between users on a social network, message board or mailing list. The goal is to identify cliques of different sizes or people who are particularly influential in a particular group online. This type

of analysis is important to many brands including Starbucks (Plimsoll, 2010). The purpose of relationship analysis is to identify key influencers and social who influencers who are or who have the potential to be brand evangelists. (Plimsoll, 2010) Lord and Singh (2010) define social media influence marketing as being "about recognizing, accounting and tapping into the fact that as your potential consumer makes a purchasing decision, he or she is being influenced by different circles of people through conversations with them, both online and off."

B. The methodology for influence identification is not clearly spelled out as identifying influencers can be heavily dependent on the network being examined and how the community on a specific site functions. As a result, social media marketers suggest an array of tools like Twitalyzer that can be used to help determine your own influence. (Ankeny 2009) Twitalyzer's Peterson and Katz (2010) explain their site-specific method of determining influence as including the following variables: Engagement level, total followers, total following, hashtags cited, lists included on, frequency of updates, references by others, references of others, times content is retweeted, urls cited and a number of other variables. Sterne (2010) suggests using WeFollow.com to find people who use topic specific #hashtags on Twitter. The people who tweet the most about a topic are likely to be influencers in that others looking for tweets around a topic are likely to read them. In a wider web context, Sterne (2010) suggests using Technorati to identify bloggers who have clout and influence around a certain topic.

Relationship analysis can be viewed as a fundamental component to sentiment analysis; social media marketing companies like Razorfish often package the two together. (Lord & Singh, 2010)

8. Population /Demographic studies.

A. Population studies involve defining the demographic characteristics of a community. In a population study, the goal is also to define the limits and size of the community that is being studied. Because of the complexity in defining the boundaries of a population and in sampling the whole of it, this type of research is rarely done in terms of social media.

B. Daugherty and Kammeyer (1995) define a population study as the assembling "of numerical data on the sizes of populations." This sort of data is defined by the authors as "descriptive demographic statistics." Daugherty and Kammeyer (1995) say "population numbers are always changing, so even if they are accurate when gathered they are soon out of date and inaccurate." Daugherty and Kammeyer (1995) say the basic purpose of conducting a demographic study "is to explain or predict changes or variations in the population variables or characteristics." Given the definition of a population study, the methodology involves counting all members of a select population.

C. The most famous example of a population study is the census. In the United States, this is done every ten years. According to the U.S. Census Bureau (n.d), the goal of the 2010 US census is " to count all U.S. residents—citizens and non-citizens alike." This is done by sending all citizens a ten-question questionnaire, requiring that people complete it and having a census taker follow up for all households that did not return

completed questionnaires. (U.S. Census Bureau, n.d.) The results are then calculated and are used by the government to make decisions.

This type of research often stands on its own. The results will often be utilized for marketing purposes in conducting other research, such as psychographics, to make that that sampling contains representative populations.

9. Online target analysis of behavior and psychographics.
A. Online targeting of and marketing towards a specific audience because of their demographic characteristics is extremely common on the Internet. Psychographics is a term that includes targeting towards a specific demographic group except it includes the offline component.
B. Sutherland and Canwell (2004) define psychographics as "market research and market segmentation technique used to measure lifestyles and to develop lifestyle classifications." (p. 247) Nicolas (2009) defines online behaviorial analysis as a series of steps: Collecting user data across several sites, organizing information about users based on the sites they visit and their behavior on those sites, "infer demographics and interest data", and classifying new users based on the collected data in order to deliver relevant ads and content based their demographic profiles. Kinney, McDaniel, and DeGaris (2008) define psychographics as attitude towards something such as a brand or involvement with an organization. Given the methodology involved, much of this type of research involves action research in that it is done in a specific content, based on internal models to address specific situations.
C. An example of this type of research was done by Kinney, McDaniel, and DeGaris (2008) who investigated the demographic characteristics of NASCAR fans and their attitudes towards NASCAR, its sponsors and sponsor involvement with NASCAR. The research found that age, gender and education were all important variables in determining sponsor recall: Younger, more educated males had the best brand recall amongst NASCAR fans.

This type of research can be viewed as a subcomponent of a population study in that demographic information is sought about the population. In an online context, it often works in conjunction with search and traffic analytics analysis, content analysis, and interaction and collaboration analysis.

10. Predictive analysis.
A. A search on 13 July 2010 on SPORTDiscus had three results for "predictive analysis." A search on the same date on Scopus had 605 results, 275 of which were in engineering, 132 in computer science and 102 in medicine. Predictive analysis is probably one of the least used analysis methods, especially in social media and fandom.
B. What is predictive analysis? At its simplest, it is identifying a future event or events, monitoring selection actions that precede the event and seeing if those events can be used to predict the outcome of similar events in the future. If a predictive value is found, an organization can monitor behaviors to help make more informed decisions.
C. An example of this type of research is "Predicting the future with social media" by Asur and Huberman (2010). Their goal was to determine if tweet volume and sentiment on Twitter prior to a movie being released could be used to predict how

well a movie performs at the box office. Their methodology involved identifying movie wider release dates that took place on a Friday, creating a list of keyword searches related to those movies, and using the Twitter API to collect all tweets and aggregate date that mention those keywords over a three month time period. The authors then compared the tweet volume to box office performance. They concluded that social media "can be used to build a powerful model for predicting movie box-office revenue." (Asur & Huberman, 2010)

This type of research can be used in conjunction with other methods. It can be used alongside a population study to determine if certain actions will result in demographic changes or population shifts.

Choosing the appropriate methods.

Each of these methods offers insights into various aspects of the web and its population. The type of analysis used is often specific to the purpose of the research, involved blended approaches from traditional analysis types, and different methods are often used in conjunction with each other. These methods often blend quantitative and qualitative analysis. Choosing the correct method of gathering analyzing data can be one of the biggest hurdles for being able to measure ROI (Return on Investment) and understand how a community works. While writing this dissertation, the methodologies identified were frequently reviewed for ideas on how to improve the analysis.

Rational for Population Study

The literature review found in the preceding chapter provides insight into the lack general quantitative analysis regarding the demographic and geographic characteristics of Australian sport fans. Much of what is written about Australian sport fandom involves observations based on match attendance, attendance statistics, common historical tropes based on the experience of the authors as members of the sport community, or analysis of demographic data around the club's traditional geographic boundaries. There are no public population studies conducted by clubs, academics or newspapers identified by the author that provided insight into the composition of Australian sport fandom.[3] The methodology used in sources that offered a small picture was rarely spelled out. There is little reason to doubt the demographic composition of fans because accounts by different authors match and there are a variety of citations that talk about at general match population characteristics. The literature review revealed a lack of quantitative research in terms of population characteristics.

The research regarding fan demographics in the Australian sport online community is even sparser. The focus on research being done tends to focus on fan production, such as the transition from fanzines to online mailing lists and message boards. It is often not quantitative in nature. See *Passion play* by Matthew Klugman for an example of qualitative Internet driven research into sport fans.

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[3] Roy Morgan research does a yearly telephone survey looking at who Australians barrack for. They do not survey all Australians. Rather, they get a representative population. Beyond asking who they barrack for, Roy Morgan research also asks respondents about their purchasing habits. The results are not public; Roy Morgram charge a fee to access reports they generate. (Roy Morgan Research, 2009, July 19).

Given the hole in the research, there is a clear need to fill it to better understand the existing population of Australian sport fans who are increasingly using the Internet in order to facilitate their love of their chosen club. To do this, an appropriate methodology needs to be chosen. This chapter examined the major methodological approaches available for conducting research into social media and online populations. Most of these methods involve some form of interaction analysis or textual analysis, which in themselves, do not offer a clear method of understanding the demographic characteristics of a large group and its subcomponents.

Methodological Approach

The methodology used in this study will be a population/demographic study. To provide context for the findings, other methods will be incorporated as well. The exact method for conducting the population study will differ depending on the site being examined. Most of the methodology used in this study will explained in each chapter as relevant to that chapter.

Despite the specific methodologies for different sites, there are several broad methodologies that are used as a component of population study. The type is dependent on the type of fan being looked at.

1. Measuring the population of viewers,
2. Determining the size and characteristics of the population that identify with a club, athlete or league,
3. Measuring population shifts over time,
4. Utilizing Predictive Analysis to determine if the answers discovered using the three previous methods can predict the size and shape of Australian sport going into the future.

Measuring the population of viewers is generally very simple. A site is visited and a number is recorded. In the case of Alexa, website viewers would be determined by recording the rank of the site around the world and in Australia. If a site has enough visitors, Alexa may provide some demographic data about site viewers. Twitter viewership involves recording the total number of Tweets using specific keywords. For Wikipedia, viewers are determined utilizing Wikipedia article statistics provided at http://stats.grok.se/ . For YouTube, total viewers are determined by recording information about a video and the number of views for that video. This particular method can be used to determine the total interest in an athlete, club or league. No assumptions regarding classification of fan type can be made as looking at a webpage, tweeting about a topic or watching a video are largely passive activities that do not imply a person wants to be publicly identified as supporting the club. The point of using this methodology is to determine the reach for a league, club or athlete. The methodology used in each chapter will be explained in greater detail in the chapter.

Population size and characteristics involve determining what people want to be publicly connected to an athlete, club or league. On Facebook, this is determined using Facebook's advertisement page at http://www.facebook.com/ads/create/ . People who like fan pages or list a topic as an interest on their profile appear in those results. Different keywords and demographic characteristics are chosen and the results are then recorded. On LiveJournal, profile interests and community membership are used to determine who identifies with an athlete, club or league. Once that is determined, demographic information on their profile is recorded. On Twitter, profile information is recorded for people who follow selected accounts on the site. On

Yahoo!Groups, membership to a group dedicated to a club or athlete determines if a person identifies with them. Profile information is then pulled from the Yahoo!Group members list. On YouTube, this information comes from the profiles of those who upload video featuring an athlete or club. This methodology differs from viewers as the group being examined has taken active steps to express allegiance to the athlete, club or league by sharing that interest on public profiles.

Throughout the sections that required population size and characteristics information, there was a dependence on user listed locations to determine the geographic location of members of the Australian sport fan community. To provide consistency across all sites looked at, a list was developed that included user generated location, city, state and country. The city, state and country were determined based on intelligent guesswork. For example, as the focus of the research is Australia, if Melbourne was standing alone, the assumption was that the user meant Melbourne, Victoria, Australia and not Melbourne, Florida, United States. Spelling variations and nicknames were also used to determine location. For example, Brisvegas is a nickname for Brisbane, Queensland, Australia. Often patterns of cities were looked for assuming the standard pattern of city, state, country or country, state, city or city, country or city, state. To aid in processing location lists more quickly, when using an automated tool such as the one for Twitter, the user-generated list was supplemented with one created by the author. This list included all Australian cities listed using the patterns of postal code and city, state and city, country, and city, state, country. The completed list contains over 65,000 variants that were listed by the author or user created. This information can be found in Appendix 2: User locations to city, state, country.

Measuring population shifts over time is a combination measuring the population and determining the size and characteristics of the population that identify with a club, athlete or league. There is an additional step of gathering this data on multiple dates to check for historical patterns and determine if there are shifts in the composition of a fan community or for the audience interested in an athlete, club or league.

In conclusion, in order to provide framework for the data, the analysis will be done as a series of cases involving events that take place in Australian sport fandom. Most of these cases will involve the AFL or the NRL as they are the two largest professional sporting leagues in Australia. The primary methodology will be a population study looking at the characteristics of the population, the size of the population and how these change over time in response to events that take place in fandom. As the cases evolve, the results will likely become predictive analysis, answering the question: Do previous cases suggest patterns of predictable behavior in how fan populations respond to certain situations that will occur in the future?

Online Activity in the Wake of the Melbourne Storm Controversy

On April 22, 2010, the news of salary cap violations on the part of the Melbourne Storm broke online in such publications as the Fox Sports, on television including ABC news and on multiple social networks including Facebook and Twitter. By April 23, the news was available in various print publications including The Australian and the Sydney Morning Herald. During the news coverage, NRL fans learned that the team had been fined $1.8 million, stripped of two premierships and were not eligible to earn points towards 2010's premiership. ("Melbourne storm stripped," 2010) The team was being punished for salary cap violations over the previous five years, where the total cap violation in that period was $1.7 million with $400,000 of that total cap violation occurring in 2009. ("Melbourne storm stripped," 2010)

Early in the coverage of the Melbourne Storm, several issues were discussed including the impact this would have on the fan base for the team, the subsequent economic fallout for Storm and other clubs in the league, and if the players would try to leave the club or lower their performance level. The consequences that people feared have yet to bear out: The fan base for the Melbourne Storm has grown, attendance has not fallen, membership is up and players have not left the team and the team continues to win.

This chapter examines the online response to the Melbourne Storm controversy. Specifically, it looks at the interest patterns on several networks including blogger, LiveJournal and its clones and bebo, follow patterns on Twitter and Facebook, and activity levels smaller and niche sites on 43things, wikis and Yahoo!Groups. It will provide evidence the controversy has not eroded the online fan base for the team and has resulted in an increased profile for the team in ways that can have a net positive for the team and their sponsors.

Profile Interest

One way to quickly gage online interest for a team is to perform a population/demographic student checking the number of people who list a team as an interest on social networks that include that option. The level of interest on a network will, in general, increase over time. Including an interest is a passive activity that shows active allegiance. Most people complete their profiles and lists interests at the time they register on a service. They may update their interests once a year when they do an overhaul on their profile. Other factors may

result in an update of interests, most notably a desire to associate or disassociate with certain people and organizations. The latter generally requires a certain amount of rage and disillusionment and does not happen that often. For adding interests, it can require a certain degree of wanting to stand in solidarity with someone or thing in the face of perceived oppression. [4] Adding or removing an interest will generally require a large emotional response in people to motivate them to change their interests on social networks where an individual has not been active in the past six months. These conditions mean that numbers for interests are relatively stable or increase over time. A big shift downward is possible but unlikely.

Did the Melbourne Storm controversy result in people being motivated to update their interests to include or exclude the team? Yes and no, many people added them as an interest on Facebook but the numbers remained level across several other networks.

As of January 9, 2010, more than three months before the incident, 17,020 had listed the Melbourne Storm as an interest on Facebook. [5] By May 9, 2010, a little over two weeks after the incident, this number had increased to 41,240, or 24,220 new people. From January 9 to May 9, 2010, there was also an increase of roughly 120 fans within fifty miles of Hobart adding the team as an interest, going from less than 20 to 140. Canberra saw a similar increase in fans, going from 140 on January 9 to 1,020 by May 9, 2010, an increase of 880 new people listing the team as an interest. [6] For fans within fifty miles of Cranbourne, there was an increase of 5,540 fans going from 7,140 fans on January 9 to 12,580 fans on May 9, 2010. Some of this increase on Facebook can be possibly attributed to a change in Facebook in mid-April, where people were encouraged to add their interests as likes of fanpages and vice versa. (Albanesius, 2010) It cannot entirely explain the shift as the official Melbourne Storm page is a user page, not a fan page so the interest to liking will not be automatically converted. At the same time, the number of people listing the team as an interest is roughly ten times as many who follow the Storm's

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[4] An example of a group being mobilized to add an interest occurred on LiveJournal in May 2007. Members of the service were upset over the deletion of fandom based communities from the service and the subsequent actions by LiveJournal. There was a mass effort to get people to list "fandom counts" as an interest on user profiles in order to demonstrate to LiveJournal the size of the offended user community. Many people were motivated to update their accounts, some of which they had not used in years, to express their outrage.

[5] This number is based on data provided by http://www.facebook.com/ads/create/ where the country was limited to Australia, age was any, sex was all, interested in was all, relationship was all, and education was all.

[6] Facebook says there are 267,080 users within 50 miles of Canberra. The number of people listing the Melbourne Storm as an interest compromises only 0.4% of the total potential population whom could list the team as an interest. While this shift is significant in terms of total people, percentage of the total population is an insignificant increase. The percentage near Cranbourne of people listing the team as an interest as of May 9, 2010 is similar: 0.7% with 1,682,600 people from with in 50 miles of the city.

official Facebook profile, suggesting that interest listing is independent of following the official team presence.

In addition to the Melbourne Storm interest on Facebook, there have been two new interests related to the storm created in the wake of the controversy: "Shame On You Melbourne Storm" with fewer than twenty people listing it as an interest, and "Sucked In Melbourne Storm Haha" with 3,240 people listing it as an interest. The latter definitely connects to a Facebook fanpage with the same name,[7] which has 8,432 people who like it.

While Facebook saw an explosion in growth of people listing the team as an interest, other sites allowing interest listing on profiles remained stagnant or saw limited growth. This includes bebo,[8] where there has been no change as of April 28 and May 9 from 402 people that was originally recorded on March 18, 2010. Blogger saw some growth for the number of people listing the team as an interest. [9]As of January 18, 2010, four people had listed the team. By May 9, 2010, six people had listed them as an interest. As the time frame is wider than that of bebo, it might be possible to account for the increase as a pre-season boost, rather than in response to the controversy. Because of the big gap in time between data collection periods, it is impossible to attribute all growth to increased interest as a result of the salary cap controversy; some growth could have been a result of the start of the new season.

LiveJournal is a popular blogging site in Australia. LiveJournal's software is freely available so that people can create their blogging networks. In the LiveJournal community, these new sites are called clones. Popular clones include DeadJournal, Dreamwidth, blurty, JournalFen, InsaneJournal. During the first half of 2010, Alexa often ranked LiveJournal as a top 500 site in the country and top 100-site worldwide. The clones did not, as they tend to cater to smaller, more niche audiences of disaffected LiveJournal users. One of the features of LiveJournal is a profile page, where you can see interests that people list, who their friends are on the network, what communities they belong to, and their birthday and location if they chose to make it visible amongst other things.

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[7] The page can be found at http://www.facebook.com/pages/Sucked-in-Melbourne-Storm-HAHA/119988934680797 .

[8] Bebo numbers for the Melbourne Storm were determined by going to http://www.bebo.com/c/search? , selecting the "People" tab and searching for "Melbourne Storm".

[9] Blogger numbers are derived from the following profile search: http://www.blogger.com/profilefind.g?t=i&q=Melbourne%20Storm .

LiveJournal saw no growth in people listing the team as an interest[10] between January 10 and May 9, 2010. Of the 25 LiveJournal accounts listing the Melbourne Storm as an interest, only five had updated since the controversy broke. LiveJournal's clones including Dreamwidth, Blurty and DeadJournal[11] also saw no growth as of May 9. This contrasts to the Brisbane Broncos on LiveJournal, where one person removed the team as an interest during a similar period.[12] Dreamwidth had two users listing the team as an interest as of January 9, Blurty had one user as of January 9, and DeadJournal had one user as of December 23, 2009. None of the people on LiveJournal's clones who list the Storm as an interest have updated their journals since the controversy happened. The most recent updates occurred on Dreamwidth, taking place in early March 2010. The other account last updated in April 2009. The Blurty account last updated in November 2005 and the DeadJournal account last updated in January 2006.

Smaller networks are important to look at because they can provide insight into how minority or niche populations behave that could be representative of attitudes held offline groups. The niche population behavioral changes may not be picked up on larger sites such as Twitter and Facebook. A few of the smaller networks examined include BlackPlanet, Care2 and Gaia Online. BlackPlanet generally targets African Americans inside the United States, though there is a small community of Australian users on the site. There was one person who listed the NRL as an interest on the network as of February 15, 2010.[13] This has not changed as of May 9. Care2 is a social networked targeted at people who wish to make the world a better place and is marketed at social activists. As of March 20, 2010, no one had listed the Melbourne Storm as an interest.[14] This changed by May 9, when three people listed the team as an interest. Given the names, limited profiles and join dates, it is possible that these accounts are all tied to one

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[10] Melbourne Storm numbers for LiveJournal were derived from
http://www.livejournal.com/interests.bml?int=melbourne+storm .
[11] Melbourne Storm numbers for LiveJournal clones were derived from
http://www.dreamwidth.org/interests.bml?int=Melbourne%20Storm ,
http://www.blurty.com/interests.bml?int=Melbourne+Storm and
http://www.deadjournal.com/interests.bml?int=Melbourne+Storm . InsaneJournal, CrazyLife, inksome were also
checked. No one on these clones listed the Storm as an interest.
[12] Other teams on LiveJournal experienced zero change in terms of the number of people listing the team as an
interest in this period. This includes the Melbourne Victory who had 24 people listing them as an interest on
February 27 and May 10, 2010. It also includes the Melbourne Demons who had 26 people listing them as an
interest on February 25 and May 10, 2010.
[13] BlackPlanet numbers are derived from the following profile search:
http://www.blackplanet.com/user_search/index.html?interest_search_form_submit=1&gender_filter=&keywords=M
elbourne+Storm .

individual. Gaia Online is a small, niche network for role players. As of March 11, 2010, no one had listed the Melbourne Storm as an interest.[15] There is interest in the NRL on the network as people listed the Brisbane Lions, Canberra Raiders, Parramatta Eels and Sydney Roosters as interests. There has not been any change for any of these teams as of May 9. The limited growth and lack of pull back could suggest that larger interest in the NRL has not been diminished on smaller networks as a result of the controversy.

Wiki Activity

Wikis are, at their most basic, web sites where visitors can easily edit the content of the site. Sometimes, there are limits to who can edit put in place by the creator of a wiki. These include requiring users to register or confirm an e-mail before they edit, or to get their account approved by the admin before they can edit. Some wikis have policies when breaking news happen or an article gets trolled to lock down the article so only registered users can edit or wiki admins can edit. The culture of editing on specific wikis thus develops around the who can edit process as locking down wikis to prevent edits can affect the frequency an article is updated.

For comprehensive wiki articles, the ideal is to have to have editors who approach the topic from different perspectives, where there is inherent conflict in the content and perspective being presented. If this situation does not exist, an article can be high jacked by one or two editors who seek to push their own perspective. The more edits and people involved in contributing to the article, the less likely the article will be biased. This also makes vandalism less problematic as people are incentivized to quickly remove that material.

Wikis are a good tool for gauging interest in a particular topic over time as most wiki software keeps a record of all edits to a page. For some of the big wikis, like Wikipedia, data also exists for how many views an article has over a certain time period. This can help track more passive community interest in a topic.

Wikipedia's English language article about the Melbourne Storm is probably the most visited wiki article about the team and appears third in Google's search results for the team.

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[14] care2 numbers were derived from http://www.care2.com/find/site#q="Melbourne Storm" and tabulating the total people who had functional profiles after clicking on members in the right sidebar.
[15] On Gaia Online, the numbers for the Melbourne Storm were derived by searching http://www.gaiaonline.com/search/?type=users.interest&val=Melbourne+Storm . For other teams, the search was changed to include their name.

[16]The article, found at http://en.wikipedia.org/wiki/Melbourne_Storm , was created on May 23, 2004. As of May 9, 2010, the article had 1,732 total edits made to it. The controversy involving the Melbourne Storm broke on April 22, 2010. 1,471 of the edits were made prior to that. In the period between the article's creation and the day before the controversy broke, an average of .681 edits per day were made to the article. In the eighteen-day period since the controversy broke, an average of 14.5 edits per day were made to the article. The vast majority of these edits were made in the first three days, with 90 edits made on April 22, 56 edits made on April 23 and 69 edits made on April 24.

On April 24, in response to repeated vandalism, the article was semi-protected;[17] this meant that only registered users who had confirmed their e-mail could edit the article. The protection had the effect of reducing the total number of daily edits to the article. After that, peak editing days included April 26 and May 3 with seven edits, and April 25 and May 5 with six edits. There were zero edits on April 28, May 6, May 7 and May 9. The controversy certainly caused an increase in the number of edits. If the day that the controversy broke and the next two days are excluded, the average number of daily edits is 3.06 edits per day. This is still higher than the period prior to the controversy and the trend will probably continue at least until the end of the season.

The article views per day mirrors the total edits by day. Based on data provided by Henrick (2010, May 1 and May 9), there is a correlation of .904 between the total daily edits and the total daily page views. According to Henrick (2010, May 1) during April 2010, the article was viewed a total of 49,540 times. Of these views, 40,355 views were between April 22, when the story broke, and April 30. The peak day for visits was on April 22, when the article was viewed 14,800 times. The average page views between April 22 and April 30 was 4,482 views per day.   If this period is extended out to include data provided by Henrick (2010, May 9) for May 1 to May 8, the average views per day is 2,700. If the three days around when the controversy first broke are excluded, the average edits per day drops to 1,143. This stands in contrast to the period between April 1 and April 21 where the average page views per day was

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438. The above average page views trend appears to be continuing. There has not been a decrease in overall interest in the Melbourne Storm on English Wikipedia.

In addition to the English language article about the Melbourne Storm on Wikipedia, there are articles in two other languages: French and Italian. The views and edits to these articles can indicate the level of international interest in the controversy. As some Australian players go to France and Italy to play in local leagues when they retire, there is likely to be an audience for it as players could potentially be recruited away if money could be offered. The French language article, http://fr.wikipedia.org/wiki/Melbourne_Storm , was created on March 1, 2006. Since the controversy started on April 22 and May 8, there have been 35 total edits to the article. Unlike the English language article, total edits per day peaked on April 24, 2010 with 19 with the second highest editing day occurring on April 23 with 7. The average total edits per day during this period was 2.1. In April, prior to the controversy, the average edits per day was zero. Also unlike the English language article, it was not locked because of vandalism. According to Henrickhe (2010, May 1) peak views per day happened on April 23 and April 24 with 59. The next day with the greatest number of views in the period between April 22 and May 8 is May 8 with 34. The average viewed per day in the April 22 to May 8 period was 17.4 and the average viewed per day in April prior to the controversy was 3.4. The correlation between the total edits per day and views per day in the period between April 1 and May 8 is .7740.   The French Wikipedia article saw an increase that was proportionally bigger than the English article but the total views and edits were much smaller on the French article.

The Italian language Wikipedia article, http://it.wikipedia.org/wiki/Melbourne_Storm , was created on December 21, 2007. The article had two edits in 2008 and one in 2009. Since the controversy broke on April 22 and May 8, there have two edits to the article. These two edits are the only edits made during 2010. According to Henrickhe (2010, May 1) , the total number of article views from April 1 to April 21 was 30. According to Henrickhe (2010, May 8), the total number of page views per day was 58. The day with the most views was April 23, with 14 views. The next day with the most views was May 3, with 8 views. The Italian Wikipedia article saw an increase in the total number of edits and page views as a result of the controversy. It might have been larger but the Italian interest in the team is much smaller to start with than the French or English language communities.

Outside of Wikipedia, there are a few small wikis that focus on the NRL and Rugby League. These wikis generally lack detailed information on the daily total page views but still provide information on the editing history. One such wiki is the NRL Central Wiki that is hosted on Wikia. It has an article about the Melbourne Storm located at http://nrl.wikia.com/wiki/Melbourne_Storm. The article was created on August 13, 2009 and was last updated on October 10, 2009. It has not been updated since the controversy. The wiki the article is hosted has only had three non-bot edits in the past 30 days so the lack of updates is not surprising. A few other wikis have articles that mention the Melbourne Storm. Most of these are institutional wikis where article histories are not available or where content is posted by its creator and never intended to be edited by a wider audience. There does not appear to be a movement by wikis to create additional content in response to or to try to capitalize on interest in response to the controversy.

Wikipedia edits and pay views clearly indicate that there was interest in the team as a result of the controversy. The interest extended beyond the English speaking audience, and into the French and Italian language communities. While the Wikipedia community was activated, the more traditional fan community was not activated on less encyclopedic, more fansite type wikis found on Wikia.

Twitter

Twitter is a microblogging service. Users can post 140 character messages , called tweets, which are shared with anyone who chooses to follow them. Twitter is one of the most well known and popular social networks in Australia and the world. There is a large community of sport fans on the site. This community has grown as athletes and clubs created official accounts, started interacting with their fans and providing original content that could not be found elsewhere. One of the most famous athletes on the site is Shaq. One of the most popular Australian athletes on Twitter is Shane Warne. Their celebrity helps to further encourage the growth of sport fandom on the site.

There are two main ways to measure Twitter activity. The first is to keep track of the total followers an account has. The second way is to monitor the total number of daily tweets posted about a topic posted across the whole network and by specific accounts.

The Melbourne Storm have an official Twitter account at @MelbStormRLC . There is an unofficial Melbourne Storm Twitter account run by a fansite at @MelbourneStorm_ . As of March 9, 2010, the official account had 458 followers. This contrasts with @MelbourneStorm_ which had 605 followers as of March 8, 2010. By May 10, about nineteen days after the controversy broke, the official account had 1,037 followers and @ MelbourneStorm_ had 720 followers. That was an increase of 579 and 115 followers respectively. The situation has not hurt growth for either account and people are still interested in keeping up with the team and what they are doing.

When compared to the official Twitter accounts for the NRL, Gold Coast Titans, Manly Sea Eagles, North Queensland Cowboys, Parramatta Eels, Canberra Raiders, South Sydney Rabbitohs and New Zealand Warriors, the follower growth for the Melbourne Storm suggests a potential connection to the controversy creating additional interest or a fan base that has become much more interested in Twitter in a short period of time. (Table 1) The only account with a greater increase in total number of followers is the NRL, which picked up 942 followers, which could have picked up Storm fans and Melbournians who were looking to see how the league would respond. The Melbourne Storm saw a fifty-five percent increase in the new followers. The next closest team of the aforementioned in the same period was the Canberra Raiders who saw a forty-two percent increase. In this context, it reaffirms that additional interest in the team was likely generated by the controversy.

Table 1

Twitter Follower Counts by Official Club Accounts and Date

Team	Account	9-Mar-10	10-May-10	Difference	% increase
Melbourne Storm	MelbStormRLC	458	1,037	579	55.83%
Canberra Raiders	RaidersCanberra	202	349	147	42.12%
South Sydney Rabbitohs	SSFCRABBITOHS	761	1,139	378	33.19%
Parramatta Eels	parramatta_eels	618	780	162	20.77%
NRL	NRL	4,231	5,173	942	18.21%
Manly Sea Eagles	manlyseaeagles	888	1,073	185	17.24%
Gold Coast Titans	GCTitans	1,616	1,950	334	17.13%
New Zealand Warriors	thenzwarriors	434	507	73	14.40%
North Queensland	northqldcowboys	1,403	1,588	185	11.65%

Detailed statistics regarding the total number of references for the Melbourne Storm by day on Twitter are not available.   It makes it harder to determine the total daily volume of conversation involving the team in the days surrounding the news leaking about the salary cap violations. People were interested in the Melbourne Storm as the team was briefly trending on Twitter when the story broke. Manual counting can be done but Twitter search only goes back around one week What can be more easily tracked is the posting volume per day of specific accounts related to the Melbourne Storm to compare their activities before and after the controversy broke. In the case of the @MelbourneStorm_, the account does not update regularly with about twenty tweets made during the past year. Their last tweet was on March 24, 2010; they have not posted since the news broke. @MelbStormRLC has posted several tweets[18] since the controversy and has mentioned it. From April 22 to May 9, eighteen days after the story broke, the Storm have made eleven total tweets. Prior to that, the team had made thirteen tweets. The difference in tweet totals is inconsequential. Neither account made changes to their Twitter posting in response in to the controversy.

Searching through Twitter, it is very clear people are still tweeting about the team and, as of May 10, are tweeting about them at a comparatively higher rate than other teams in the league. One popular way of indicating a tweet is about a certain topic is to include a hashtag in front of a word. This makes the whole phrase easily searchable on Twitter. For example, a person who is tweeting about the Melbourne Storm may include #melbournestorm to indicate the tweet is about the team. There generally fewer of these tweets as a great many accounts on Twitter come directly from RSS feeds.[19] These feeds were not originally created for Twitter and are absent some of the cultural practices and do not use coding tools to help make finding posts easier. Thus, tweets tagged with a # are fewer and more readily countable in search. This allows for comparisons to be made between teams over a short period. For the period between May 3 and

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[18] It should be noted that the Melbourne Storm's official account is not "live tweeting." That is, a human being is not posting to the Twitter account. Instead, the Twitter account pulls the RSS feed from the Melbourne Storm's official website.

[19] The NRL's Twitter account contains many links provided through an RSS feed. Several newspapers also have RSS feeds that export to Twitter. This can really expand the sheer volume of non-hash tagged comments. The practice of adding RSS feeds to Twitter became much more possible as social media experts talked up the power of Twitter as a search engine for content exploration and as a marketing tool. The overabundance of this type of content can make finding pure sports fandom content from people who barrack for a team very difficult.

May 8, 2010, #melbournestorm beat out all the other teams that were sampled for most the most discussed NRL team. (Table 2)   There were twenty-one references for the team on May 5. This is sixteen more than #manlyseaeagles on the same date and the only other team with five or more tweets with a hashtag on a single day. The controversy can likely be seen as the cause for the increase in the number of tweets when compared to other teams in the league.

Table 2

Hashtagged Marked NRL Team Tweets

Team	Keywords	3-May-10	4-May-10	5-May-10	6-May-10	7-May-10	8-May-10
Brisbane Broncos	#brisbanebroncos	0	0	0	0	0	1
Canberra Raiders	#canberraraiders	0	0	0	0	0	1
Gold Coast Titans	#Gctitans, #goldcoasttitans	0	0	0	2	0	0
Manly Sea Eagles	#manlyseaeagles	0	0	5	0	0	0
Melbourne Storm	#melbournestorm	0	2	21	2	3	1
Newcastle Knights	#NewcastleKnights	0	0	0	0	0	0
North Queensland Cowboys	#NQCowboys, #NqldCowboys, #NorthQueenslandCowboys	0	0	0	0	0	0
Parramatta Eels	#ParramattaEels	0	0	0	0	0	0
Penrith Panthers	#PenrithPanthers	0	0	0	0	0	0
Sydney Roosters	#SydneyRoosters	1	0	0	0	0	0
Wests Tigers	#WestsTigers	0	0	0	0	1	0

The Melbourne Storm got a boost in the total number of Twitter followers as a result of the controversy. The total count was higher than other clubs in the league was. The team was also talked about more than other teams in the NRL. There clearly appears to have been a response by the Australian sport community on Twitter.

Facebook

Facebook is one of the largest social networks in Australia and it arguably has the largest population of Melbourne Storm fans online. Outside of interest monitoring, the easiest way to monitor the activities of fans is to examine the fan community's growth on official pages and groups, and activity levels on these groups.

The Melbourne Storm has an official user profile on Facebook. The profile is for their mascot, Storm Man. It has a limited profile view so only people who have friended the account can view posts and interact with content posted by Storm Man. When the profile was checked on April 6, 2010, the account had 3,203 friends. Checked again on April 28, the account had 4,154. On May 9, the account had 4,401 friends and on May 10, it had 4,494 friends. While the

total new friends for their account was fewer than other clubs such as the Brisbane Lions over the same period (Table 3), the team had the largest percentage increase in: 28.7% versus 13.5% for the next closest team, the North Queensland Cowboys.[20] The controversy did not cost the team any friends and resulted in a higher percentage gain when compared to other teams.   It has resulted in a net momentum gain that continues almost three weeks after the controversy first broke out.

Table 3

Facebook Fan Counts by Club and Date

Official Facebook account	6-Apr-10	10-May-10	Difference	% increase
Melbourne Storm	3,203	4,494	1,291	28.7%
North Queensland Cowboys	2,428	2,806	378	13.5%
Manly-Warringah Sea Eagles	14,895	17,044	2,149	12.6%
Wests Tigers	14,078	15,911	1,833	11.5%
Gold Coast Titans	18,032	20,204	2,172	10.8%
Sydney Roosters	12,204	13,570	1,366	10.1%
Newcastle Knights	12,766	13,774	1,008	7.3%
Cronulla-Sutherland Sharks	9,502	10,229	727	7.1%
Canberra Raiders	2,583	2,775	192	6.9%
Brisbane Lions	45,327	48,228	2,901	6.0%

Facebook fan pages are created by teams and by fans. The person who created the fan page can post to the wall, controls else who else can post to the wall, control the type of content posted to the fan page and create a unique landing page. Members of a fan page can comment on wall posts and indicate they like the post. There are many Melbourne Storm fans that have created fan pages and many more have joined, commented and liked posts made to these fan pages. A quick search on Facebook for fan pages dedicated to the team using the keywords "Melbourne Storm" results in over 500 pages about the team. By looking at a sample of the individual fan pages to check the daily posting volume of wall posts and the number of likes and comments to those posts, an idea of how the controversy effected fan interests can be determined.

For this, three fan pages were chosen.   These were the top three fan pages in search that were not created in response to the controversy. They are Melbourne Storm, Best team in NRL..

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[20] For comparison with a team in another league, the Hawthorn Hawk's official Fan Page found at http://www.facebook.com/Richmond.FC had 4,798 fans on March 25. By May 13, the Fan Page had 6,636. This was

Melbourne Storm ! and melbourne storm :).[21] The total posts per day by the person who runs the fan page, and comments and likes per post associated with the post for the day were recorded for the period between April 1 and May 10, 2010. (Table 4) When comparing the total posts in the period between April 1 and April 22, 2010 to the period between April 23 to May 10, two of the three fan pages had more posts made by the maintainers before the controversy. See Figure 1. Two of the three groups saw an increase in the total comments made after the controversy.   For Melbourne Storm, a fan page with over 40,000 members, the increase was massive going from 54 comments to 803 comments. The increase for Best team in NRL.. Melbourne Storm !, a group with 281 members as of May 10, was much smaller. It went from 252 to 257 comments. For all three groups, there was an increase in the number of likes after the controversy took place. While posting levels by fan page maintainers may not have increased, the level of engagement and interest in the team for the fan population did. The controversy has created a climate where fans are more engaged with posts.

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a growth of 27% over that period.
[21] The urls for the Fan Pages are http://www.facebook.com/pages/Melbourne-Australia/Melbourne-Storm/21222300614 , http://www.facebook.com/pages/Best-team-in-NRL-Melbourne-Storm-/43558529287 and http://www.facebook.com/pages/melbourne-storm-/234035998634 respectively.

Figure 1. Facebook comments, likes, posts from April 1 to May 10, 2010 for the Melbourne Storm.
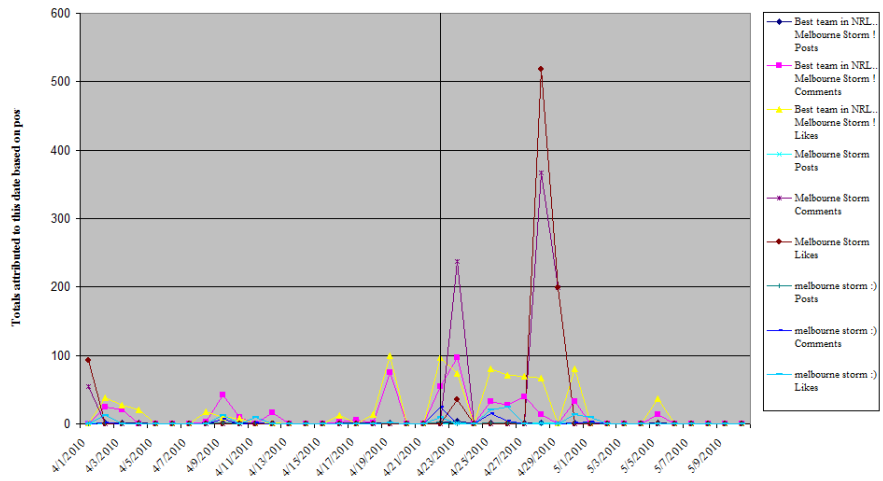
Mailing Lists

During much of the 1990s, mailing lists were one of the most popular tools for fans to use in order to communicate with each other. The creation of mailing lists became much easier when sites like egroups, coollists, topica, Yahoo!Groups and Google groups were created. They largely automated the process of creating mailing lists, provided web based archives and removed barriers of having to understand majordomo syntax in order to join a list. Mailing lists are relevant to this analysis because they are another component of online fandom. It attracts a certain subset of the fan community that is worth noting. It just used to be a lot more important in Australia. It is valid to ask if this particular community was pushed out of inactivity as a result of the controversy. There are Australian sport fandoms that are active on Yahoo!Groups and continue to be active.

Australian sports fans actively used these services to participate in their team's fandom. Some leagues and teams were more popular than other leagues and teams. Amongst the fan communities utilizing mailing lists were Melbourne Storm fans. Most of the lists dedicated to team were on Yahoo!Groups, where there are currently eight lists. These eight lists include melbournestorm2, melbournestormrugbyleague, melbournestormsupportersclub, Storm_Squad,

StormSupporters, MSSC-Storm-Mailouts and melbourne_storm_supporters.[22] Many of these lists are no longer active. There are a variety of reasons for this including absent list owners, large volumes of spam content posted on list, people switching to different services in order to express their fondness for the team or fans losing interest in a team. If spam content is not counted in total posting volume by month, [23]the peak posting month was February 2001 with 59 total posts across all eight lists. January 2001 had the next highest posting volume by month with 50 posts. Given the always small and inactive community, it is not surprising that there have been zero posts on these lists since the controversy broke out. These lists have also seen zero growth in membership since their totals were last checked on February 20, 2010. The controversy had no effect on the Storm's mailing list community.

43things

According to Robot Co-op (2010), 43things "is the world's largest goal-setting community." Members of the site set goals for themselves that are published on their profiles and on lists of others who share the same goal. Members are also encouraged to blog about their efforts in trying to complete their goals. Other members are encouraged to cheer people on as they work to complete a goal. When a goal has been completed, people change the goal status to "I did this" and it appears as completed on their profile. This site is relatively popular; according to Alexa Internet, Inc. (2010), the site is ranked the 2,549[th] most popular website in Australia. While this site is small, it provides a different perspective on the whole online Australian sport population. Just because it is not that active does not mean it is not worth benchmarking and examining.

There are a number of people who have set Australia related sports goals on 43thing. This includes playing for certain clubs to attending the finals to seeing the team they barrack for play. On April 1, 2010, the site was searched for any goals that connected to the Melbourne Storm. Only one goal related to the Melbourne Storm was found. It is "Go to a Melbourne

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[22] A directory of five of these lists can be found at
http://au.dir.groups.yahoo.com/dir/Recreation___Sport/Sport/Rugby/Rugby_League/Leagues/National_Rugby_Leag ue_%28NRL%29/Teams/Melbourne_Storm . Two teams can be found in
http://sports.groups.yahoo.com/dir/Recreation___Sports/Sports/Rugby/Rugby_League . One team can be found in http://au.groups.yahoo.com/dir/Recreation___Sport/Sport .
[23] In order to determine when legitimate content ended and spam content began, each list's archive was looked at. In some cases, because archives were only available to members, the researcher had to join the group before gaining access to the archives.

Storm Game."[24] Two people, erynne and mmcpharlane, had listed this as a goal they were working towards completing. When checked again on May 10, no one had added any additional goals related to the Melbourne Storm. No movement had been made towards completing the existing goal: Both individuals still listed themselves as working towards it and neither had updated their blog to indicate they were any closer to accomplishing this goal. The controversy has not had any measurable impact on people's goal setting and efforts towards accomplishing their goals as they pertain to the Melbourne Storm.

Conclusion

This chapter examined the online response to the Melbourne Storm controversy. Specifically, it looked at the interest patterns on several networks, follow patterns on Twitter and Facebook, and activity levels on 43things, wikis and Yahoo!Groups. The data has shown the controversy involving the Melbourne Storm's salary cap violations and the subsequent punishment of rewarding them zero points for the season has not resulted in a loss of people interested in the team or resulted in a drop in activity level on the part of fans and the controversy has not eroded the online fan base for the team and has resulted in an increased profile for the team in ways that can have a net positive for the team and their sponsors.

In addition it has shown that across smaller and less popular services and web sites, there has been no behavior change; the controversy has had a null effect in that no one removed content or interests, nor created content and added interests. For larger sites such as Facebook, Twitter and Wikipedia, there has been a gain in followers, viewers and interactions. Eighteen days out from the initial incident, a long tail increase in views and interactions exists when compared to the period prior to the controversy. While some of the initial burst of activity and interest could be a consequence of negativity publicity, the long tail interest two to three weeks out is much harder to attribute to solely to wanting to watch a controversy for the sake of entertainment. The results are irrelevant in the context of more real world indicators like match attendance, television viewers, radio listeners and product sales. The Internet community is an expression of fandom.

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[24] The page for the goal can be found at http://www.43things.com/things/view/2535563/go-to-amelbourne-storm-game .

Clubs should take away from this a call to action to think of ways to convert controversy attained fans into fans who watch the games live, on television, listen on the radio and buy merchandise. If a club can use that elevated interest and maintain it at higher levels, the club should be able to leverage to increase club membership and sponsorship deals, especially as they apply to their online presence, because they have successfully used the controversy to grow their fan base. The behaviors of fans demonstrate that have been given an incentive to express their loyalty and solidarity with the team.

Google, the Melbourne Demons, Port Adelaide Power and That Game in Darwin

On May 22, 2010, the Melbourne Demons played the Port Adelaide Power in Darwin. This game was one of two AFL games being held in Darwin during the 2010 season. The reason to play these games is to help develop the AFL fan community in the territory. The team chosen to play in Darwin by the AFL as the home side is done so because they have poor home attendance. These games are noteworthy in that they were played far away from the traditional Melbourne home of Australian Rules football. [25] They were also played far away from a population base that would be needed to sustain a team of its own. [26] Given these two factors, questions worth asking are "What are the AFL club loyalties in the Northern Territory for the two teams involved in the May 22 game? Where are fans located in the Northern Territory? What is the size and interest level in a particular town? Which team is better for a Northern Territory game to monetize for in the lead up to this game?" The answers do not appear obvious, as neither team is located near Darwin.

Given the small population in the Northern Territory and the limited Internet access, [27] it is very hard to locate people who claim to live in the territory online. This is a problem if someone wants to engage this population in order to identify online fanbases. The issue of a small population is aggravated because people online are likely to list themselves as residing or belonging to the next biggest city even if they do not actually reside there. This is highly problematic when you are looking to see if there are pockets of team support in Darwin's suburbs and the Northern Territory's rural areas. People often want to give people a general idea of where they reside: Many international web viewers may have heard of Perth but may not have heard of Freemantle, or may have heard of Melbourne but do not know where Geelong is. There are ways to circumvent those patterns out by removing the major cities, like Melbourne, where the core is very tiny. When dealing with a tiny population that has limited Internet access, that is harder to do.

The challenges of population and city identification mean that sites such as Facebook,[28] LiveJournal and its clones, bebo, blogger, orkut, 43things, LinkedIn, Twitter and care2 are of limited usage. Users are unlikely to be using these networks and, if they are, they are likely to list

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[25] The nearest AFL team to Darwin is based in Adelaide, over 3,000 km away.

[26] The population of Darwin is 124,800. (Darwin, Northern Territory, 2010, December 4) The population for the whole of the Northern Territory is 227,025. (Northern Territory, 2010, December 4)

[27] The government has been working on improving Internet access in the Northern Territory. The emphasis appears to have been on providing access through public libraries. (Kirlew, 2010, October 26) Library based access means that people do not have continual access that they may have at home. This issue is coupled with the potential privacy issues of accessing the Internet from a public Internet terminal. These two factors probably result in decreased usage of social networks outside the main population centers in the Northern Territory.

[28] Theoretically Facebook data is available from Facebook's advertiser page for the number of people who list an interest and live within a certain distance of a city. There are just a few limitations. First, not every location in the Northern Territory is listed. Second, since Facebook forces users to like their interests, things have been in a state of flux; zeros have been discovered where there should not be zeros based on the number of people who like a fan page that Facebook uses and its default for a search of that interest.

their location as one of the three regional centers in the territory, even if they are hundreds of kilometers from them.

An example of this geographic data limitation involves the Adelaide Crows fans who were tracked across six different social networks including LiveJournal, bebo, blogger, care 2, 43 Things and Orkut. There was a total population of seventy-five fans identified. Of these seventy-five, only one lists themselves as residing in the Northern Territory. This shows how difficult it is to use traditional social media sites to determine regional patterns of sport fandom in the Northern Territory.

Another solution to determining regional Northern Territory interest in the Melbourne Demons and the Port Adelaide Power involves using Google.com.au, and searching for the team's name and the city. [29] A list of towns in the Northern Territory was created from a list on Wikipedia at http://en.wikipedia.org/wiki/List_of_postcodes_in_the_Northern_Territory . The list of cities was 114 long after removing cities with multiple postal codes. City names, when they included more than one word, were put in quotes. Team names were put in quotes. An example search would be "Melbourne Demons" "Alice Springs".

Partway through, problems began to arise. . First, there are duplicate city names. This is an issue for Palmerston, which is a city in New Zealand, a city in the Northern Territory and a suburb in the Australian Capital Territory. Second, some cities have common names or share names with people. This is the case for Gray, Northern Territory. It is the case for another city that shares a name of a player for a different AFL team. This issue might be correctable by adding a "Northern Territory" or an NT to the search phrase, which was done for Palmerston. The results were not always consistent because Google did not always realize NT meant "Northern Territory" and there were three wildly different search results in some cases. It becomes just easier to ignore and accept that search results are going to be faulty. The third major issue was Google spelling. This issue can be less obvious unless you actually look at the results. Moil is a city in the Northern Territory. Google helpfully wanted to correct the spelling by pulling up results featuring the word Mobile. Moil and Mobile, and Karama and Karma are not the same thing. Google, if you don't specifically tell it that these are not the same thing, usually treats them as if they are. However, when occurrences of this were discovered, it was corrected by putting a + in front of it to force Google to only pull up results with that exactly spelling. Outside those two examples, others includes did this for Katherine, Elliott, Farrar, Gray, Gunn, Malak, Millner, Mitchell, The Gardens, and The Narrows. Making these changes helped insure slightly more relevance and didn't create the problems of what is the preferential way to indicate that a city is in the Northern Territory. The results of these searches are available in Appendix 2 - Northern Territory Google Results.

To determine which team was more popular, a point was given per city where the search phrase for a team returned more results. Using this method, the Demons easily win the day with

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[29] There are other ways to have gone about doing this besides Google, including searching online databases for references to a team. There are just limitations there in that not every location has its own newspaper and it excludes a lot of fan created references on sites likes bebo and blogger where the audience may be different than the ones that newspapers market to. Another option might have included geolocation based search. At the time of the writing, a good search that is based in Australia could not be found. The ones that do tend to focus on Twitter and Foursquare. AFL fandom is located more than just there.

93 points to the Power's 15 and with six cities being tied. If all search results are added up, [30] the Demons also win with 114,368 total pages compared to the Power's 64,191. The ratio to cities and total pages is not particularly close. The Power are more popular in 13 percent of cities and representing 35 percent of total pages.

The top city for Port Adelaide Power is represented by the following search: "Port Adelaide Power" Driver NT. Driver is a popular common word so it is highly probable that this is not accurate, even with the attempt to correct for the Northern Territory by adding NT to the search. [31] The next city that "prefers" the Power based on total search results is Parap, with 839 results. For the Melbourne Demons, "Melbourne Demons" +Mitchell was the top city. This is another problematic place as this is a common surname. The next most popular city based on total search results for the Melbourne Demons is Yuendumu with 12,200 page results. It is interesting that Darwin and Alice Springs do not appear at the top of the list, even when we exclude Driver and Mitchell. When the Demons and Power lists are combined and sorted descending by pages per city, Darwin doesn't appear until the 12th spot for the Demons and 18th sport for the Power. Alice Spring doesn't appear until 32 for the Demons and 39th position for the Power. The biggest population bases in the territory are not generating the most references for either team.

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[30] Each total search results by city column was derived by adding together for this result. This search result may not be indicative of the total number of web pages about the teams in the AFL as some of the pages may reference multiple towns or mention both teams.

[31] The methodology problems are a recurring problem when doing any sort of social media or web based research with the intent to create data sets. It is why the author is generally deeply skeptical of any numbers she sees unless someone clearly states their methodology, explains the problems and provides their data to give benchmarks. This methodology issue also probably explains why much of the research done in regards to social media involves case studies and qualitative style research: The data is problematic to attain.
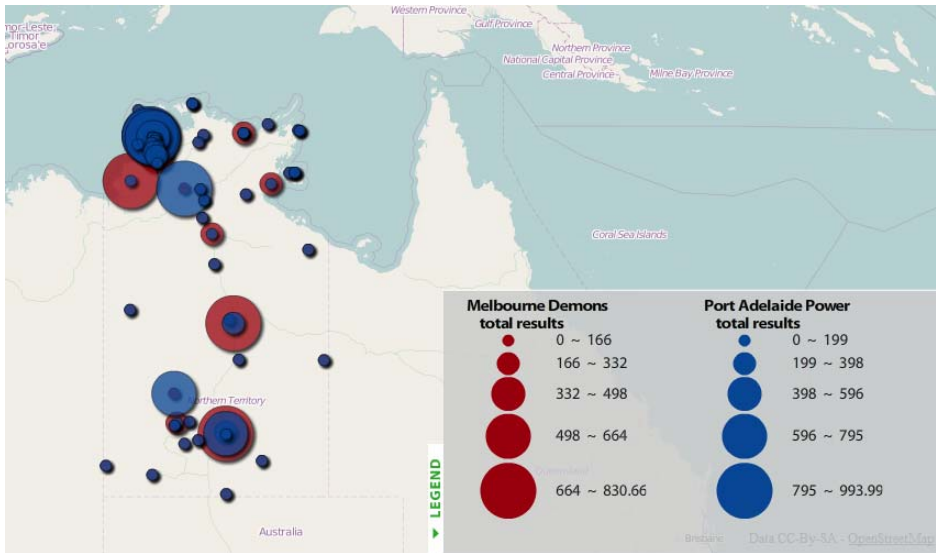
Figure 2. Map of Google.com.au search result totals by AFL team and city.

Another way to visualize these results is to put them on a map. This was done using Geocommons and the results can be found in Figure 1. Port Adelaide appears to have a greater presence in the Torres Strait Islands. They also appear to be the dominant team in the Darwin area. The Melbourne Demons look more popular in areas near Alice Springs and Tennant Creek.

Explanations for why regional centers do not rank higher are difficult. Are all the cities ahead of them problematic with their names where steps were not taken to correct for that? Or is it possible that more rural fans are reliant on the Internet to express their fannishness for a team? Are there players from these rural communities playing in the AFL so local news sources give additional attention to players that they would not get in more urban areas? It is possible. It could be fans in more rural areas have more interest in the game, or some other reason not yet identified. The real reason is probably a complex combination of all the questions asked above.

Based on Google data, the Melbourne Demons are the more popular team of the two in the Northern Territory. Much of their audience is found around the major cities of Darwin and Alice Springs. In the lead up to the game, if you were trying to monetize one or the other, focusing on the Melbourne Demons might have better spent money.

The Impact of Jason Akermanis's Comments on the Western Bulldogs Online Fan base

On May 20, the Jason Akermanis says gay AFL players should stay in the closet backlash started in response to his column in the *Herald Sun*. (Akermanis, 2010) The media covered the story on television, in print and online. AFL fans discussed it on Twitter, created protest pages on Facebook, wiki articles were updated and a lot of people posted about it on the blogosphere. Management within the AFL and the Western Bulldogs felt compelled to speak out against Jason's comments. People talked of reporting Jason to the Victorian Human Rights and Equal Opportunity commission.

From a marketing perspective, Akermanis's opinions were perceived as damaging to the sport and league. The Western Bulldogs have an association with VicHealth and the Gay and Lesbian Health Association and Akermanis's comments seemed to contradict and undermine that support. (Walsh, 2010) The possibility of negative backlash may not have been apparent to the team prior to the article being published as, according to the *Sydney Star Observer*, team management signed off on the column. (Noonan, 2010) The size of the backlash and efforts to try to address it can probably be best evidenced by the suspension of Akermanis from the playing field and talking to the media.

Unlike the Melbourne Storm controversy, Akermanis's comments do not give the appearance of having activated his personal fan base and the fan base for the Western Bulldogs. There were no media reports of pastors speaking out on Akermanis's behalf. His teammates did not support him. The media did not dismiss his comments, excusing them because of his otherwise excellent on field performance. Perhaps had Akermanis made these comments in a different country, his comments would have had the potential to be less damaging to the club he played for. There is also a general view, at least in the United States, that sport teams are run by conservatives who maintain traditional family values. The assumption is often that sport fans reflect those same values; those that do not chose to follow other popular culture products like movies, television and video games. If the fan base for the AFL had actually reflected those underlying assumptions, the situation could have been much more easily ignored and have had the potential to be much less damaging.

The question is how damaging was the situation for the Western Bulldogs online? How can this be measured? Did the team lose the potential to grow their audience when compared to other AFL teams as a result of Akermanis's comments? Who supported Jason and who did not?

The measurement question is probably the most difficult one to address. Unlike the Melbourne Storm situation, this does not involve a team: The situation involves a specific player. Liking or adding the team as an interest cannot necessarily be seen as supporting or condemning Jason Akermanis. People could like the team because they suspended Akermanis for his comments. It is much harder to attribute page views to Akermanis and/or Western Bulldogs supporters who want to find out the situation in order to justify or reaffirm their allegiances. Almost none of the media coverage and very few people on Twitter indicated that the fan base was activated in defense of the team and Akermanis. Thus, a default assumption for any data is that publicity of the situation will activate a larger audience to be against both the club and Akermanis unless contextual evidence suggests otherwise.

Given the measurement difficulties, this paper will nonetheless try to determine how the online community responded to the Jason Akermanis situation and how this reflects back on the Western Bulldogs. This will be done by looking at Facebook, Wikipedia, Twitter, bebo, Alexa and a few selected sites.

Facebook

  Facebook is the most popular social network in Australia. Facebook's advertising data says that there are over nine million users from Australia using the site. [32] The following of some Australian based sport teams and leagues are quite large. The official fan pages for the Queensland Maroons, Brisbane Broncos, Socceroos, AFL and Essendon Bombers all have more than 50,000 fans.

  Given the large number of Australians using the network, the official presence of so many clubs and the amount of media attention paid to the service, a response on network was inevitable. There are several Facebook metrics that can be looked at to ascertain how the controversy effected the Western Bulldogs and Jason Akermanis. The first way is to compare the relative growth of the Western Bulldogs' total fans on their fan page compared to other teams during the same page. A second way is to examine comparative growth of groups that supported Akermanis versus those that condemned his views. The third way is to compare demographic and geographic distinctions between fans that support Akermanis, people that condemned Akermanis's views and Western Bulldogs fans.

  If the Jason Akermanis controversy hurt the Western Bulldogs on Facebook, it should have resulted in a loss or slower growth in terms of total and percentage of new fans on Facebook when compared to other teams. Data was collected between March 25 and June 10, 2010 regarding the size of the official Facebook fan pages for several AFL teams. [33]

Table 4
Total Fans of Official AFL Club Facebook Fan Pages

Team	25-	28-	3-	12-	26-	30-	1-	4-	5-	7-	10-

<div align="center">Footnotes</div>

[32] Facebook's advertising page is located at http://www.facebook.com/ads/create/ . As of June 11, 2010, it said that there were 9,300,240 people from Australia.
[33] The urls for the fan pages in this sample are http://www.facebook.com/adelaidecrows, http://www.facebook.com/AFL, http://www.facebook.com/pages/Brisbane-Lions/21301860172, http://www.facebook.com/OfficialCarltonFC, http://www.facebook.com/collingwoodfc, http://www.facebook.com/Essendon, http://www.facebook.com/fremantlefootballclub, http://www.facebook.com/GeelongCatsInsider, http://www.facebook.com/GoldCoastFC, http://www.facebook.com/teamgws, http://www.facebook.com/hawthornfc, http://www.facebook.com/MELBOURNEfc, http://www.facebook.com/northkangaroos, http://www.facebook.com/portadelaidefootballclub, http://www.facebook.com/Richmond.FC, http://www.facebook.com/stkfc, http://www.facebook.com/sydneyswans, and http://www.facebook.com/pages/West-Coast-Eagles/38862387223, http://www.facebook.com/Western.Bulldogs
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	Mar-10	Mar-10	May-10	May-10	May-10	May-10	Jun-10	Jun-10	Jun-10	Jun-10	Jun-10
Adelaide Crows	39,546		41,246			42,119			42,341		42,654
AFL	88,546		99,722								115,990
Brisbane Lions										13,489	13,528
Carlton Blues	12,693		14,932			18,554					20,117
Collingwood Magpies	26,314		31,366			35,516			35,977		36,326
Essendon Bombers	44,511		52,126			54,556			54,960		55,289
Fremantle Dockers	12,939		17,513			19,244			19,572		19,706
Geelong Cats	1,632		4,745			5,264					5,402
Gold Coast Football Club	1,720					1,720	2,995		3,124		3,174
Greater Western Sydney									1,044	1,055	1,105
Hawthorn Hawks	14,342		16,129			17,996					18,931
Melbourne Demons	3,159		6,278			6,995					7,117
North Melbourne Kangaroos	9,866	10,042	11,678			12,682					12,937
Port Adelaide Power	7,892		10,815			11,906					12,041
Richmond Tigers	4,798		6,626	7,196		7,805			7,994		8,091
St Kilda Saints	21,310		25,106		25,933	7,805		26,207	26,209		26,282
Sydney Swans										22,518	22,602
West Coast Eagles	33,501		36,559			38,541			38,968		39,418
Western Bulldogs			4,930			6,383	6,441		6,596		6,742

In the period between May 3 to May 30, the Western Bulldogs were in the middle of the teams for number of new fans with 1,453. This was almost three times as many as the bottom ranked Geelong Cats who had 519 new fans in that period and a third of new fans of the top ranked Collingwood Magpies who saw an increase of 4,150 fans. An argument could be made that period had too much time preceding it that could have lessened any potential loss with earlier gains. Thus comparing the period between May 30 and June 5 migh be more helpful as Akermanis was suspended on June 1. That new brought additional attention to the column that led to his suspension. During this period, the Western Bulldogs ranked seven out of nine for total new fans with 213 people liking them. This number may not be that accurate as not all teams that had performed worse than them in the previous period were included in this sample. The better comparison could be between May 3 and June 10, 2010 as it is larger and includes the initial controversy and the suspension use. That data set is also more complete. During this longer period, the Western Bulldogs finish in the middle with a gain of 1,812 fans. This compares to the Carlton Blues who on top with 5,185 new fans and the Geelong Cats who are on the bottom with 657 new fans. All of this supports the idea that, when compared to other team's growth, the Western Bulldogs were not hurt by the controversy.

Another way of looking at this data is to compare percentage growth of new followers. This number compares a club's ability to get new followers relative to their own performance as opposed to all AFL fans. Using this number, the Western Bulldogs saw the most growth in the period between May 3 and May 30 with a 22.8% increase. The next highest performing club was the Carlton Blues with 19.5%. The Western Bulldogs growth is impressive when compared to the Essendon Bombers who had 4.5% growth, the St. Kilda Saints who had 3.7% and the Adelaide Crows who had 2.1% growth. In the period between May 30 and June 5, the Western Bulldogs were second only to the Gold Coast Football Club: The Bulldogs had a 3.2% increase in new fans compared to the Gold Coast's 44.9%. The Western Bulldogs saw .8% more growth to the next highest team, the Richmond Tigers who had 2.4%. The Bulldogs percentage growth was roughly 6.4 times as much as the bottom teams, Essendon, St. Kilda and Adelaide who saw between .5 and .7% growth. For the period between June 5 and June 10, the Western Bulldogs finished second for highest percentage growth. The only team that outperformed them was Greater Western Sydney, another expansion team who had just made a lot of news with their signing of Israel Folau. With the exception of the Gold Coast, all teams had one or more percent

less growth than the Western Bulldogs. For the overall period between May 3 and June 10, the Western Bulldogs finished on top with 26.9%, 1.1% more growth than the number two team of Carlton and well above that of the last place performer Adelaide who had 3.3% growth in fans on Facebook. Given these numbers where the Bulldogs led in percentage growth on Facebook, it is hard to argue that the Jason Akermanis controversy hurt their Facebook strategy. It might be argued that the team was able to effectively capitalize on Akermanis related traffic on Facebook and their website to convert some fringe fans into Facebook fans.

Beyond the total fans of official pages, there are other interesting metrics that can explain the fan response to the Jason Akermanis controversy. One involves the creation and growth of Facebook groups and fan pages: Facebook easily allows users to create them and they do. Some of the fastest member growing Facebook groups and fan pages are created to get media attention for an issue, to help people spread the word about breaking news and share knowledge, to express disgust with actions taken by institutions or to express allegiance with a person or organization in response to negative publicity. Once the catalyst for the event is out of the news, many of these groups face stagnant growth and become irrelevant having been abandoned by their creators.

While it is not possible to date the creation of a group, the Akermanis controversy likely resulted in the creation of a number of fan pages and groups. These groups have names such as Jason Akermanis, you are a MORON!, Jason Akermanis: Homophobe and complete fuckwit!, Jason Akermanis is a homophobe., Jason Akermanis is a dick, Jason Akermanis Is Totally Gay, Only Homophobes think Jason Akermanis is a homophobe!, Jason Akermanis should be locked and gagged in a closet!, Don't you hate it when you're in the shower and Jason Akermanis comes in?, Jason Akermanis is a homophobe., Jason Akermanis is a F*ckwit, Jason Akermanis Can't Drive A Race Car, JASON AKERMANIS'S "IQ OF A PLANT", Jason Akermanis slept with me, Jason Akermanis is a coward, and for people who wanna see Jason Akermanis shove his head up his own Ass. There are a number of pro or neutral Akermanis groups on Facebook. They likely predate the controversy. They include groups named Jason Akermanis, Jason Akermanis Biography, Jason Akermanis Autobiography, The Battle Within by Jason Akermanis, jason akermanis is amazing!, The Jason Akermanis Appreciation Society, Jason Akermanis is a

legend, Jason Akermanis handstand appreciation society, and Jason Akermanis for Brownlow 2008. [34]

Some of the anti-Akermanis groups saw relatively impressive levels of growth. Jason Akermanis is a homophobe. is one of the most popular anti groups. It had 126 members on May 20 and had 547 members by May 24. Membership levels stabilized and it had only 627 members by June 12. Don't you hate it when you're in the shower and Jason Akermanis comes in? had 171 fans as of May 22. By May 30, it had 482. Most of the other anti-Jason groups sampled had smaller total populations and smaller membership increases. Some of the anti groups were deleted during this period. One such group was Jason Akermanis Is Totally Gay, which had one member when checked on May 20 and was deleted some time between then and June 10. Jason Akermanis: Homophobe and complete fuckwit! had 118 members on May 20 before being removed from Facebook by May 22.

The pro and neutral Akermanis groups in the sample were all smaller than the two largest anti-Akermanis groups as of June 12, 2010. A pro-Akermanis group ranked third for the total

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[34] The following is a complete list of URLs for Jason Akermanis related Facebook fan pages and groups that the author looked at: http://www.facebook.com/pages/Jason-Akermanis/107712129252191, http://www.facebook.com/pages/Jason-Akermanis/105738419448658, http://www.facebook.com/pages/Jason-Akermanis/373300971735, http://www.facebook.com/pages/Jason-Akermanis/376142636801, http://www.facebook.com/pages/Jason-Akermanis/301148780410, http://www.facebook.com/pages/Jason-Akermanis-Biography/106142142741832, http://www.facebook.com/pages/Jason-Akermanis-Autobiography/106446502709782, http://www.facebook.com/pages/Jason-Akermanis-you-are-a-MORON/109009685810123, http://www.facebook.com/pages/The-Battle-Within-by-Jason-Akermanis/110570445624262, http://www.facebook.com/pages/Jason-Akermanis-Homophobe-and-complete-fuckwit/105067262872425, http://www.facebook.com/group.php?gid=124872100865630, http://www.facebook.com/group.php?gid=118380594866779, http://www.facebook.com/group.php?gid=118537708183794, http://www.facebook.com/group.php?gid=118573961511057, http://www.facebook.com/group.php?gid=344061166761, http://www.facebook.com/group.php?gid=20900401086, http://www.facebook.com/group.php?gid=10308061363, http://www.facebook.com/group.php?gid=19647855868, http://www.facebook.com/group.php?gid=128825660465576, http://www.facebook.com/group.php?gid=16522463154, http://www.facebook.com/group.php?gid=109095775801131, http://www.facebook.com/group.php?gid=18564050741, http://www.facebook.com/group.php?gid=21877556009, http://www.facebook.com/group.php?gid=123972501889, http://www.facebook.com/group.php?gid=107444465957654, http://www.facebook.com/group.php?gid=38642639632, http://www.facebook.com/pages/Jason-Akermanis-slept-with-me/115552025153010, http://www.facebook.com/pages/Jason-Akermanis-is-an-idiot/125326927493237, http://www.facebook.com/pages/Jason-Akermanis-is-a-coward/105337389512086, and http://www.facebook.com/pages/Dont-you-hate-it-when-youre-in-the-shower-and-Jason-Akermanis-comes-in/124465230905493 .

number of fans. In comparison to the anti-Akermanis groups, the growth rate was much smaller. The Jason Akermanis Appreciation Society went from 454 members on May 20 to 469 on June 12. Jason Akermanis is a legend saw no growth during that period, continuing to have 201 total members. Jason Akermanis handstand appreciation society saw a growth of one, going from 88 to 89 during that period. Jason Akermanis at http://www.facebook.com/pages/Jason-Akermanis/107712129252191 is the group that probably saw the biggest percentage increase of clearly established fan pages. It went from 56 fans on May 20 to 165 on June 12. Jason Akermanis at http://www.facebook.com/pages/Jason-Akermanis/301148780410 went from 307 fans on May 20 to 382 on June 12. Growth levels for the pro and neutral groups are level compared to the anti groups. The data suggests that people did not respond to the Akermanis controversy by rushing out to assert their support of him and his views by joining communities about him on Facebook. The data also suggests that the anti-sentiment regarding Akermanis was not sustained for a long period of time and that people were not scared to affiliate with Akermanis, despite people's negative attitudes towards him.

Another way of evaluating the effect of the Akermanis controversy on the Western Bulldogs is to compare the characteristics of Western Bulldog fans, Akermanis supporters and Akermanis detractors. Facebook shows the network membership for people who belong to many groups and fan pages, which allows such a comparison to take place. On June 13, 2010, a list of all the members of the Western Bulldogs official fan page was pulled. While Facebook shows the page as having 6,819 fans, it only provided names and network membership for 3,343 people. Of these fans, 188 or 5.6% belonged to a network. A membership list for Jason Akermanis is a homophobe.[35] was also pulled. As of June 13, 2010, the group had 627 members, of which Facebook lists 428. Of the 428, 28 or 6.5% belong to a network. A membership list for The Jason Akermanis Appreciation Society was pulled. As of June 13, the group had 469 members of which 337 were on the member list. Of these, 27 or 8.0% belonged to a network.

Networks are Facebook created groupings that early in the site's history allowed people to easily filter content to people who shared an affiliation with other users. These networks cover three broad general categories: Places of employment, secondary schools and high schools. The pro-Akermanis people belong to thirteen networks not shared by detractors or Western Bulldogs

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[35] The group can be found at http://www.facebook.com/group.php?gid=118380594866779 .

fans. That means 48% of Akermanis fans do not belong to a network that is shared by Western Bulldogs fans and highly suggests that Akermanis's fan base largely is independent of the Bulldogs. Eight anti-Akermanis fans or 27% of that population belong to networks not represented by the Western Bulldogs or Akermanis supporters. This suggests that Akermanis detractors likely come from with in the Western Bulldogs fan base.

The differences between Akermanis detractors and Western Bulldogs fans are really clear when network membership is sorted by type (secondary school, university, company) and then tabulated in Appendix 8. 78.6% of all Akermanis detractors that list a network belong to a university related one. This compares to 50.0% for Akermanis supporters and 48.6% for Bulldogs supporters. Bulldog supporter network membership suggests that the club's goal of building a barracker base from the working class has been successful. The pattern of network membership may also suggest that Akermanis detractors are older than the club's current supporter base. Given these two conditions, the Bulldogs are likely to be unaffected by the detractors as they represent a demographically distinct group that the club is not marketing to.

Twitter

Twitter is a popular microblogging platform. Many teams, players and fansites have established a presence on the site. Australian sport fans are also actively using Twitter to discuss their club's performance, celebrity athlete related gossip and to find other sport news.

There are several possible ways to monitor the impact of the Akermanis controversy as it pertains to Western Bulldogs. Sadly, the most important Twitter metrics are not accessible as the author did not get the data in the moment.[36] These include total number of followers before and after the controversy for the official account and total number of tweets featuring certain keywords. The counting the total number of Tweets by the official account was also not done, as it was believed that this data would not have meaningful results. Unlike the Melbourne Storm controversy, the focus was on a player where the media and fan attention appeared to be on him to the exclusion of his club. Given that, the Bulldogs did not have to respond or change their practices in their official fan communication channels and monitoring their Tweet volume would be unlikely to provide any insight into the fan response to the controversy.

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[36] . Data regarding the comparative size of total Twitter followers for the Western Bulldogs was initially gathered on June 1, almost a week after the controversy first started. Twitter follower counts for other official club accounts were not recorded on that. This further hampers the ability to make comparisons between teams.

As the three of the most popular Twitter metrics are not available or not relevant, the question is what other metrics can be used? One Twitter analysis tool that can be useful in this case is Twitter Venn. [37] The service creates Venn diagrams based on keywords that a user selects. The service uses Twitter's search API to find Tweets that mention the two or three teams the user selected, determines if the terms were used together or independently, counts the total Tweets and then creates the Venn. (Clark, 2010) Using this service on June 11, a Venn diagram (Figure 1) was created. The keywords chosen were based on the goal of trying to exclude irrelevant tweets, such as people talking about their pet Bulldogs or other teams named the Bulldogs. Phrases such as gay, homosexual and homophobic were also not included as their usage extends beyond this controversy and would pick up a lot of irrelevant data.
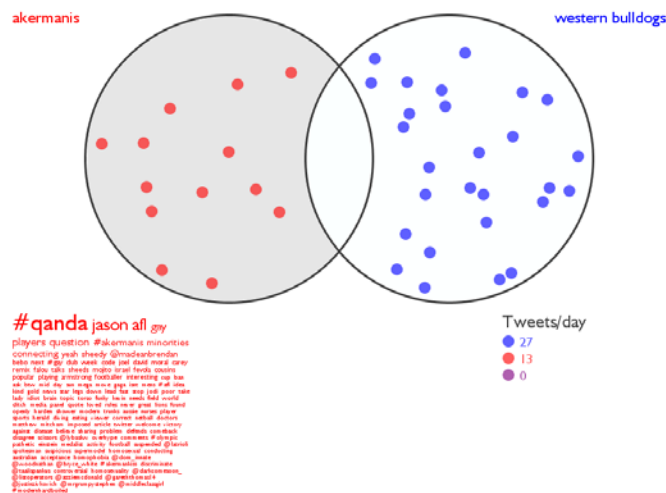
Figure 3. Twitter Venn. This Venn diagram generated by Twitter Venn demonstrates the lack of overlap between use of Akermanis and Western Bulldogs.

On Twitter, people who mentioned Jason Akermanis did not mention his club affiliation, instead referencing the AFL, gay and other words that indicate the controversy involving the column he published. Based on this, it can be concluded that on Twitter, Akermanis's comments did not result in rage directed at his club.

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[37] Twitter Venn is located at http://www.neoformix.com/Projects/TwitterVenn/view.php .

Wikipedia

Wikipedia is one of the first sources of information that many people turn to when a news story breaks. Articles on the site often provide background information and context to an event, and include a summary and links of breaking news. Wikipedia also has an excellent search engine optimization. When people go to Google or other search engines to find out what is happening, Wikipedia often appears as the first, second or third result. Thus, an increase in an article's views should be expected when controversy happens.

In terms of the Jason Akermanis and Wikipedia, the way to measure the controversy as it impacts the Western Bulldogs would be to compare the total page views between those two articles. If the controversy reflected more upon Akermanis than his team, the expectation is the page view spike would be higher. The chart below contains traffic information to those two articles for the period between May 1 and June 8, 2010.[38] To give perspective to Akermanis's situation as it pertains to athlete interest connecting to club interest, data for the Israel Folau, Brisbane Broncos and Western Sydney Football Club articles have been included on the chart. (Figure 3)
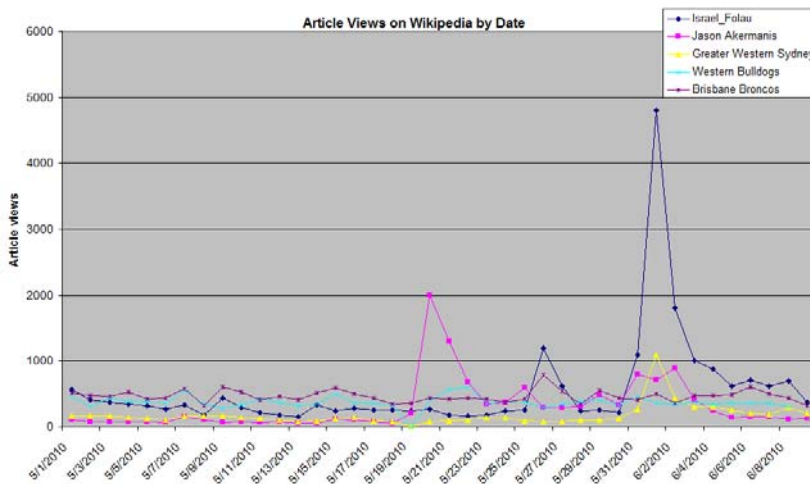
Figure 4. Article Views on Wikipedia by Date. Graph shows total views of selected Wikipedia articles between May 1 and June 10, 2010.

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[38] Article view information is provided by http://stats.grok.se/ .

The Jason Akermanis controversy did not result in increase in attention for the Western Bulldogs: Total page views by date have a correlation of .280, which suggests that interest in the two is not related. This is much different than the situation that exists for Israel Folau and Greater Western Sydney: The two articles move in tandem in terms of total article views by date with a correlation of .943.[39]

There are two other aspects of Wikipedia worth analyzing as they pertain to understanding the fan community's actions in response to the controversy. One is the total edits. The second is the location of those edits. For total edits, controversial and high visibility stories tend to lead to an increase in editing. For less controversial news stories, where there isn't much new information and the topic is not one people are passionate about, there tend to be fewer peaks in editing. Below is a chart (Figure 3) that compares the total number of edits to the Jason Akermanis, Western Bulldogs, Israel Folau and Greater Western Sydney articles.
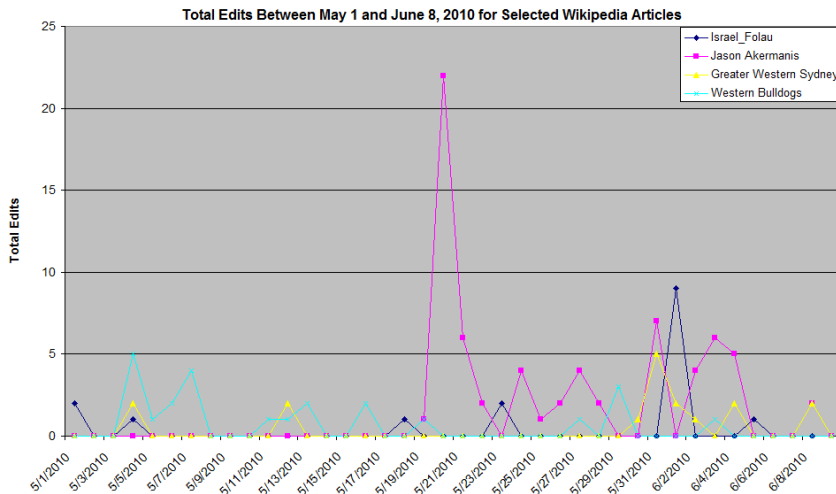
Figure 5. Total Edits Between May 1 and June 8, 2010 for Selected Wikipedia Articles.

The Jason Akermanis controversy resulted in people editing the article about him. The total number of daily edits does not mirror total number of daily edits to the Western Bulldogs. This continues to suggest that people viewed Akermanis's actions independently of his club.

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[39] The correlation between the Brisbane Broncos article and the Israel Folau article is .155. The relationship between page views for each article is close to random.

This contrasts with the Israel Folau situation, where the total number of edits appears to be a bit more connected.

The Western Bulldogs are based in a Melbourne suburb. An argument could be made that the Western Bulldogs should be concerned about maintaining or developing a fan base in their local area; they do not need to worry about the fan community outside their geographic home. The only way to measure the local fan community response on Wikipedia expressed by editing an article is to use geolocation for IP addresses that have edited an article. As the total edits by date chart shows, there have been very few edits to the Western Bulldogs article since the Jason Akermanis controversy broke. Of the five edits made to the Western Bulldogs article, two edits have been made by users who have not logged in and have a visible IP address. Neither of these edits references the controversy. Both edits are from Melbourne. [40] This suggests that the controversy did not impact their local fan base.

The edit history for the Jason Akermanis article stands in stark contrast to the Western Bulldogs article. It has a lot more edits and almost all of the non-logged in edits involved editing the article to reference the stay in the closet controversy. There were 29 total edits made by 14 non-logged in users. Of these edits, four are from Melbourne, one each from Camberwell and Sandringham in Victoria, two are from Adelaide, three are from Sydney and three are international. Only 42 percent of the edits to the Jason Akermanis article originate from the Western Bulldog's geographic home. Determining what this means is more problematic. The most obvious conclusion is that the offended population were geographically dispersed and were more interested in the topic because of the homophobic aspects than because of their interest in Akermanis and the Western Bulldogs. These edits should not be seen as being committed by a base who will punish the Western Bulldogs by not watching games on television or in person.

Bebo

Bebo was a popular social networking site in Australia, New Zealand, Ireland and the United Kingdom. Its popularity has slipped in the past year but there is still a large population of AFL fans on the site. It probably ranks amongst the top ten most popular social networks inside Australia

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[40] http://whatismyipaddress.com/ was used to determine the geolocation of IP addresses.

Bebo allows people to search for keywords and interest that appear in people's profiles, in videos, descriptions of bands, groups, applications and skins. For profiles, the general assumption is that people do not update interests listed on them regularly after they register. Doing so generally requires a strong desire to associate or disassociate with a person or organization. This desire has to overcome general antipathy towards updating. Thus, interest levels remain relatively stable unless something happens that causes a huge emotional response.

What does this mean for the Western Bulldogs? Did the Jason Akermanis situation reach that point, causing people to want to associate or disassociate with the team? As of March 17, there were 93 people who listed the Western Bulldogs as an interest. [41] By June 8, 2010, this number had increased to 95. There does not appear to have been an attitude shift that causes many people to want to change their public allegiances. The small increase may mean something when compared to Melbourne Storm who saw zero interest listing growth during a similar period prior to and after a major controversy. (Hale, 2010)

While no bebo video data is available for the Western Bulldogs prior to June 9, video data is available for the Brisbane Lions. On May 1, 2010, a search was done of videos on bebo for the "Brisbane Lions." This is a team that Jason Akermanis played for. On that date, there were 74 videos which mentioned the Brisbane Lions. Three of these videos referenced an Australian soccer league team. The rest were about the AFL team. Of these 71 videos, only one contained Akermanis in the title or description.   As of May 1, it had only eleven views. When the video viewing statistics were check on June 9, 2010, there were still only 11 views: The Jason Akermanis controversy has not translated into people seeking out video content on bebo featuring him to watch.

There are no groups about Jason Akermanis. This contrasts to Facebook, where there are several that cover several different views of the player. The Jason Akermanis did not inspire anyone on bebo to create any anti-Jason group, which suggests either antipathy towards the situation or fans not being particularly active on bebo any more.

The only other large player/club controversy that occurred during this time period involved Israel Falou, who switched from the NRL and Brisbane Broncos to the AFL and Greater Western Sydney. To put Jason Akermanis's fan community as it related to the Western

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[41] This number came from visiting http://www.bebo.com/c/search? , clicking on the people tab and searching for "Western Bulldogs."

Bulldogs on bebo into context, it is worth comparing the two players. The following data was gathered on June 8, 2010.

Table 5 .

Jason Akermanis versus Israel Folau on bebo

Interest	People	Video	Music	Groups	Apps	Skins
Western Bulldogs	95	40	8	13	0	0
Jason Akermanis	5	10	0	0	0	0
Brisbane Broncos	280	156	53	75	2	0
Israel Folau	99	26	8	30	0	0

Bebo interests suggest that Israel Folau is much more important to the Brisbane Broncos fan community than Jason Akermanis is. Jason Akermanis's comments look like, based on these numbers, that they would have less potential to harm the club than Israel Folau's desertion to the AFL.

Website Traffic and Demographics

There are primarily three services which track website traffic. They are Alexa, Quantcast and Compete. [42] Each one has something different to offer in terms of how they measure and information they provide about a site. None of these sites are perfect in that they cannot convey a completely accurate picture of a website's traffic or the demographic composition of visitors to the site. Despite these deficiencies, using their data can begin to give an idea to the fan response by looking for traffic movement out of sync with other teams and if there was a major difference in audiences visiting the Bulldogs site.

Alexa ranks websites based on the amount of traffic they get. It measures traffic using a user-installed toolbar coupled with other data. [43] (alberto, 2009) They can differentiate traffic based on nation and will provide ranking information by country for sites that get a majority of their traffic from specific countries. Their data is also updated daily. This makes them more

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[42] Compete is not being looked at here because they have not updated their data to include May. They also do not provide free demographic details about visitors to sites that they track.

[43] It is important to note that this tool does not measure direct traffic to a site. Rather, it involves sampling traffic to the site to get an approximate for this his compares to other sites.

useful than Compete and Quantcast in that Alexa provides information about Australian sites and updates daily so that daily traffic patterns can be examined.

On June 5, June 8 and June 9, 2010, the international and Australian ranking on Alexa was recorded for all official AFL club websites. [44] This is not ideal, as it does not include traffic prior to and immediately after the Jason Akermanis situation.   Still, it can provide a picture of what was happening 16 days after the incident broke, a few days after news of Akermanis's suspension was announced.

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[44] The list of Alexa pages checked include: http://www.alexa.com/siteinfo/afc.com.au ,
http://www.alexa.com/siteinfo/afl.com.au , http://www.alexa.com/siteinfo/lions.com.au ,
http://www.alexa.com/siteinfo/carltonfc.com.au , http://www.alexa.com/siteinfo/collingwoodfc.com.au ,
http://www.alexa.com/siteinfo/essendonfc.com.au , http://www.alexa.com/siteinfo/fremantlefc.com.au ,
http://www.alexa.com/siteinfo/gfc.com.au , http://www.alexa.com/siteinfo/teamgws.com.au ,
http://www.alexa.com/siteinfo/hawthornfc.com.au , http://www.alexa.com/siteinfo/melbournefc.com.au ,
http://www.alexa.com/siteinfo/kangaroos.com.au , http://www.alexa.com/siteinfo/portadelaidefc.com.au ,
http://www.alexa.com/siteinfo/richmondfc.com.au , http://www.alexa.com/siteinfo/saints.com.au ,
http://www.alexa.com/siteinfo/sydneyswans.com.au , http://www.alexa.com/siteinfo/westcoasteagles.com.au ,
and http://www.alexa.com/siteinfo/westernbulldogs.com.au .

Table 6.
AU Alexa Rank for Official AFL Club Sites.

Team	Site	5-Jun-10	8-Jun-10	10-Jun-10
Adelaide Crows	afc.com.au	4,500	4,410	4,307
AFL	afl.com.au	43	42	41
Carlton Blues	carltonfc.com.au	2,084	2,134	2,275
Collingwood Magpies	collingwoodfc.com.au	1,548	1,608	1,620
Essendon Bombers	essendonfc.com.au	1,549	1,659	1,625
Fremantle Dockers	fremantlefc.com.au	4,757	4,841	4,725
Geelong Cats	gfc.com.au	6,727	6,696	6,147
Hawthorn Hawks	hawthornfc.com.au	1,624	1,784	1,794
North Melbourne Kangaroos	kangaroos.com.au	6,042	6,228	6,443
Brisbane Lions	lions.com.au	1,973	2,090	2,130
Melbourne Demons	melbournefc.com.au	3,049	3,126	3,126
Port Adelaide Power	portadelaidefc.com.au	4,183	4,603	4,687
Richmond Tigers	richmondfc.com.au	2,367	2,417	2,380
St. Kilda Saints	saints.com.au	2,616	2,634	2,685
Sydney Swans	sydneyswans.com.au	1,644	1,722	1,727
Greater Western Sydney	teamgws.com.au	30,347	26,435	28,346
West Coast Eagles	westcoasteagles.com.au	4,678	4,959	4,920
Western Bulldogs	westernbulldogs.com.au	9,758	10,763	11,746

The only team with less traffic to their site is Greater Western Sydney, a team that has not started playing in the AFL yet. While only three of the seventeen teams saw an increase in Australian traffic ranking from June 5 to June 9,[45] the decrease in rank between those dates for the Western Bulldogs was the most extreme: It dropped almost 2,000 places. This suggests that something is going on to depress traffic to the Bulldogs when compared to other teams.

Quantcast and Alexa both provide demographic information about visitors to a site. Quantcast can directly measure a site's traffic and build a better demographic picture if a site inserts Quantcast's code into their site. (Quantcast Corporation, 2008) Quancast's data tends to be American centric and does not always provide a picture of international visitors unless a site is Quantified. Alexa's demographic data comes from a survey users complete when they install the toolbar. (alberto, 2009)

Bearing in mind that the Quantcast's description is based on American visitors, the site characterizes visitors to the Western Bulldogs's site[46] as female, middle aged, Hispanic, have children, make between $30,000 and $60,000 a year and are college graduates. This information was based on all of May 2010, including the nineteen days before the controversy broke out. Alexa, which has much more data from Australian users, characterizes visitors to the Western Bulldogs site as generally between the ages of 18 to 24, male, college graduates, childless and visiting the site from work.

The Geelong Cats and North Melbourne Kangaroos are closest to the Western Bulldogs in terms of amount of traffic. They are also based in the same metro area. Thus, it makes sense to compare their audience with the of the Bulldogs to determine if the there are demographic differences between the clubs that could be attributed to a shift in viewing habits as a result of the Akermanis controversy.

Quantcast characterizes visitors to the Geelong Cats site[47] as female, extremely young, Asian, having no children, making between $30,000 and $60,000 a year and being college graduates. Quantcast characterizes North Melbourne Kangaroos website visitors[48] as being split evenly amongst both genders, teenaged, Asian, having kids in their household, affluent and possessing a graduate degree.

Alexa characterizes Geelong Cats website visitors as being between 18 and 24, male, having a graduate degree, having children, and visiting the site from bother home and work. Alexa characterizes North Melbourne Kangaroos visitors as between 18-24, male, having a college degree, childless and visiting the site from home.

There does not appear to be a demographically homogenous group visiting the websites of all three clubs. The major difference appears to be the racial make up of visitors, with the Western Bulldogs over representing in Hispanics. It would be difficult to make a claim, based on available website demographic data, that the Akermanis situation changed the composition of the fan base.

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[45] There are almost certainly cyclical patterns to the checking of AFL club websites: People check them on game and around game day to keep up with the team. They are unlikely to check club websites when there is no club news and teams are not playing.
[46] The Quantcast information is from http://www.quantcast.com/westernbulldogs.com.au#demographics
[47] The Quantcast information is from http://www.quantcast.com/gfc.com.au#demographics
[48] The Quantcast information is from http://www.quantcast.com/kangaroos.com.au#demographics

43 Things, Blogger and Other Small Networks

While smaller and less influential sites like 43 Things, Blogger and BlackPlanet have tiny populations, they are worth monitoring as they can often be one of the first signs of a major public relations problem online that can no longer be controlled. Twitter and Facebook can often be very temporal: Things happen in the moment and are quickly forgotten. Those sites are not set up to record fan responses. Other sites, either because they are inactive, allow for longer posting, have greater visibility to people outside the network the content exists on or because influential fans from those networks may have greater crossover to a wider selection of sites, can hurt a club or league's reputation. The content does not go away. There are influential people on some of those sites that can spread the message to a totally different audience with a different demographic profile. Also, when you're talking to some one in a much smaller group, there tends to be more trust and greater potential for people to believe what their friends are saying. While a person reading one hundred tweets by nominal acquaintances may be able to forget and move on as things move so fast, in a one on one environment, the chances are the smaller group may have bigger problems letting go and moving on.

43things is a goal setting site that is relatively popular in Australia. Prior to the Jason Akermanis controversy, there was one goal related to the Western Bulldogs: See the Western Bulldogs win the grand final. One person was trying to accomplish this goal. Since the controversy, there has been no change in people creating new goals related to the club, nor in the number of people trying to accomplish the existing goal. There have been no goals, either positive or negative, created related to Jason Akermanis. This mirrors the non-action taken by Brisbane Broncos, Israel Folau and Greater Western Sydney fans who added no goals in response to the change in code news for Israel Folau.

BlackPlanet is a small social network marketed at African Americans in the United States. It has a small community of Australians on it. The major sport league that Australians are interested on the site is the NRL. Prior to and after the controversy, no one listed the Western Bulldogs as an interest. After the controversy, no one updated their profiles to include Jason Akermanis as an interest.

Blogger is a blogging site powered by Google. It is one of the more popular free blogging services in Australia. Users can create a profile on the site, which is used to link their different blogs and comments on one page. The profile page includes an interest field that users

can fill out. As of January 16, twelve people listed the Western Bulldogs as an interest. This number only changed by one as of June 4 and June 8, 2010, with 13 people listing the team as interest. No one listed Jason Akermanis as an interest on blogger as of June 4, 2010. It is unlikely that the Jason Akermanis situation resulted in any behavioral change in terms of public allegiances shown on profiles for the Western Bulldogs.

Care2 is a small social network marketed at people who want to make the world a better place. It hosts blogs, groups, discussions, personal profiles, petitions and photos. Care2 has a small population of Australian sport fans using it. As the site is geared towards making a difference and addressing social problems, it is a bit surprising that Akermanis does not show up when searching[49] site profiles, discussions, groups or petitions. As of June 11, the Western Bulldogs are only mentioned four times in blogs and only included on one person's profile. While this data was gathered three weeks after the controversy, it seems unlikely that with no mentions of Akermanis, the small community on Care2 turned against the team.   ecademy is a niche social networking site that is an alternative to LinkedIn for professionals. With no earlier benchmarks, a June 11, 2010 profile search[50] turned up similar results to Care2: No one listed the team or Jason Akermanis as an interest on their profile. It is unlikely that the controversy had an impact on the small AFL community on the site.

Wikia is an extremely popular wiki hosting company[51] that allows anyone to freely create a wiki. They are home to three small wikis dedicated to the AFL and Australian rules football. [52] These wikis are small and not very comprehensive.   Two were created prior to the controversy and one was created after it.   None have had any edits to the Western Bulldogs or Jason Akermanis article. Coincidentally, there have been no edits related to Israel Folau and Greater Western Sydney. The Wikia community for the AFL was clearly not activated in response to the Akermanis or Folau situations. This suggests that the community is either inactive or more interested in historical on field play rather than off field player antics.

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[49] The url for the search that was confused is http://www.care2.com/find/site#q=%22Jason+Akermanis%22 .
[50] The ecademy search can be found at
http://www.ecademy.com/module.php?mod=member&q=%22Western+Bulldogs%22&op=Search+People
[51] As of June 11, 2010, Alexa ranks Wikia as the 312th most popular site on the Internet. Compete estimates that the site gets around 3.2 million visitors a month.
[52] The wikis are http://afl.wikia.com/wiki/Australian_Football_League_Wiki ,
http://aussierules.wikia.com/wiki/Main_Page , and http://aflpedia.wikia.com/wiki/AFL_Wiki .

Conclusion

Based on fan behavior online, Jason Akermanis's comments did not help the player build his personal brand. He upset some fans in the short term, and motivated people to create long time reminders of views that they consider problematic. Very few fans rushed to his defense by affiliating with him or creating groups to defend his position. While the controversy may be problematic for Akermanis, the controversy was less problematic for his club, the Western Bulldogs. Fans did not link the club and player on Wikipedia or Twitter. People did not remove their Western Bulldogs interest on sites such as Blogger or change their behavior goals on sites like 43 Things. Inactive Bulldogs fans were not motivated to become active in order to express disgust for the team. The people that had problems with Akermanis were demographically distinct from Bulldogs fans on Facebook. The controversy harmed Akermanis but it did not harm his team's image.

Data absent context can change the meaning: Did Julia Gillard hurt the Bulldogs?

> *It was not lost on club supremo David Smorgon that Ms Gillard had joked, amid speculation in May over the future of then prime minister Kevin Rudd, that "there was more chance of me becoming the full-forward for the Dogs than there is any change in the Labor Party".*
>
> *"Well," said Mr Smorgon yesterday. "You are now prime minister so there is only one job left for you: to take over from No.28."*
>
> *No.28 is Hall's number. (Pierik, Lane, & Sharp, 2010, August 2)*

Julia Gillard, the first female Prime Minister of Australiam is a public supporter of the Western Bulldogs football club. During June 2010 when Labor was dealing with their leadership struggle that resulted in Gillard coming out on top, the press often connected Gillard with the team of that she barracked for. Much of this was a result of Gillard's own words and actions. In one case, she claimed she would sooner play full forward for the Western Bulldogs than there would be a change in leadership for Labor. (The deputy's not for turning, 2010, June 19). This reference received national attention. The day after she became Prime Minister, members of the Western Bulldogs told the press that they expected Gillard to show up for practice. (Horan, 2010, June 25)

The clear relationship between Gillard and the Bulldogs raises the question of how much of an impact Gillard had on the Western Bulldogs fanbase. Conventional wisdom is politicians help raise a club's visibility. In Australia, as well as internationally, politicians are quick to ally themselves with their teams national side during the soccer World Cup, Rugby World Cup and during the Olympics, as well as other high profile sporting. This is often perceived as helping the team and athletes by raising their visibility. In the United States, the media made a big deal of President Obama's support for his hometown Chicago White Sox.   In the case of Barack Obama, there is a fair amount of evidence in terms of merchandise sales to suggest his support has helped the team. (Nightengale, 2009, April 6) Did Gillard provide similar help to the Western Bulldogs?

There are several methods that can be used in an attempt to answer this question. They include measuring the Alexa traffic for the Western Bulldogs site, tracking the number of followers for Bulldogs related accounts on Twitter, fans for the official page and unofficial fan pages on Facebook, membership increase for fan pages that mention both Julia Gillard and the Western Bulldogs, possibly demographic differences between the Gillard groups and Bulldogs only fanpages, the number of mentions for the Western Bulldogs on bebo, people listing the team as an interest on LiveJournal and its clones, the total pages mentioning Julia Gillard and the Western Bulldogs on google.com.au, and the amount and geographic location of edits to the Western Bulldogs article on Wikipedia.

Some of this data, found in Appendix 3 - Julia Gillard and the Bulldogs, on its own might suggest that Julia Gillard hurt the Bulldogs. Other data, such as Figure 1 showing Wikipedia article views, suggests that the data is random and is supported by a correlation calculation of -0.05. One of the Western Bulldogs fan pages on Facebook lost 30 people, an anti-Akermanis group lost two people, a pro-Akermanis group lost two people, the Twitter growth was almost non-existent despite Tweets mentioning Gillard, and the Western Bulldog's site rank on Alexa

for Australia fell almost 2,000 places between the 25th and 26th. Toss in the fact that the Gillard created communities on Facebook were fewer and had much less growth than the anti-Akermanis over the same period.   All of these appear to be really good indicators that Gillard's effect on the team online was not a great one, and was potentially a negative one in that it hurt their growth potential.
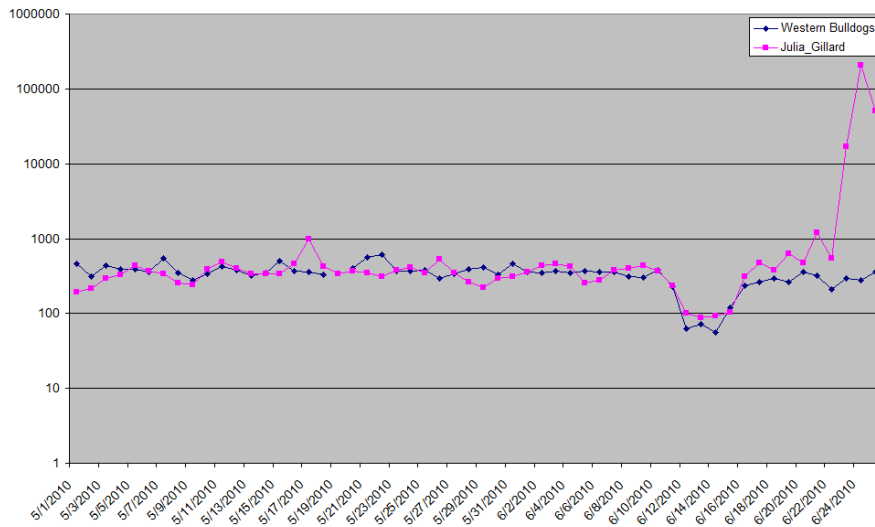
Figure 6. Wikipedia Article View for Julia Gillard and Western Bulldogs.

       The author would really like to draw that conclusion. A really strong argument could be made that, the Western Bulldogs data absent a broader context of what happened to other AFL clubs during the same period, that Gillard's allegiance hurt the club.
       The problem with this arguement involves putting the Bulldogs data into the context of the rest of the AFL. The Brisbane Lions did not appear to have an official Facebook fan page at that time, but one of their biggest unofficial fan pages is worth looking at. They lost nine members only one day after the Bulldogs lost 30 members. Between June 22 and June 26, only one AFL team hasn't had their Alexa traffic rank for Australia rise; that is the Melbourne Demons. For that period, three teams saw a rank drop of over 1,000. Twitter follow gains are about even for all teams. Official Facebook fan page growth is also pretty close. In that context, it is hard to say that Julia Gillard had much impact at all. In fact, for the Alexa data, the big drop could probably be attributed to the fact that they only had half the teams playing a game for this weekend and the weekend before that. The impact of Gillard on the growth of the Western Bulldogs fan base online just probably is not there.

In the wider context, Julia Gillard had no effect. In a limited context of the team she barracks for, possible negative effect. Which conclusion is the right one? This is a case where social media numbers do not provide a clear answer.

Australian Fans at the World Cup: Foursquare and Gowalla Checkins

The men's soccer World Cup is one of the biggest sporting events on the planet. Australia's participation excited the nation, with extensive coverage of a friendly versus New Zealand prior to the departure, live cross network coverage of the team's departure to South Africa, and in depth analysis of the Socceroo's performance during South African based friendly. There were many live events held in the early hours of the morning for fans; these events were held across the country. Australia's excitement was particularly keen as the country was bidding for rights to host the World Cup in 2022. Journalists, marketers, social media specialists and soccer fans were just as excited. Many of these people were expressing their interest in how this World Cup would be different from previous ones because of social media, accessibility of athletes online and how sponsors were busy engaging with fans who love the beautiful game.

Sniderman (2010, June 11) provides a brief history of social media and the World Cup in a post to Mashable, an influential technology blog. The 2002 World Cup was the first one to have an official site, where profiles were provided of all competing teams. (Sniderman, 2010, June 11) Beyond that, there was not much out there that people would recognize as social media related content about the World Cup. (Sniderman, 2010, June 11) [53] The 2006 World Cup occurred when MySpace was the most popular social network at the time. "US. Companies like Adidas, Nike and Puma were early adopters with campaigns that included print ads, television spots and online sites." (Sniderman, 2010, June 11) In connection with the World Cup, Google and Nike teamed up to create a social network for sport fans. (Sniderman, 2010, June 11) Beyond that, many sport related websites and fans had established their own blogs and were posting about the World Cup. . (Sniderman, 2010, June 11)

Sniderman and other documented social media usage related to the World Cup in the run up to its start. This included CNN creating two badges related to the World Cup on Foursquare, and soccer players being available to fans on Twitter. [54] (Sniderman, 2010, June 11) McDonalds created an online fantasy game. (Yeomans, 2010, June 1) Powerade, Coca-Cola, Budweiser and Adidas uploaded videos to YouTube. (Yeomans, 2010, June 1) Visa, Adidas, Budweiser and Continental engaged World Cup fans on Facebook. (Yeomans, 2010, June 1)

CNN's World Cup Foursquare badges received a fair amount of attention as an innovative marketing tool. At the same time, there was a lot of discussion about the potential usefulness and high adoption rates of geolocation sites like Foursquare and Gowalla in the general social media blogosphere. [55] Despite the attention Foursquare got in the run up to the World, in the post World Cup social media measures of how much people used various services to talk about the games and how many people fanned what pages, Foursquare, Gowalla and other geolocation

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[53] The author of this dissertation recalls fanpages created on sites such as Geocities and Angelfire. The author also recalls some discussion about the World Cup taking place on LiveJournal. LiveJournal was one of the earliest social networks in that it linked people in unique ways that allowed them to follow people's content creation streams. Beyond these, mailing lists were active and while the author cannot recall any activity, there likely were groups that were actively discussing the event.

[54] Sniderman (2010, June 11) pointed out that 10 of the 23 men on the USMNT's roster had Twitter accounts.

[55] An idea as to the volume of discussion can be found using Google's blog search in the period between June 1, 2010 and July 15, 2010:
http://www.google.com.au/search?q=gowalla+foursquare&hl=en&prmdo=1&sa=X&source=lnt&tbs=blg%3A1%2Ccdr%3A1%2Ccd_min%3A1%2F6%2F2010%2Ccd_max%3A15%2F7%2F2010

services were largely ignored: No one talked about the metrics for Foursquare and Gowalla in the context of World Cup related checkins.

This chapter attempts to fill that void by looking at the total Foursquare and Gowalla checkins based on the teams playing. One purpose is to determine if there are different national patterns for checkins. This is important for several reasons. The first reason this is important is it helps to understand how Australian sport fans utilize geolocation services at sporting events outside the country and provides greater insight into how Australian sport fandom functions.

Another purpose is to figure out if the Foursquare and Gowalla checkin totals can help determine the adoption rate of both sites amongst different national groups. This data can be used to provide additional context Alexa's ranking for both sites in various countries.   The adoption rate in a country is important because it can provide additional insight into different national needs and online cultural practices in that country. [56]
Third, this data can help the comparative size of one nation's sport social media savvy community to another. Neither Foursquare nor Gowalla provide public data regarding the number of checkins to industry and interest specific venues. Sport related data cannot be independently removed. By doing an analysis focusing on national patterns at an international event with a lot of foreign visitors, this data becomes accessible in a way that it would not be otherwise. Issues with different levels of mobile infrastructure do not become relevant because all users are forced to use the same infrastructure: South Africa's. The last reason this data is important is it can help other event organizers and sponsors of international events plan better and try to create an appropriate geolocation service strategy. Organizers and sponsors may not want to coordinate a geolocation campaign as part of travel packages if those groups are unlikely to use the service when they get to the event.

A month prior to the start of the World Cup, Wikipedia was checked to get the name of all the venues that World Cup games would take place at. [57] A search was then conducted on Foursquare and Gowalla to find the corresponding location. If the location did not exist on Foursquare or Gowalla, a location was created. [58] If multiple locations existed, all locations were recorded. The locations were then matched against dates that games were being played at those venues. Information on what teams were playing at those venues on those dates was then added to another column. In the case of Foursquare, the venue location data was added and dated for checking the day prior to the event. This was because Gowalla shows the time that people checked in; Foursquare does not show who checked in and when. In order to get total checkins, totals were needed for the prior day. Several times in the period between a month prior to the World Cup and the start, locations were checked to make sure that the list was accurate. When needed, the calendar for checking was updated. [59] When the World Cup started, when the

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[56] Different adoption rates and relative national popularity for social media sites can be found in a map provided in an article by Marya (2010, December 10). For instance, the historical maps shows that Mexicans were slower to adopt Facebook as their primary social network when compared to other countries. This is worth noting as Mexico was one of the teams playing in the World Cup. Portugal, another World Cup nation, was also slower to adopt Facebook.

[57] The Wikipedia page can be found at http://en.wikipedia.org/wiki/2010_FIFA_World_Cup . This source was chosen because it clearly listed the venues, their locations and the games that would be played there. The official FIFA site was checked but the information was not presented as clearly.

[58] Locations were created at that time because the author wanted to have a complete list of locations prior to the start of the World Cup. She believed that if she did not create these locations, some one else would create them at a later data. This could result in multiple locations. It would also make tracking of total checkins more difficult.

[59] About a week before the start of the World Cup, CNN created several locations for World Cup venues. A few days before the start of the World Cup, Foursquare removed a few duplicate location entries.

games were finished being played, total people checkins, total checkins and mayors were recorded on Facebook. [60] Total checkins were recorded on Gowalla. The checkins were recorded at 9:00 AEST/ UTC+11, at 0:00 SAST / UTC+2. By that time, all checkins for night games should have been made. On Foursquare, math was then done to determine the difference in checkins from the previous day to get the total number of checkins for the game. The raw results are available in Appendix 11.

Raw Foursquare and Gowalla data makes it difficult to determine the nationality of people checking in. There is no way to determine which team a person barracks for based on their checkins. In order to correct for this and get data could be compared used to compare national checkins, the total and average number checkins by team based on all games that the team played in were calculated. This should help normalize the dataset by having a way to account for a game when a less popular team played against a more popular one. Average number of checkins also helps to address the problem of teams not playing the same number of games. An example using Gowalla: New Zealand played three games. Against Italy, there were 0 checkins at Mbombela Stadium. At Royal Bafokeng Stadium versus Slovakia, there was 1 checkin. Versus Paraguay at Peter Mokaba Stadium, there were 2 checkins. The average number of checkins for New Zealand was 1 and the total number of checkins was 3. A summary of these results can be found in Table 1 for Foursquare and Table 2 for Gowalla. Teams are sorted descending by average number of checkins by game.

Prior to the start of the World Cup, the author's initial thinking was that as the tournament went on, you would see more checkins at games as events progressed beyond the first round. This assumption was based on the idea that ticket prices would go up for later rounds, leading to a more affluent, social media connected audience attending these game. The author also assumed that the stadiums would be at capacity, where early first round games would not be. The author also assumed that South Africa would have the highest average checkins for all team, because of the home country advantage. The author also figured most of the teams left after the first round would be big name teams, which would have a wider audience than their own national base. The author also thought that Foursquare would always beat Gowalla by a lot based on news coverage by social media blogs covering the sector. The author also assumed that English speaking countries would be close to the top as the sites were originally launched in the United States for an English speaking audience.

Table 7

Foursquare World Cup Checkins

Country	Total Checkins	Total Unique Visitors	Average Checkins	Average Unique Visitors	Games played
Ghana	819	362	163.80	68.40	5
Spain	1105	608	157.86	86.86	7
Uruguay	1103	466	157.57	66.57	7
South Africa	399	179	133.00	59.67	3

[60] For the Germany vs. Spain game, between getting data before the event and after the event, Foursquare merged two locations. If just the one remaining location was used, it would have possibly included an additional 43 checks for the game that were from previous games. Thus, the previous venue's totals were subtracted from the venue that they were merged into.

Netherlands	885	427	126.43	61.00	7
Germany	801	434	114.43	62.00	7
Mexico	453	199	113.25	49.75	4
Argentina	512	228	102.40	45.60	5
Portugal	317	166	79.25	41.50	4
Nigeria	228	89	76.00	29.67	3
England	302	150	75.50	37.50	4
Italy	186	99	62.00	33.00	3
North Korea	176	83	58.67	27.67	3
France	166	82	55.33	27.33	3
Brazil	265	156	53.00	31.20	5
Chile	211	108	52.75	27.00	4
USA	205	102	51.25	25.50	4
Honduras	142	75	47.33	25.00	3
Denmark	134	59	44.67	19.67	3
Paraguay	209	115	41.80	23.00	5
Slovakia	152	95	38.00	23.75	4
Serbia	76	41	38.00	13.67	3
South Korea	149	77	37.25	19.25	4
Cameroon	110	64	36.67	21.33	3
Algeria	102	60	34.00	20.00	3
Switzerland	94	55	31.33	18.33	3
Slovenia	93	43	31.00	14.33	3
Côte d'Ivoire	88	59	29.33	11.19	3
Australia	85	44	28.33	14.67	3
New Zealand	75	49	25.00	16.33	3
Japan	85	57	21.25	14.25	4
Greece	55	29	17.33	9.67	3

Table 8

Gowalla World Cup Checkins

Team	Total Checkins	Average Checkins	Games
Netherlands	30	4.29	7
Germany	27	3.86	7
Argentina	18	3.60	5
Ghana	17	3.40	5
Spain	21	3.00	7
Denmark	9	3.00	3
Uruguay	20	2.86	7
Cameroon	8	2.67	3
England	10	2.50	4
Algeria	7	2.33	3
Italy	7	2.33	3
Portugal	9	2.25	4
Slovakia	8	2.00	4
Brazil	9	1.80	5
Japan	7	1.75	4

Mexico	7	1.75	4
United States	7	1.75	4
Paraguay	8	1.60	5
Chile	6	1.50	4
Australia	4	1.33	3
France	4	1.33	3
Honduras	4	1.33	3
South Korea	4	1.00	4
New Zealand	3	1.00	3
Nigeria	3	1.00	3
Serbia	3	1.00	3
Switzerland	3	1.00	3
North Korea	2	0.67	3
Slovenia	2	0.67	3
South Africa	2	0.67	3
Côte d'Ivoire	1	0.33	3
Greece	0	0.00	3

Some of the author's assumptions appeared to be on the mark. Some of them were not. Appearing in the second round did not mean that a team climbed the ladder of total checkins. Witness Japan, Paraguay, South Korea, Slovakia, Brazil and Germany who are averaging less than 50 checkins a game on Foursquare at the end of Round 2. Some of these are popular teams and they are all teams that played in the second round. Chile, Brazil, South Korea all appeared in the bottom 16 teams on Gowalla at the end of the second round. South Africa was not anywhere close to the top on Gowalla. It should barely held on to a top four spot on Gowalla, being passed by Mexico at the end of the second round for total checkins. Patterns the author thought would emerge did not.

The results clearly show that Gowalla and Foursquare users are not the same. The top teams for Foursquare are not the same top teams on Gowalla. Only Ghana appears in the top four on both lists. English language usage was not a factor in terms of number of checkins by national team. A number of teams that appeared in the top eight on both lists are from countries where English is not the national language. The United States appeared as number 17 on both lists.

Australians did not check into games for their side in high numbers. On Gowalla, they averaged 1.33 checkins. On Foursquare, the Socceros averaged 28.33 checkins per game. The averages put them at 28th most popular on Foursquare and tied with three teams for 20th on Gowalla. Compared to other nationalities, Australians sport fans do not have as high of usage rates of Foursquare and Gowalla. They may behind others in their adoption of more cutting edge social media related sites, or they might not find either sites useful and not enhancing their enjoyment of sport.

The results suggest that Foursquare has the potential to be useful for sport marketers looking to get into geolocation during major international sporting events. Popular games can easily get over 50 checkins, helping users to earn a swarm badge on Foursquare. [61] The

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[61] Foursquare awards badges for certain types of checkins. One type is a Swarm badge, earned when 50 or more people check into a venue at the same time. Mashable introduced a Super Swam badge, for when 250 people check into a venue at the same time. Because Super Swarm badges were becoming increasingly easy to get at major events, Foursquare introduced a Super Duper Swarm badge for 500 checkins and a Epic Swarm badge for 1,000

popularity of the event and the nationalities being present would ultimately play a role in the effectiveness of such a strategy. If attendees were heavily Greek or Australian, then using these sites may not be as effective if the audience was Spanish, German, South African or Dutch.

checkins at a venue. (Van Grove, 2010, October 29) Two World Cup games would have been eligible for these badges: South Africa versus Mexico for a Super Swarm and Uruguay versus Ghana for a Super Duper Swarm badge.

NRL Semi-Final: Raiders Fandom versus Tigers Fandom in Canberra

On Friday, September 17, 2010, the Canberra Raiders played the Wests Tigers in a semi-final game as part of the Raider's campaign to make it to the NRL Finals. Based on the author's observations based on Raiders shirt wearing around Gunghalin and Belconnen , Canberra Times coverage and Tweeting about the team, Canberrans finally started to get excited about the team's potential in the lead up to this game. Of the three types, the level of expressing excitement was the greatest online.

This chapter examines various insights into who Canberra Raiders fans that are on Twitter and Facebook, and what Raiders fans were doing in the week before the Canberra Raiders played the Wests Tigers. The purpose of this analysis is to benchmark the size of the Canberra Raiders community on Facebook and Twitter, as well as to better understand the Canberran sport community operates online by comparing regional follow patterns for a Canberran based team to a team from another regional area and by comparing Canberran behavior to that of online sport fans from another region and state.   This information should be useful for other sport teams located in cities such as Townsville, Cairns, Hobart and Darwin that have smaller markers and no competition from other teams playing in the same league.

Twitter

In the lead up to the game, there was a lot of discussion about the Canberra Raiders on Twitter. Not all of this discussion was by Raiders Fans. Wendell Sailor, RealBigDell on Twitter, is a popular NRL player who is under contract with the St. George Illawarra Dragons. He was wishing the Tigers good luck against the Raiders. [62]

With all this Raiders activity on Twitter, a question worth answering is: Where are people tweeting about the Canberra Raiders from? There are two good tools to help answer this question. The first is tribalytic.com. The second is Searchtastic.

tribalytic.com.

tribalytic.com is Australian based allows you to search for a term and then can give you a break down by state, by klout and by wordcloud. See Appendix 9, Canberra Raiders Twitter Data for a screenshot of tribalytic.com's Canberra Raiders search results. According to tribalytic.com, in the period between August 14 and September 14, there were 298 tweets by 142 users that mentioned the Canberra Raiders. Of these tweets, 75 were from New South Wales, 32 were from the ACT, 25 were from Queensland and 4 from Victoria. Canberrans were not chatting about the Raiders like those in the traditional rugby league stronghold of New South Wales.

Searchtastic.

Searchtastic is a Twitter search engine that allows results to be exported to Excel. The Excel export includes profile information about the person who Tweeted. It sadly does not pull up all search results for every tweet ever made on a subject. The author's experience is that it tends to pull up the 50 most recent and if searched for again, removes tweets that had previously appeared. On the night of September 14 and the morning of September 15, the author did a number of Raiders related searches, exported the results to Excel, combined all the tweets and

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[62] An example of his support on Twitter can be found in the Tweet at http://twitter.com/RealBigDell/statuses/24269333344 : " #RedV Tigers fans u must be loving the Dragons today i know u were with us today but good luck against the Raiders next week tough task..."

removed the duplicates. She was left with a list of 443 unique tweets.[63] After this, using the location field, it was determined where those tweets originated from. 181 of the remaining Tweets were from an identifiable Australian state. 105 were from New South Wales, 53 from the ACT, 18 from Queensland and 5 from Victoria.

The ratio between New South Wales based Raiders Tweets and ACT based Tweets is 2.3 on Tribalytic and 1.9 on Searchtastic. The two are pretty close and suggest that people in the New South Wales are twice as likely to tweet about the Raiders as people in the ACT. Canberrans don't Tweet about their teams as much as outsiders do.

Based on Searchtastic data, there were 22 people from the ACT who tweeted about the Raiders. The average person from the ACT who tweeted about the Raiders from the Searchtastic sample follows an average of 281 people, median of 91 and mode of 22. They are followed by an average of 222 people, median of 83. They have made an average of 1,346 total tweets, median of 718. The most "popular" person tweeting about the Raiders was @markparton with 1,632 followers as of September 15, 2010. He was followed closely by @abcnewsCanberra who has 1,611 followers. The contrast between the top two Canberra based Raiders Tweeters is huge. @markparton follows 1,843 people. @abcnewsCanberra follows 0.

The New South Wales Raiders Tweeting habits are different from those from the Australian Capital Territory. There are 58 of them. They are very different than your Canberran tweets. They have on average 1,335 followers, follow an average of 324.7 people and have made an average of 4,440.3 Tweets. Canberrans are much less active and less popular in comparison.

Twitter followers.

Another way of looking at location on Twitter is to see where people who follow the team are from. Do Canberrans support their local side or if, in this particular Finals game or do Canberrans actually support the opposition, Wests Tigers? Following someone on Twitter is an active way of showing support and sentiment behind following is likely to be positive; the assumption is you would not follow a team because you hated them or were disinterested. The over representation of the NSW based tweets referenced in previous paragraphs could be explained away as most of the competition in the NRL is based there; fans of other teams are likely to mention the team they are playing against. Added to that, the population base which NSW based teams draw from is much bigger. Thus, using the location of followers could be a better indicator of Canberran support for the Raiders.

To determine Australian Capital Territory Twitter loyalty for the Raiders and Wests Tigers, the follower information was gather on September 14, 2010 using the script in Appendix 5. The account checked for the Raiders was @ RaidersCanberra and the account for the Wests Tigers was @Wests_Tigers. These are the official accounts for the team. On the date the data was gathered, the Raiders had 870 followers compared to the Wests Tigers 2,305 followers. The follower user location field was then compared against a list to determine the city, state, and country of the follower. This list is available Appendix 4.

Of the Wests Tigers followers, only 25 or 1% of their followers are from Canberra. None of the Wests Tigers followers from the ACT put information in their location that could identify what suburb they are from. This contrasts to the Canberra Raiders where 137 or 15.7% are from the ACT. 9 of those 137 list an identifiable suburb: 1 from Belconnen, 1 from Bruce, 1 from

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[63] Some of these 443 were removed after it was determined that content wise, they had nothing to do with the Canberra Raiders. The total was brought down to 438. 46 of these tweets date from between November 2009 and August 2010. The rest are from September 1, 2010 and after.

Conder, 1 from Fyschwick, 1 from Gungahlin, 1 from Phillip, 1 from Stirling and 2 from Tuggeranong. On Twitter, Canberrans are much more likely to follow the Raiders than the opposition. While Canberrans may not be tweeting about their local team, they are following them more than they were following the opposition.

Despite the large number of Canberrans following the Raiders, they do not follow the club in larger numbers than New South Wales people follow the team. Where there are 137 from the ACT following the Raiders, there are 198 from New South Wales. That accounts for 24.6% of all Raiders followers. Those New South Wales people Tweet more about the Raiders and they follow the Raiders more than Canberrans.

A brief look at Canberran based followers of both the Wests Tigers and the Canberra Raiders shows different Twitter usage patterns. Raiders fans have an average of 130.8 followers compared to 48.2 for the Wests Tigers. Canberra Raiders fans from the ACT update more often: 662.7 average updates compared to 104.8 for Canberran based West Tigers followers. Raiders fans have more friends with 199.2 people they follow on average. This compares to ACT based West Tigers followers who have an average of 121.2 people they follow. Canberrans Raiders fans are more likely to appear on lists, appearing on an average of 6.8 lists. ACT based West Tigers fan on average only appear on 1.2 lists. The indicators are that Raiders fans are much more engaged with Twitter.

TwapperKeeper.

For Australian professional sport on Twitter, there appears to be a pattern for showing team support or interest in a team by following three hashtag patterns. They are #goTEAMMASCOT, #TEAMNAME, #LEAGUETEAMTEAM. AFL teams mostly pushed this method of tagging. The NRL appears to have embraced it less. [64] Despite these semi-standard fan practices, some fans have followed the formula to make Twitter worth exploring from this angle. For the Canberra Raiders, two standard hashtags appear to be used the most frequently: #canberraraiders and #goraiders. [65] The #goraiders tag is problematic during the finals season: This hashtag is shared with fans of the Oakland Raiders. The data on tribalytic suggests it isn't used period but looking through TwapperKeeper, [66] there are Canberra Raiders references in there made the author at @ozziesport and @CountryRL. In any case, this tag isn't as popular as # canberraraiders. [67] summarizr [68] says that between September 10 and September 15, there were at least 24 Tweets using this tag. The most popular user of this tag since that date is @KayLaYvette, who has used it 13 times. Beyond that, 3 others used it twice. 5 others have used it once. People using this hash tag are not using it to post links. summarizr said that 25% of all Tweets contained links. For this hashtag, only 12.5% of tweets contained a url. 67% of Tweets with the #canberraraiders hashtag also included the #NRL hashtag. Raiders fans aren't

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[64] This is largely a result of different levels of engagement. On the whole, AFL teams engage more. NRL teams are more likely to use their official Twitter account as a place to export their RSS feeds. The AFL has official game tags. The NRL does not.

[65] The still aren't used all that frequently. Tribalytic's #NRL data says that for the September 1 to September 14, Canberra was mentioned in 9.42% of all tweets tagged with #nrl. No Raiders related hash tags are on the top 50 list of words used.

[66] The page looked at was
http://twapperkeeper.com/hashtag/goraiders?sm=&sd=&sy=&em=&ed=&ey=&o=&l=10000&from_user=&text=&lang= on September 15, 2010.

[67] The page looked at was
http://twapperkeeper.com/hashtag/canberraraiders?sm=&sd=&sy=&em=&ed=&ey=&o=&l=10000&from_user=&text=&lang= on September 15, 2010.

[68] The Summarizr page looked at was http://summarizr.labs.eduserv.org.uk/?hashtag=canberraraiders and was accessed on September 15, 2010.

using this Tweet hashtag when chatting with each other on Twitter as there are not any interactions associated with it. Of the 24 Tweets using this hashtag, 9 were geotagged. These geotags did not originate in Canberra. Rather, the geotags put the tweeter in England.

Twitter conclusion.

Tribalytic and Searchtastic data both suggest that people from New South Wales are more active in discussing the Canberra Raiders on Twitter than people from the Australian Capital territory. Beyond that, Canberra Raiders tweeting users from the ACT are less active than their peers in New South Wales. New South Wales fans also outnumber Australian Capital Territory fans who follow the official team account.

Facebook

Facebook advertising data.

The purpose of this analysis is to benchmark the size of the Canberra Raiders community on Facebook. Facebook has fewer tools for analysis and the amount of publicly available data available for analysis is less. One tool for getting Facebook data is their advertisement page at http://www.facebook.com/ads/create/ . This page allows for getting demographic data about people who list an interest that the user inputs.

One of the first things to determine is how many Australian Canberra Raiders fans are on Facebook: 7,860. Of these, 1,180 are in the ACT and 4,340 are in New South Wales. In comparison, there are 29,380 Wests Tigers fans on Facebook in Australia. 480 are from the ACT and 19,980 are from New South Wales. Like Twitter, if you're in Canberra, you're more likely to support the home team. Like Twitter, New South Wales Raiders fans outnumber fans in Canberra based Raiders fans.

11,780 of the Wests Tigers fans are female. 2,180 of the Raiders fans are female. The Wests Tigers have a lot more female supporters (40.1%) than Raiders fans do (27.8%). Long term this is good news: The Raiders have a great opportunity to grow their female fan base and develop a base of fans that more closely align with the demographic characteristics of the Australian Capital Territory. The Wests Tigers do not have that opportunity on Facebook as they have a much more gender equal fan base.

1,080 of Canberra Raiders fans on Facebook are college graduates. 2,840 of West Tigers fans are college graduates. Percentage wise, this is 13.7% to 0.7%. This number aligns more closely with Canberra's demographic profile as the territory's population is better educated than other states and territories,

How welcoming are both teams to the GLBT community? 500 Wests Tigers fans identify as women interest in women and 100 Wests Tigers fans identify as men interest in men. The Canberra Raiders have 120 fans who identify as women interested in women and 40 fans who identify as men interested in men. Using this measure, both teams are about equal: 2% of their fanbase are gays, lesbians or bisexuals.

Facebook fan pages.

Another way of looking at Facebook to understand its population and how it functions involves looking at the teams' official fan pages.

The official Wests Tigers fan page can be found at http://www.facebook.com/WestsTigers.com.au and the Canberra Raiders page can be found at http://www.facebook.com/pages/Canberra-Australia/Canberra-Raiders/44722778922. The total number of likes and comments were recorded for the 25 most recent official posts on the feed. For the Raiders, that takes posts back to August 21. For the Tigers, this takes them back to July 1. [69] On average, the Canberra Raiders get 22.75 likes per post and 17.04 comments per post. The Tigers in contrast get 30.54 likes per post and 32.16 comments per post. This appears to testify to the passion of West Tigers fans, except for the fact that 23,391 people like the Wests Tigers page and 1,710 people like the Canberra Raiders page. On average, 1.33% of Raiders fans like a post and 1.00% respond to a post. For the Wests Tigers, an average of 0.13% like a post and 0.14% comment on a post. Clearly Raiders fans are much more willing to interact with the club.[70]

Facebook conclusion.

The Canberra Raider's community on Facebook is smaller than the Wests Tigers community. Despite this, the community is more active than the Wests Tigers. The Raiders community has a smaller percentage of female fans than their NRL semi-final opponents. Both teams have a similar percentage of gay and lesbian fans. Canberra Raiders fans are more educated than their West Tigers counterparts.

Conclusion

The Raiders fanbase appears to be contain more people from outside the territory than in it. The community on Facebook and Twitter is smaller than that of the Wests Tigers. The Raiders do have a larger fanbase in Canberra and the ACT than the Wests Tigers have. While the Raiders fan base may be smaller, it is more likely to engage with the team on a percentage basis than Wests Tigers community is. The reasons for some of the numbers on both fandom sides likely has to do with how the Raiders and Tigers chose to engage with their fanbase online. If anyone changed their strategy to be even more interactive, their fan base could grow exponentially. The Canberra Raiders also demonstrate that for smaller market teams they may be dependent on people from outside their geographic area for support. Balancing outside and inside support may turn out to be crucial to a team's success in these markets, explaining why the Raiders survive when teams like the NBL based Canberra Canons did not.

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[69] The Raiders appear to be much better at updating their Facebook page. The Tigers are importing their posts through their RSS feed, which is itself imported through Facebook. The Raiders in contrast post almost nothing through an RSS feed to their Facebook page.
[70] It is probably helped by the fact that the club is engaging back. This isn't the case for either on Twitter.

Joel Monaghan's Mad Monday and the Online Canberra Raiders Fan Base

Figure 7. 5 Nov 2010 front page of The Canberra Times.

Figure 8. 6 Nov 2010 front page of The Canberra Times.

Figure 9. 7 Nov 2010 front page of The Canberra Times.

In Canberra, the story of Joel Monaghan's Mad Monday actions has been above the fold in the city's leading newspaper for two days and was the whole cover on the third. The story was sensational and received coverage in other newspapers across the country such as *The Daily Telegraph*, *The Herald-Sun*, *The Sydney Morning Herald*, *The Adelaide Advertiser* and *The Australian*. According to *The Canberra Times,* Monaghan was involved in a prank where he was photographed "sitting on a tiled floor with a dog's head near his exposed groin." (Dutton & Moloney, 2010, November 5) The pictures had gone viral on Twitter (Dutton, 2010, November 6) with sponsors threatening to pull their support if the Raiders failed to sack Monghan for his actions. (Dutton, 2010, November 6)

This news was bad news for the Raiders as sponsorship is an important revenue stream for the club. Beyond that, Monaghan's actions are potentially bad for rugby league and the NRL who have an image problem in Australia, where players are viewed by some people as uneducated thugs. This characterization of NRL players can be witnessed by doing a quick Google search for NRL scandal as shown in Figure 4.

Figure 10. A screencap of a search for NRL scandal on Google. Screenshot is dated 6 Nov 2010.

Scandals like Monaghan's have the possibility of hurting the NRL in terms of growing the size of their potential audience and widening their demographic base so they can better compete with other leagues in the country like the AFL, who draw upon larger segments of the population, including women. Measuring exactly how people respond to these controversies is difficult as there is an array of dependent and independent variables that factor into why people support their clubs, and how much money they will spend to do that. These variables include a club's performance, loyalty to a club, available disposable income, amount of free time, availability for attending matches, television coverage, and merchandise to name a few.

At the same time, the NRL has the possibility to be hurt by the Joel Monaghan controversy, but the situation is different than a number of the other sporting controversies that took place during the 2010 NRL and AFL seasons. The difference is there were not moralistic and human rights related issues underpinning it like there were for the Akermanis controversy and the racism controversy during the State of Origin. There was not the harm or potential to cause harm and death that there were for the alleged sexual assault by a St Kilda player or the drink-driving situation by another Canberra rugby player. There were not the illegal actions like the St Kilda player and the Canberra Raiders player allegedly did. There was not the break of unstated football rules regarding the poaching of players from rugby to Aussie rules like there was for the Israel Folau code change controversy. There was not the issue of cheating and

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bringing unfairness to the game that the Melbourne Storm salary cap violations had. The lack of these issues probably underscores the reasons why fans may have responded online such as they did. This was a drunken act in a culture that can understand and relate to someone engaging in drunken stupidity. If other structural issues to the controversy had been at play with a similar amount of media coverage, if the Raiders had been in a bigger market and if the player had been more famous, this might have played differently, as the author's Akermanis and Melbourne Storm controversy chapters demonstrate.

Despite the structural differences, it is worth critically examining how scandals like this one can impact a club's supporter base. Once incidents are documented, it helps with forming a prediction of how fans will behave in the future. First, there is the case of the Jason Akermanis scandal in the AFL in June 2010. It appears there was little negative impact in terms of supporters shifting their loyalties away from the club in the immediate aftermath of the scandal. (Hale, 2010, June 14) Second, in the NRL, the Melbourne Storm salary cap controversy in May 2010 saw a huge immediate spike in interest and demonstrations of online loyalty to the club. (Hale, 2010, May 20)

The questions for the Joel Monaghan scandal are: What was the immediate impact on the online Canberra Raiders community in response to the media cover of the Monaghan dog sex pictures? Did fans connect Mongahan's actions to the Raiders and to the NRL? This paper will attempt to answer the question by looking at Facebook, Wikipedia, Twitter, Wikia, YouTube and Yahoo!Groups.

Twitter

Twitter is a microblogging platform that is popular in Australia. According to Alexa, it is the tenth most popular site in the country. (Alexa Internet, Inc., 2010) On Twitter, there is an active community of Australian sport fans on it who frequently discuss what is going on with their favorite teams and athletes. Sport organizations, leagues, clubs and athletes also use Twitter to engage with their fans. For example, the Canberra Raiders are on Twitter at @RaidersCanberra.

There are several methods that can be employed to begin to understand how the Canberra Raiders fan base responded to the Monaghan controversy that broke on November 4, 2010. This includes looking at any shift in the geographic location of Canberra Raiders fans on Twitter, comparing the total number of new followers for the Raiders to other teams over the same

period, looking at the geographic location of Tweets that mention Monaghan versus the team, and looking to see how many Tweets mention Monaghan and the Raiders together. Each of these different methods gives a different perspective on how fans responded and when looked at together, give a more informed big picture perspective. For the purpose of this analysis, let us assume that more people tracking a team is better regardless of the reason.

One way of measuring the impact of the Monaghan scandal on Twitter is to compare the geographic location of the Canberra Raiders followers and to see if there were any noticeable shifts before and after the scandal broke. The way this was done in this chapter was to attain a list of all the followers for @RaidersCanberra, get the location the user included on their profile, and get the timezone that the person listed themselves as from. Using those two pieces of information, translate that into a real location. For example, "canberra :)" would be the location Canberra, Australian Capital Territory, Australia. Once as many locations have been identified as possible, they are totaled by date.

The October 15 @RaidersCanberra list had 996 followers on it. Of these, 772 had a country location attached to them. The November 6 @RaidersCanberra list had 1,071 followers on it. Of these, a country location could be identified for 790. When locations are removed because they are not Australian or New Zealand locations that include a city, there remains 454 locations for October 15 and 483 for November 6. Table 1 shows difference for followers by city and date. Only the cities where the difference did not equal zero were included.

Table 9

@RaidersCanberra followers by city.

Location	15-Oct	6-Nov	Difference
Auckland,Auckland,New Zealand	9	10	1
Belconnen,Australian Capital Territory,Australia	1	2	1
Bowen,Queensland,Australia	1	0	-1
Brisbane,Queensland,Australia	49	50	1
Canberra,Australian Capital Territory,Australia	145	154	9
Casino,New South Wales,Australia	1	0	-1
Cremorne,New South Wales,Australia	1	0	-1
Gold Coast,Queensland,Australia	7	16	9
Gosford,New South Wales,Australia	2	1	-1
Greystanes,New South Wales,Australia	1	0	-1
Hamilton,Waikato,New Zealand	1	0	-1
Jerrabomberra,New South Wales,Australia	1	0	-1
Mandurah,Western Australia,Australia	1	0	-1
Newcastle,New South Wales,Australia	10	16	6
Orange,New South Wales,Australia	0	2	2
Parramatta,New South Wales,Australia	1	2	1
Penrith,New South Wales,Australia	2	3	1
Queanbeyan,New South Wales,Australia	3	5	2
Rockhampton,Queensland,Australia	2	3	1
South Auckland,Auckland,New Zealand	1	0	-1
Sydney,New South Wales,Australia	97	106	9
Taigum,Queensland,Australia	1	0	-1
Turramurra,New South Wales,Australia	2	1	-1
Tweed Heads,New South Wales,Australia	2	1	-1
Wallacia,New South Wales,Australia	1	0	-1
Wellington,New South Wales,Australia	1	0	-1
Wellington,Wellington,New Zealand	2	1	-1

There were 93 total Australian and New Zealand cities on this list. Only 27 saw any difference in the total volume of followers. Some of these differences could be explained as an issue with processing or user profile changes where a person may have used geographic coordinates for their location and updated them as they traveled around, resulting in a change in city location for the user. Some may have removed location information from their profiles. The populations are so small that these small shifts in normal user activity may have nothing to do with being a Raiders fan.

The independent user profile variables aside, the data appears to support the conclusion geography did not play a role in choosing to follow or not follow the team in response to the

controversy. There might be small micro patterns at play. Of the four New Zealand cities where there was a difference, three locations saw a loss in followers for the team. This might be a bit misleading as four New Zealand cities saw no change in the total number of followers from them. Of the four cities seeing gains of five or more people listing themselves as followers, all are large cities that are traditional league strong holds. Their increase is probably reflective of that reality, rather than as an increase in interest in the team because of the controversy. Geography does not appear to have played a role in Twitter user's decision to follow or not follow the team in response to the Monaghan situation.

On Twitter, people follow accounts that are of interest to them. This can be seen as a positive expression of interest in the club as people are unlikely to follow groups or organizations they despise. By measuring comparative growth patterns, we can begin to see if the scandal had an impact on the Raider's Twitter follower fan base. As the official team account has not mentioned the controversy and the Raiders have not changed their Twitter practices in response to this controversy, the official account content can be excluded as a variable for growth; the Raiders have not used the situation to try to leverage their fan base. Given that, Table 2 shows the total follower counts by date for the Raiders compared to the official accounts for the Manly Sea Eagles, Gold Coast Titans, New Zealand Warriors and Melbourne Storm.

Table 10

Total Twitter followers: Raiders, Eagles, Titans, Warriors, Storm.

Date collected	Raiders Canberra	Manly seaeagles	GCTitans	Thenz warriors	Melb StormRLC
9-Mar-10	202	888	1,616	434	458
30-May-10	375	1,129	2,052	521	1,124
5-Jun-10	389				
19-Jun-10	417				1,215
21-Jun-10	424	1,203	2,176	565	1,226
29-Jul-10	608	1,338	2,447	614	1,473
13-Sep-10	841	1,705	3,011	884	1,942
14-Sep-10	870				
15-Sep-10	873	1,726	3,036	756	1,983
4-Oct-10	949	1,842	3,274	763	2,222
6-Nov-10	1,071	1,963	3,513	884	2,504
Difference: October 4 - November 6	122	121	239	121	282

The controversy did not appear to create a spike in new followers for the Canberra Raiders. The total number of new followers for the most recent period available with the data suggests the total number of new followers for the Raiders is in line with other teams with similar follow totals.

Beyond user follow patterns, it is useful to look at content. The geographic location of Tweets is one method of looking at tweets. There is a tool called Tribalytics that allows this to be done. Tribalytics maintains a list of over 200,000 Australian based Twitter users, sorted by state. Tribalytics allows users to search for a word or phrase on Twitter and adds up the total number of people who tweeted using it by state. This data can then be visualized over time. Table 3 uses data provided by Tribalytics to show the total number of tweets that mention Monaghan.

Table 11

Tribalytics: Tweets that mention Monaghan by state

State	Monaghan	3-Nov	4-Nov	5-Nov
Australian Capital Territory	Tweets	1	41	44
	Users	1	31	29
New South Wales	Tweets	7	286	191
	Users	7	203	152
Northern Territory	Tweets	0	2	3
	Users	0	2	3
Queensland	Tweets	3	154	69
	Users	2	80	57
South Australia	Tweets	0	25	9
	Users	0	18	7
Tasmania	Tweets	0	5	1
	Users	0	3	1
Victoria	Tweets	0	164	87
	Users	0	122	79
Western Australia	Tweets	0	16	21
	Users	0	10	19
Total	Tweets	11	694	428
	Users	10	470	350

The geographic location of the Tweets mentioning Monaghan suggests that the controversy had the biggest audience in New South Wales, one of rugby league's traditional strongholds. The situation in regards to Queensland and Victoria is interesting. Victoria has a much larger population than Queensland. Given the population difference, it is not surprising

that the total number of Twitters and Tweets from Victoria is larger than Queensland. On the other hand, Victoria is not a rugby league stronghold; Queensland is. Logically, it would seem that this story should be bigger in Queensland but it isn't. Interpreting what this means is difficult. The best conclusion is that this story will not help the NRL's attempt to expand into Victoria, as fans are more aware of negative news stories regarding players and the league. On the other hand, for the traditional stronghold of Queensland, the controversy is not as interesting to the local population so there should be less risk in terms of attempting to grow the fan community for the NRL in Queensland.

The last method used for analyzing Twitter given a controversy like this is to examine the other words used in Tweets that include the word Monaghan. This can be done using Tribalytics, which provides a table that includes a list of the most popular words used in tweets mentioning a term and the percentage of time that the word is included in a Tweet involving a specific keyword. Table 4 was generated using Tribalytics and the keyword Monaghan.

Table 12

Popular words used in Tweets mentioning Monaghan

Word	Inclusion	Word	Inclusion	Word	Inclusion
monaghan	87.31%	sex	2.79%	#doggate	2.03%
joel	73.10%	worse	2.54%	wrong	1.78%
dog	21.32%	monday	2.54%	today	1.78%
#nrl	9.64%	trending	2.28%	clear	1.78%
photo	8.88%	talking	2.28%	bad	1.78%
raiders	6.85%	sticking	2.28%	takes	1.52%
#bonegate	6.60%	dangers	2.28%	sexual	1.52%
canberra	6.09%	club	2.28%	room	1.52%
dogs	5.33%	ve	2.03%	qantas	1.52%
statement	5.08%	social	2.03%	mad	1.52%
nrl	5.08%	sack	2.03%	jokes	1.52%
news	4.57%	releases	2.03%	guess	1.52%
twitter	3.30%	player	2.03%	bulldogs	1.52%
sacked	3.30%	mr	2.03%	blew	1.52%
wow	3.05%	danger	2.03%	barking	1.52%
sick	3.05%	agent	2.03%	admits	1.52%
breaking	3.05%	#rugbyleague	2.03%	#thatpicture	1.52%

This table suggests good things for the NRL and the Canberra Raiders. While people are discussing Monaghan and a lot of them are mentioning the dog, only 9.64% mention the NRL and even fewer Tweets reference that Monaghan plays for the Canberra Raiders. Based on

Tweets, people are not necessarily associating the controversy with the NRL and the Raiders. Things may not be as bad as they could be for both organizations in terms of what Australians fans and potential fans are choosing to focus on.

Overall on Twitter, the controversy involving Joel Monaghan appears to have been rather neutral for the Raiders and the NRL. The Canberra Raiders did not see a mass defecting of followers. Those that did leave were geographically distributed so there was not a geographic area that responded particularly badly. Outside of New South Wales, most of the tweets came from an area where the NRL is not strong: The NRL should not lose strength in their traditional strongholds. The controversy may hurt their ability to push into Victoria as it may reaffirm negative opinions about rugby league. When people are tweeting about Monaghan, they are rarely connecting it to the Raiders and the NRL. While Twitter suggests not all-good news, things could be much, much worse in terms of the respective fan bases.

Facebook

Facebook is the most popular social networks in Australia. According to Alexa, Facebook ranks as the second most popular web site in the country. (Alexa Internet, Inc., 2010) According to Facebook's "What do you want to advertise?" page on November 6, 2010, the site has 9,530,800 users from Australia. The site probably has more Australian sport fans on it than any other site in Australia. This is because a lot of the users are fans of the fan pages run by Australian sport leagues, clubs and athletes. Several of these official fan pages have well over 100,000 fans.

Given the large number of Australians using the network, the official presence of so many clubs and the amount of media attention paid to the service, a response to the Monaghan controversy was inevitable. Given the timing of the writing of this paper, there are two methods that can be used to measure the impact of the Joel Monaghan controversy on the Canberra Raiders' fan base on Facebook. The first way is to see if there has been a demographic shift in fans of the Canberra Raiders using Facebook's advertising page data. The second is to measure the relative growth in the number of followers for the Raiders compared to other NRL teams. The third is to look at total and nature of the groups and fan pages created about Monaghan. As group and fan page size had not been recorded earlier, it is impossible to compare their growth like was done in the Akermanis paper.

Facebook's advertising buy page provides demographic information about Facebook users in order to help advertisers target specific audiences. This information can be found at http://www.facebook.com/ads/create/ and is the easiest method of accessing publicly available demographic data on Facebook. On November 5 and November 6, 2010, the number of Canberra Raiders fans were recorded that lived in Australia, in New South Wales and in the ACT. During this 24-hour period, there was no change in the size of these groups. Data regarding various demographic groups for the Canberra Raiders was also collected on June 16 and November 6, 2010. It can be found in Table 5. The gap between data collection periods is large and covers a period where a player was suspended for drink driving and the Canberra Raiders finals run.

Table 13

Facebook data regarding Canberra Raiders fan demographics

Age	Sex	Education	Relation	Interested in	16-Jun-10	6-Nov-10	Difference: Jun 16 to Nov 6
All	All	All	All	All	7,980	8,940	960
All	Men	All	All	All	5,400	6,000	600
All	Women	All	All	All	2,460	2,800	340
All	Women	All	All	Women	140	160	20
All	Women	All	All	Men	1,000	1,000	0
All	Women	All	Married	Men	200	160	-40
All	Women	All	Single	Men	260	420	160
All	Women	All	In a relationship	Men	320	220	-100
All	Women	All	Engaged	Men	400	< 20	#VALUE!
All	Men	All	All	Men	60	< 20	#VALUE!
All	Men	All	All	Women	3,060	3,420	360
All	Men	All	Married	Women	440	560	120
All	Men	All	Single	Women	1,340	1,520	180
All	Men	All	In a relationship	Women	700	620	-80
All	Men	All	Engaged	Women	180	140	-40
All	All	College grads	All	All	1,060	1,120	60
All	All	University of Canberra	All	All	180	160	-20
All	All	ANU	All	All	120	40	-80
All	All	University of Melbourne	All	All	< 20	< 20	0
All	All	In College	All	All	160	160	0
All	All	In High School	All	All	220	220	0

During this period, the number of engaged female fans engaged to men dropped to almost zero. The number of women interested in men who were married, engaged or in a relationship

also dropped. The number of male fans interest in men also dropped. While it is unlikely that the controversy caused these population shifts, it is possible contributor as the Canberra Raiders may have had a net gain of zero but lost old followers and gained new followers.

The response to a controversy can also be looked at by examining the comparative growth of a team to other teams in a league. If fans connect the problem to the team, they may punish a team by removing their like or not liking the fan page at the same rate that fans of other teams like their fan page. Table 6 shows the comparative growth of the Canberra Raiders official Facebook page to other teams for the period between July 30 and November 6, 2010.

Table 14

NRL official team fan page growth

Team	Name	Type	30-Jul-10	6-Nov-10	Difference	% Difference
Melbourne Storm	Storm Man	User	4,986	4,799	-187	-3.90
Manly-Warringah Sea Eagles	Manly-Warringah Sea Eagles	Page	20,241	25,401	5,160	20.31
Newcastle Knights	Newcastle Knights	Page	16,470	20,775	4,305	20.72
Canberra Raiders	Canberra Raiders	User	3,413	4,495	1,082	24.07
Cronulla-Sutherland Sharks	Cronulla Sharks	Page	11,230	14,792	3,562	24.08
Canberra Raiders	Canberra Raiders	Sports Team	6,269	8,292	2,023	24.40
North Queensland Cowboys	North Queensland Toyota Cowboys	Page	3,208	4,279	1,071	25.03
Brisbane Broncos	Brisbane Broncos	Page	83,157	117,246	34,089	29.07
Gold Coast Titans	Gold Coast Titans	Page	25,714	39,237	13,523	34.46
Canberra Raiders	Canberra Raiders	Sports Team	1,255	1,945	690	35.48
Wests Tigers	Wests Tigers - Official National Rugby League Club	Page	19,355	31,691	12,336	38.93
Sydney Roosters	The Official Sydney Roosters Page	Page	15,362	27,890	12,528	44.92

The Canberra Raiders are listed three times because they have three official accounts: A user page and two fan pages. Thus, it is a little hard to make good comparisons as each experienced different growth levels. The time period is also a long one, which includes a drink-driving incident involving a player and the club's finals run. That said, if the controversy did have an impact on short term growth, it is not readily apparent or a big one as the three Canberra accounts are not on either extreme for percentage growth. It is unlikely that the controversy had an impact on the club's Facebook fan growth. It may yet but that will require time to see if the controversy continues, and if so for how long.

Comment [LMH2]: They do not use the phrase drunk driving. Australians use it that way and hyphenate it that way.

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Facebook makes it easy to create groups and fan pages and many people do in response to controversies. An example of this is the Jason Akermanis controversy, where fifteen anti-groups were created within three days of the story breaking. Many of these groups had names that questioned his intelligence and had names that implied criticism of his views on homosexuality. By day four of the controversy, the largest group had over 540 fans. The Joel Monaghan Facebook group and fan page creation situation is similar to that of Akermanis in that fifteen groups and pages had been included. The difference is that the membership was much smaller. The top likes for an anti-Joel page is 127. The titles of the Monaghan groups also contrast to that of Akermanis in that there is not implied condemnation of zoophilia and animal abuse. The group names also do not appear to criticize his intelligence. Rather, the names involve jokes about dogs. Table 7 gives an idea as to the nature of these groups and their size as of November 6, 2010.

Table 15

Size of the Joel Monaghan related Facebook group and fan pages

Name	Total members	Type
Joel Monaghan	119	Page
i deserve to play for NSW.. LOL jk im Joel Monaghan	6	Page
Joel monaghan = SICK FUCK	30	Group
Joel Monaghan Appreciation Group	135	Group
give joel monaghan a brake	8	Group
Joel Monaghan... one sick puppy!	2	Group
JOEL MONAGHAN IS A FILTHY BASTARD	2	Group
Joel Monaghan, "Go the dogs!!" 2010.	127	Group
I dont screw dogs jks im joel monaghan :L	22	Group
I hate playing the Bulldogs LOL JKS I'm Joel Monaghan	7	Group
That awkward moment when Joel Monaghan offers to walk your dog	33	Group
Joel Monaghan... Stay the F**K away from my dog!!!	37	Group
I think joel monaghan misstated his wife with his dog	1	Group
The Awkward moment when Joel Monaghan plays the Bulldogs	7	Group
joel monaghan... hate to get sucked off by a dog :/	7	Group
The Awkwardness when Joel Monaghan is Caught in a room with a dog…	5	Group
awkward moment when you walk in on joel monaghan copping head off a dog..	101	Group
lets take the dog for a walk, LOL JK im Joel Monaghan lets fuck it instead	8	Group
Joel Monaghan Loves Dogs........ No I Mean He Really Loves Them..…	2	Group

Against the backdrop of the Jason Akermanis situation, this appears pretty favorable for the Raiders and the NRL. It could be concluded that the nature of these groups is a positive in the

sense that it was a whole lot less negative than it could have been for the Canberra Raiders and the NRL in that the groups do not mention the Canberra Raiders. They do not imply an activation of a moralistic fan base that could be highly motivated to cause trouble for the team. These groups also have very little reach and show that many people are uninterested in joining even for a laugh.

The available Facebook data for this section suggests that the Canberra Raiders did not lose a significant fan base because of Monaghan's actions. The community that appeared to have left the Raiders were those that they were not specifically targeting such as gay men and women in relationships. Those who were expressing anger over the situation were not doing so from a troublesome moralistic position; rather, they were doing so from a less serious perspective involving cracking jokes about having sex with dogs. Like Twitter, the Facebook situation does not look particularly good but it could have been much worse.

Wikipedia

Wikipedia is one of the first sources that many Australians turn to when a news story breaks. The articles on the site often provide useful background, contain brief useful summations of ongoing events and include links to find additional information. At the same time, Wikipedia is important because of its high search engine placement. While people may not be looking for Wikipedia articles, they may just stumble upon it because the result is the first or second one for the term they are searching for.

In terms of the Joel Monaghan controversy and Wikipedia, an easy way to measure the controversy as it impacts the Canberra Raiders would be to compare the total page views and edits between the article about Monaghan and the one about the Raiders. If the controversy reflected more upon Monaghan than his team, the expectation is the page view spike would be higher for the player. This information was found at http://stats.grok.se/en/201011/Joel_Monaghan and http://stats.grok.se/en/201011/Canberra_Raiders and is visualized in Figure 5.
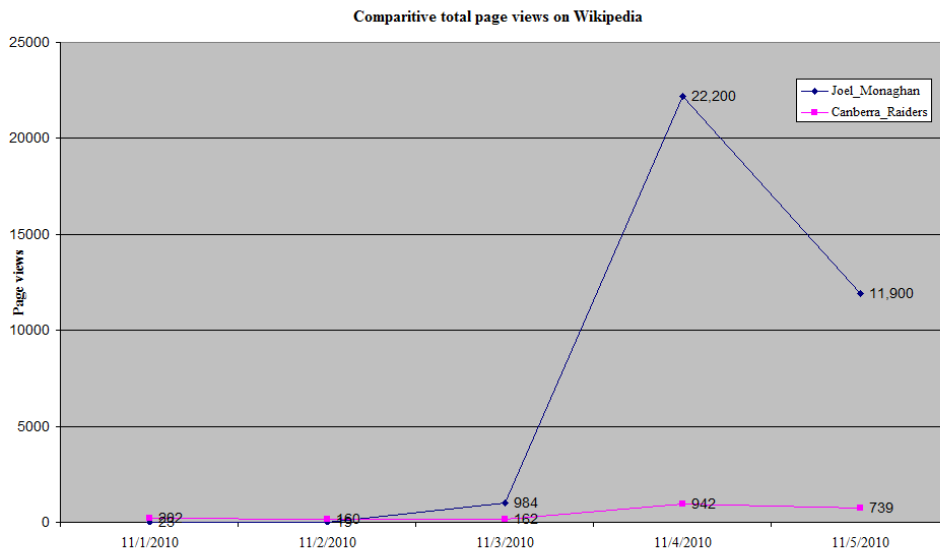
Figure 11. A visual of the total number of article views using data from http://stats.grok.se/

In the two days prior to the story breaking, the Canberra Raider article had more views: 202 to 23 on November 1, 160 to 19 on November 2. The day that the story broke, the total article views were 984 for Monaghan's and 162 for the Canberra Raiders' article. At the onset, while people may have been aware that Monaghan's actions took place during the Raiders' Mad Monday event, they did not seek out additional information on the Raiders, like seeing if the Raiders article had a section on Mad Monday.

The Wikipedia article views data strongly suggest that people were less interested in the Canberra Raiders and more interested in Joel Monaghan. While the content on the Monaghan page includes many references to his playing for the Canberra Raiders, the page view data supports a conclusion that people were less interested in the team and their response to the controversy than they were interested in knowing what exactly Monaghan had done.

Another way of measuring interest in a topic on Wikipedia is to look at the article's edit history. The history possibly provides two methods for analysis: Total edits per article that can be viewed as an active edit participation counter to the passive reading consumption.

The other possible method would involve trying to determine the location of the edits made to both articles. The latter is possible if anonymous edits were geotagged using IP address information to establish the location. This would be useful because the Raiders are probably striving for a fan base in and around Canberra. If most negative edits are coming from inside Canberra, that would be more problematic in terms of maintaining a local fan base than if the edits were coming from outside of Australia or in Australian locations that are not traditional NRL bases. This type of analysis, while possible, is extremely unreliable beause many programs that produce this information have conflicts with others in attempting to accurately identify the city that the IP address originated from. Because of these issues, that methodology will not be done in this article. The first is another matter and can easily done in this chapter.

The article about Joel Monaghan was created on March 17, 2006. As of the November 5, there have been 213 total edits to the English language article about Joel Monaghan. Of these, 47 edits or 22% of all edits to the article were made on and between November 3 and November 5, dates when the story broke. There likely would have been more edits to the article except the article was locked from editing by anyone except sysops at 4:49 UTC/15:49 Canberra time on November 4. In contrast, the Canberra Raiders article saw an increase in edits but was never locked to prevent anyone from editing. Still, given the difficulties in editing, there are noticeable difference between editing volume that can be seen in Table 8.

Table 16

Total edits to the Joel Monaghan and Canberra Raiders Wikipedia articles

	Joel Monaghan	Canberra Raiders
1-Nov	0	0
2-Nov	0	0
3-Nov	6	4
4-Nov	36	9
5-Nov	5	5

The volume of edits suggests that people were not as interested in putting information about Joel Monaghan in the Canberra Raiders article as they were in editing the article about

Monaghan. The edit volume suggestions are supported by a critical reading of both articles, where the controversy is only mentioned on the article about Monaghan and not the article about the Canberra Raiders. This is good news for the Canberra Raiders because the Wikipedia article about the team appears high in Google rankings. The controversy is about Monaghan and not as much about the Raiders and their Mad Monday.

When all three things are looked at together, comparative article views, edits and content, the picture looks better for the Canberra Raiders. People visiting and contributing to Wikipedia who are interested in the situation are not as interested in the Canberra Raiders. The association between the two does not appear to be high.

Wikia

Wikia is a wiki company that hosts over a million wikis. These wikis can be created for free and about any topic that a person wants. There are several wikis on Wikia that have been created about Australian sport, including a wiki about the NRL that can be found at http://nrl.wikia.com/ . This wiki is very small and only has 23 articles. Since the controversy involving Monaghan started, there have been no edits to the wiki. The situation did not inspire any members of the large Wikia family to visit the wiki and create an article about the Canberra Raiders or Joel Monaghan. This could be read as another positive for the Canberra Raiders and the NRL as the situation did not active a dormant fan base to document the situation.

YouTube

YouTube is the largest video site online. It is also the second biggest search engine online. (Hill, 2008) (Beesley, 2010) It is a popular site for sport fans; several teams around the world for different sports capitalize on this by having their own official accounts including the Chicago Red Stars, Real Madrid, and Perth Glory. Beyond the presence of official team accounts, fans upload many videos.   Fan videos can be music videos, news clips, and video blogs. The frequency of uploads is one way to determine interest in a club compared to other teams while a controversy is taking place. A comparison between the Canberra Raiders and other NRL teams and clubs can be found in Table 9.

Table 17

Total search results on YouTube for NRL related keywords

Team	Keyword	21-Jun-10	24-Oct-10	7-Nov-10	Difference 21-Jun to 7-Nov	Difference 24-Oct to 7-Nov

Brisbane Broncos	"Brisbane Broncos"	520	525	534	14	9
Brisbane Broncos	"Darren Lockyer"	198	187	194	-4	7
Canberra Raiders	"Canberra Raiders"	274	403	422	148	19
Canberra Raiders	"Joel Monaghan"			24		
Gold Coast Titans	"Gold Coast Titans"	260	302	303	43	1
Melbourne Storm	"Melbourne Storm"	925	889	891	-34	2
Parramatta Eels	"Parramatta Eels"	485	527	538	53	11
Parramatta Eels	"Timana Tahu"	36	31	31	-5	0
Wests Tigers	"Wests Tigers"	404	464	468	64	4

The total number of new videos uploaded between June 21 and November 7 that mentioned the Canberra Raiders is 148, about 80 more than any other team. There does not appear to be a clear reason for this as when the results are looked into to see what has been uploaded during this period, there is no major topic of interest, nor are all the videos being uploaded by one or two individuals. For the period between October 24 and November 7, the Canberra Raiders topped the table with 19 new videos. The next closest club is Parramatta with 11. It is highly likely that the increase in videos relates to the controversy, though not certain as the team had elevated video totals in the prior period when compared to other clubs.

Given the mixed conclusion from video totals over time, other YouTube variables need to be looked at. On November 5, a search result total of 20 was found for "Joel Monaghan". By November 7, this had increased to 24. This suggests as the controversy took off, there was a significant increase in interest about Joel Monaghan. A search on November 7 for "Canberra Raiders" "Joel Monaghan" had 10 results. This means that 41.7% of all videos that mentioned Monaghan also mentioned the team he was playing for on Mad Monday. It also means only 2.3% of all videos that mention the Raiders also include a reference to Monaghan. If the 10 results are sorted by date, six were uploaded since the controversy broke. If only the Monaghan/Raiders videos that were uploaded between November 4 and November 7 are included, than 1.4% of all videos relate to it the controversy. Of the six videos that mention the Raiders and Monaghan, the least viewed video as of November 7 had 1,589 views. The most viewed video had 17,683 views. The average total views for these six videos was 6,352. This can be compared to the four videos uploaded prior to the controversy, where the least viewed had 788 views, the most viewed had 4,431 views and the average views was 2,406. The audience for the controversy-related videos was 2.6 times larger than the non-controversy videos.

The additional data does not really clarify the situation. The best conclusion that can be reached is that the Canberra Raiders had an already elevated audience of people uploading videos prior to the controversy.   In the period around the controversy, if the six videos that mentioned the Raiders and Monaghan were removed, the Raiders would still be the top team for video uploads. The fan base continued to upload videos and these videos continued to be viewed but at a smaller rate than the videos referencing the controversy. On the whole though, YouTube data suggests that based on pure volume and established audience, the controversy will not have an adverse effect on the team's fan base because the controversy uploads represent a tiny segment of the content about them. There is not the quantity of videos about it that should be a long-term concern for the club in term of its image with their fan base.

Yahoo!Groups

Mailing lists once were one of the most popular tools for Australian sport fans to use in order to communicate with each other. They were easy to create with hosts like egroups, coollists, topica, Yahoo!Groups and Google groups. Two such lists still exist for Canberra Raiders fans: raiders and raiders82, both found on Yahoo!Groups. In the case of raiders, the list has only 9 members, open membership and open posting. There has not been a new post since 2003. The controversy did not activate Raiders fans in terms of encouraging them to post. raiders82 has closed membership, requiring that the moderator approve new members. It currently has 128 members. The list had no posts on it between March 2008 and October 2010. There was one new post in November 2010. As the archives are not publicly available, what the contents are is not entirely clear but it could be assumed that the controversy inspired a fan to be less dormant in their support of the club. All things said, the controversy did not inspire much activity on this particular service. It suggests that things are not so heinous as to encourage people to condemn the team they support.

Conclusion

The first question for the Joel Monaghan scandal was: What was the immediate impact on the online Canberra Raiders community in response to the media cover of the Monaghan dog sex pictures? When looking at the results across all the networks examined, it appears that the Monagahn controversy did not harm the Canberra Raiders fan base; people did not appear to link the Monaghan to the team on sites such as Twitter and Wikipedia. When the team was discussed on Twitter, fans did not mention the Raiders. When people viewed the article about Monaghan

on Wikipedia, they did click through to read the article about the Canberra Raiders. On the other hand, while fans did not make negative connections between the club and player, the Raiders did not receive a benefit from the controversy. Raider fans and Canberrans were not motivated to show support and solidarity with the club by following them on Twitter, fanning them on Facebook, or editing articles about the team on Wikipedia and Wikia in response to negative publicity like Melbourne Storm fans did during the Storm's salary cap controversy.

The section question was: Did fans connect Mongahan's actions to the Raiders and to the NRL? The answer is maybe. The amount of interest about the controversy expressed in YouTube views, Tweets and views to the Monaghan page on Wikipedia suggests that there was some connection between the two. On Twitter, more people used Monaghan's name in connection with the league he played in, rather than the team he played for. This type of result suggests there might be underlying structural image issues in places like Victoria where the NRL wants to grow its fan base. In the end, the controversy did not hurt the team, but it did not help them and most of the damage might have been done to the NRL's reputation instead.

Anna Meares: Twitter growth in response to gold

Anna Meares is one of Australia's most well known and popular cyclists. In early December 2010, she won three gold medals at the Melbourne World Cup. (Vaughan, 2010, December 5) Her three gold medals were more than any country, save Australia, won at the event. (Vaughan, 2010, December 5)

Anna Meares is on Twitter. Her account can be found at http://twitter.com/annameares . During late November and early December, she was not particularly active and only updated sporadically. Despite this, she has managed to attract a number of followers. As of December 5, 2010, she was the third most popular of twelve female Cycling Australian related accounts. See Table 1. This was one place higher than where she was on December 1, 2010. On that same date, she was the third most popular female cyclist of twelve identified. In a social media context, it is useful to understand how Anna Meares's performance affected her fan base: Did her gold medals help grow the fan community around her? Did it generate additional interest in her in specific geographic areas around Australia and New Zealand? If it did and this pattern recurred with other individual athletes, it could then be assumed that social media performance is tied in to individual performance during major competitions: Success on the track correlates to success off of it.

Table 18

Female Australia cycling Twitter account follower totals.

Account	Team	Description	1-Dec	5-Dec	Difference
RochelleGilmore	Rochelle Gilmore	biker (female athlete)	1438	1458	20
amberhalliday	Amber Halliday	rower, biker (female)	660	660	0
AnnaMeares	Anna Meares	biker (female athlete)	527	572	45
rachneylan	Rachel Neylan	athlete (female)	551	559	8
NikButterfield	Nikki Butterfield	biker (female athlete)	516	522	6
Bridie_OD	Bridie O'Donnell	biker (Cyclones) (female athlete)	424	434	10
saracarrigan	Sara Carrigan	coach (female athlete)	424	429	5
amygillettfdn	Amy Gillett	track cyclists (female)	363	369	6
sarahkent90	Sarah Kent	biker (female athlete)	274	296	22
amymccann	Cycling Australia	(female) Communications Manager @cyclesportvic. Media Off @CyclingAus	107	114	7
KirstyBroun	Kirsty Broun	biker (female athlete)	91	93	2
becdomange	Bec Domange	biker (female athlete)	43	43	0

In order to support this data and prove that these results are not an anomaly, Meares is compared to Bridie O'Donnell, found on Twitter at @ Bridie_OD . O'Donnell is not a track cyclist and did not compete in the Melbourne World Cup. She is also compared to Sarah Kent, who competed in the Melbourne World Cup and can be found on Twitter at @sarahkent90 . Kent won a gold medal in a team event.

The total number of Twitter followers that Anna Meares, O'Donnell and Kent had was recorded on several dates between October 13 and December 4, 2010. One way to determine if Meares benefited in total Twitter followers as a result of gold is to calculate slope for a period before and after the event and compare that to her fellow cyclists. The slope for Meares's follower acquisition in the period between November 28 to December 1 was 4.5. It was 1.5 and .6 for O'Donnell and Kent respectively. The period between December 1 and December 5 for Meares was 11.25. Comparatively, O'Donnell was 2.5 and Kent was 5.5. Meares's Twitter growth can be visualized using a line chart. See Figure 1. The difference in slope supports the conclusion that a winning performance translates into social media success, measured in terms of Twitter followers.
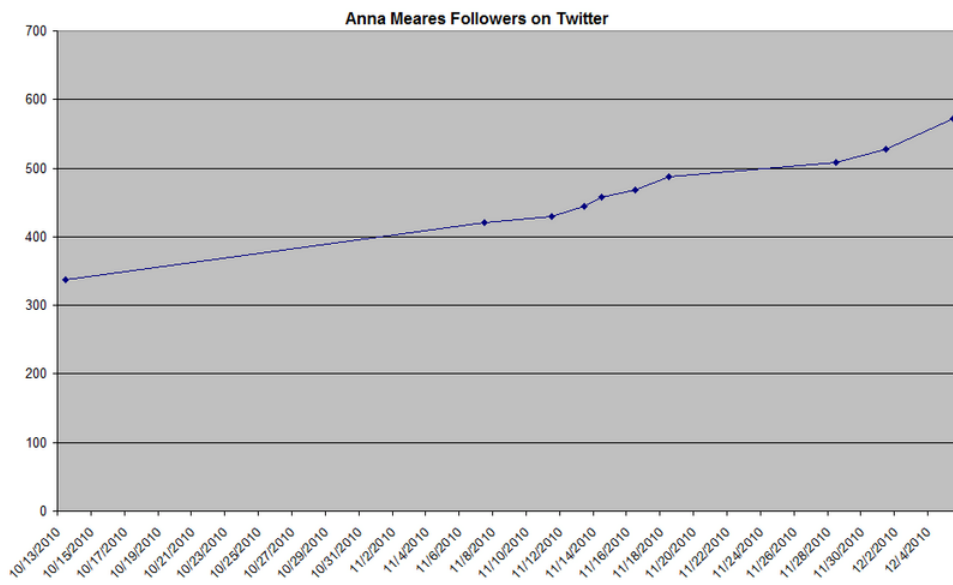

Figure 12. Growth of Twitter followers over time for Anna Meares.

Another way of determining the success of Anna Meares in growing her fan base on Twitter is to look for changes in the characteristics of the people who follow her. On Twitter, this can be measured by looking at the geography of a person's followers. To determine this, a script available in Appendix 5 was used. It pulls a list of all an account's followers, gets their user information, and runs the user location field against a location list, found in Appendix 4. The script emphasizes city location inside New Zealand and Australia. Outside these countries, city totals are not reliable as the author prioritized identifying Australian and New Zealand cities over cities in other countries like the United States, the United Kingdom, India and South Africa. This script was run for @AnnaMeares on October 14, November 21 and December 6. After it was run, the total number of followers per city was then calculated. This is data is available in Table 2. Where there was no change for the period between November 21 and December 6, the location has been off the list.

Table 19

Follower growth by city for @AnnaMeares

City	State	14-Oct	21-Nov	6-Dec	Difference 21-Nov to 6-Dec	Difference 14-Oct to 6-Dec
Melbourne	Victoria	52	76	88	12	36
Sydney	New South Wales	27	40	47	7	20
Adelaide	South Australia	20	33	37	4	17
Townsville	Queensland	0	0	1	1	1
Torquay	Victoria	0	0	1	1	1
Perth	Western Australia	8	9	10	1	2
Gold Coast	Queensland	3	3	4	1	1
Collingwood	Victoria	0	0	1	1	1
Canberra	Australian Capital Territory	6	10	11	1	5
Byron Bay	New South Wales	0	0	1	1	1
Brisbane	Queensland	6	9	10	1	4
Albury	New South Wales	0	0	1	1	1

Location growth suggests that Meares's victory did not result in geography specific growth. Most of the growth appeared in large population centers and capital cities. Meares's growth was not centered on her hometown of Blackwater, Queensland or hubs of bicycling interest in Australia.

Changes in a Twitter follower population can also be determined by looking at changes in total followers, friends, appearances on lists and total status updates. Using the same script for the geography, the information for followers of @AnnaMeares was gathered. The mean, median and mode for all followers was then calculated for all three dates. This data is available in Table 3. The type of follower Meares had clearly changed in the period after she won her three gold medals. Her new followers are more likely to update and follow fewer people. If Meares desires to leverage her audience, these two numbers are a good sign as they suggest that her new followers are more likely to see her Tweets because there is less clutter on their Twitter feed. In addition, they are more likely to read her as they are more engaged and use the site more often.

Table 20

Follower statistics for @AnnaMeares

Date	Math	Followers	Statuses	Friends	Listed
14-Oct	Mean	373.35	1044.75	405.93	20.35
14-Oct	Median	47.5	117	130	1
14-Oct	Mode	2	0	35	0
21-Nov	Mean	620.12	1034.39	541.46	36.67
21-Nov	Median	51	129	146.5	1
21-Nov	Mode	2	0	98	0
6-Dec	Mean	578.89	1053.83	533.55	31.17
6-Dec	Median	52	149	153.5	1
6-Dec	Mode	1	0	76	0

Gold medals spelled success for Anna Meares on Twitter. She increased her growth compared to other Australian cyclists. Her growth in the period around her gold medal victories was higher than the period before her gold medals. Meares's new followers were evenly distributed around the country. Her new followers were following fewer people, while being more active. All of these things suggest that similar patterns should exist for other athletes who outperform the competition on the national and international stage.

Code Flirting and Greg Inglis: Rabbitohs and Essendon Fan Response Online

There is a gentlemen's agreement between the three major football codes in Australia that players will not be poached from one code to another. This agreement is referenced by O'Neill (2007), a former Australian Rugby Union CEO, who controversially broke during the period when rugby union transition from an amateur game to a professional one. The code poaching agreement was an underlying part of the shock in the international and Australian sport media during the winter of 2009 when Karmichael Hunt and Israel Folau left the NRL for AFL expansion teams. (Pearce, 2009, July 30) (Sky Sports, 2009, October 20) (Gould, 2010) (Bradshaw, 2009, July 29) Some of the media coverage at the time implied that code poaching was intended as a publicity stunt (Bradshaw, 2009, July 29) to help build the fanbase amongst rugby league fans in a traditional rugby league stronghold.

During the winter of 2009, when a few prominent NRL players left, one player discussed, as a code switcher was Greg Inglis, a Melbourne Storm player, who was being actively courted by Essendon. (Gould, 2010, June 10) (Bradshaw, 2009, July 29) Nothing came of this talk during the winter. Subsequently, the Melbourne Storm went through a major salary cap scandal resulting in the club forfeiting all their games during the 2010 season. The Melbourne Storm had to clear space to get back into compliance with the league's salary cap. When the team wasn't trying to keep Inglis in order to continue their tradition of winning, the team was trying to get rid of him to clear salary cap space. (Marshall, 2010, July 21) (Johns, 2010, April 26) In November 2010, it looked like Inglis was going to move to the South Sydney Rabbitohs. (Badel, 2010, November 11) In mid-December 2010, the NRL refused to certify Inglis's contract, citing third party deals in violation of the salary as the reason. (Phelps, 2010, December 19). This led Inglis to talk to Essendon and switching codes. (AAP) Based on the author's observation, a number of people on Twitter felt that Inglis was talking to the team in order to leverage his contract situation with the NRL and Essendon was talking to Inglis to get positive media attention. If that was the case, it worked as the NRL dropped their objections and Inglis was signed to the Rabbitohs on December 24, 2010. (Mawby & AAP, 2010, December 24)

The potential code switch for Inglis had implications for both leagues, the NRL and the AFL, and three clubs, the Storm, Rabbitohs and Essendon Bombers. Everyone had their own agendas. Essendon and South Sydney appeared to want Inglis to bask in the player's reflected glory. The Storm probably wanted to clear their salary cap so they can gain back their reputation was winners. The NRL appeared to want to keep one of their best players, while the AFL wanted an opportunity to gain audience share by poaching one of their competition's best players.

Based on the author's observation, Inglis's code change possibility resulted in a large number of fan created comments on Twitter. The agendas at play for Essendon, South Sydney and Inglis are worth exploring to see if they were realized. The questions the situation inspires include: Did Essendon see an increased amount of interest in the club as a result of their discussions with Inglis? Did interest in South Sydney decline as a result of potentially losing one of the league's premiere players?

The social media community normally responds much more quickly than the offline community: It takes a real commitment to become a club member and such a decision is not likely to be made while a player's future is up in question. Given the speed of Inglis's Essendon exploration and termination before signing with Rabbitohs, the online analysis approach is best. To make this determination, this chapter looks at the fan response on Alexa, Facebook, Twitter

and Wikipedia data to determine how a potential player code change affects teams on both side of the decision.

Alexa

Alexa allows people to track the comparative amount of traffic to websites. It works using a toolbar people install on their brows, which tracks sites the people visit. (alberto, 2009, July 13) Alexa is one of the few sites that provides traffic ranking for individual countries outside of the United States and a world traffic rank. While it cannot tell people exactly how site visitors, it can give an idea of the site ranking amongst technology, public relations and social media friendly users. From December 4 to December 25, the world rank and Australian rank for the official websites of the Rabbitohs, Melbourne Storm, Canterbury-Bankstown Bulldogs, Sydney Roosters, Essendon Bombers, Geelong Cats and Collingwood Magpies were recorded. The Canterbury-Bankstown Bulldogs, Sydney Roosters, Geelong Cats and Collingwood Magpies were included as a control group. The AFL and NRL sites were not included because a controversy involving St. Kilda Saints players occurred during the same period and the author believes that incident may have a greater impact on the traffic for the AFL than the Greg Inglis situation. The St Kilda situation involved a fair amount of criticism regarding the AFL's response, which necessitates the league not being included as the Inglis situation alone is not an adequate control.
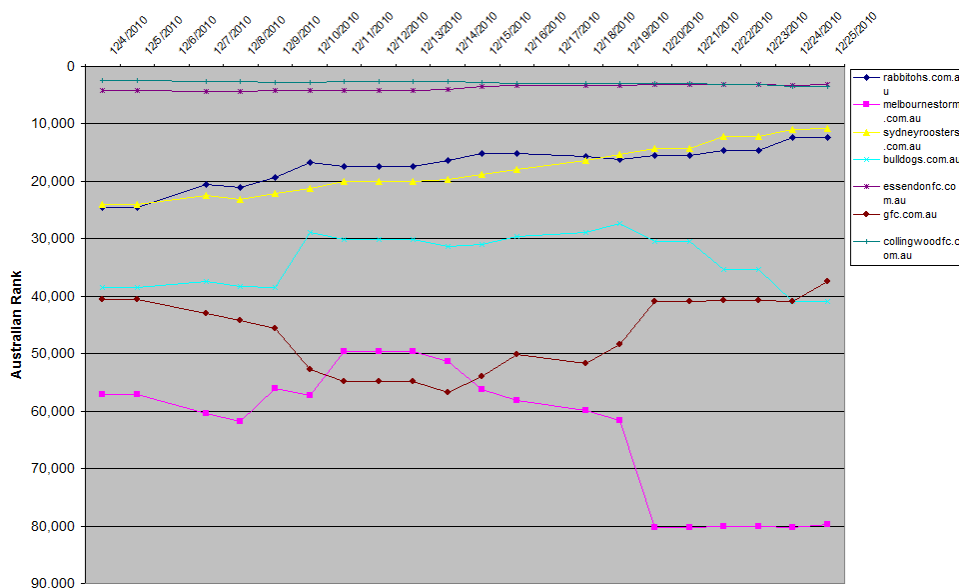

Figure 13. Alexa Australian AFL and NRL site rank from 4 Dec to 25 Dec.

News that Inglis was talking with Essendon began around December 18. The Rabbitohs saw a drop in traffic around that time, before it grew back. The day after the Rabbitohs officially signed Inglis was when they saw the most traffic during the Inglis affair. During that same period, the Melbourne Storm's rank mostly fell, with a one-day spike the day after Inglis's official departure. As a point of reference, the Australian rank for Sydney Roosters steadily

increased and the Bulldog's rank steadily decreased. Over in the AFL, Essendon saw a steady increase in traffic while Inglis was talking to the club. A drop in rank occurred for Essendon on the day the Rabbitoh's announced Inglis's official signing. During the same period, Collingwood's traffic rank steadily declined.   Geelong's traffic stayed in the same general range, with a traffic boost on Christmas day.

World rank data, available in Appendix 10, shows the Rabbitohs rank had a greater fluctuation over that period. It went from 753,186 on December 18 to 772,298 on December 23 to 739,137 on December 25. Traffic appeared to drop off as it looked like Inglis may not sign, only to pick up again when people began speculating that Inglis's were a feint to get the NRL to agree to the contract. From December 18 to December 25, the world rank for the Melbourne Storm, Sydney Roosters and Canterbury-Bankstown Bulldogs all decreased.   In the AFL during that same period, Essendon saw a steady increase in their traffic rank while Geelong and Collingwood saw a steady decrease.

Australian and world rank both suggest that Essendon benefited from an increase in site visitors in response to Inglis's talks with the clubs, while the Rabbitohs saw a decrease in traffic until it looked like Inglis was actually going to sign with the club. This suggests that Essendon's flirting with Inglis helped create interest in the team.

Beyond traffic rank, Alexa can provide demographic data about a site's visitors. On December 9, the information Alexa provided about the Rabbitoh's website was:

> Rabbitohs.com.au is ranked #717,638 in the world according to the three-month Alexa traffic rankings. This site is in the "South Sydney Rabbitohs" category of sites. The site is relatively popular among users in the cities of Invercargill (where it is ranked #132) and Sydney (#10,897), and visitors to Rabbitohs.com.au view an average of 2.8 unique pages per day. Approximately 18% of visits to the site are referred by search engines.

Besides a little fluctuation in the numbers, the profile did not change by December 25. Essendon's site visitors were described as follows on December 11:

> There are 248,437 sites with a better three-month global Alexa traffic rank than Bomberland. While the site is ranked #4,157 in Australia, where roughly 84% of its visitors are located, it is also popular in Malta, where it is ranked #440. The demographics of the site's audience do not show substantial differences from internet averages. Bomberland's content places it in the "Essendon Bombers" category. Search engines refer approximately 6% of visits to the site.

Like the Rabbitoh's, Essendon's visitor profile did not change by December 25. While Essendon may have benefited traffic wise and the Rabbitohs may have been slightly punished for the potential loss of Inglis, in neither case was there enough of a difference to change Alexa's profile of visitors to the official club sites.

Facebook

According to Alexa, Facebook is the second most popular site in Australia. (Alexa Internet, Inc., 2010, December 25). AFL clubs were quick to start using the site; clubs in the NRL were a bit slower and not all of them had official fan pages until partway through the 2010 season.

Facebook fan page membership is a good way to measure comparative interest. Membership totals were recorded for the same clubs looked at on Alexa on December 1, 2, 3, 4, 5, 9, 11, 15, 16, 21, 22, 23, 24 and 25. This data can be found in Appendix 10. Once this was

compiled, the membership difference and percentage difference was calculated for the period between December 5 and 16, December 16 and December 25, December 16 and December 22, and December 22 and December 25. This data can be found in Table 1. These time periods represent a period before the code change speculation, during the whole of the code change speculation, the period before most speculation the talk was a ploy, and during period where most of the speculation occurred.

Table 21

Growth for official NRL and AFL fan pages

Difference	South Sydney Rabbitohs	Canterbury-Bankstown Bulldogs	Melbourne Storm	Sydney Roosters	Essendon Bombers	Collingwood Magpies	Geelong Cats
5-Dec to 16-Dec	191	2,491	2,702	723	2,295	1,483	45
16-Dec to 25-Dec	142	832	1,856	566	1,265	1,042	35
16-Dec to 22-Dec	94	571	1,252	409	897	840	24
22-Dec to 25-Dec	48	261	604	157	368	202	11
% 5-Dec to 16-Dec	2.69%	5.39%	6.51%	2.38%	2.42%	1.38%	0.61%
% 16-Dec to 25-Dec	1.96%	1.77%	4.28%	1.83%	1.32%	0.96%	0.47%
% 16-Dec to 22-Dec	1.31%	1.22%	2.93%	1.33%	0.94%	0.78%	0.32%
% 22-Dec to 25-Dec	0.66%	0.55%	1.39%	0.51%	0.38%	0.19%	0.15%

The South Sydney Rabbitohs percentage growth was similar to that of the Bulldogs and the Roosters across all periods. They were outperformed by the Melbourne Storm, who were losing Inglis. For total growth, all the NRL teams looked at outperformed the Rabbitohs. Essendon outperformed its two AFL counterparts, both in total new fans and percentage growth. These differences do not change when the slope calculation is used. This data supports the idea that Essendon benefited from its brief flirtation with Greg Inglis, whereas Inglis's contract and potential contract did not provide the Rabbitohs with any benefit in terms of Facebook followers.

On December 23, a search was run on Facebook for unofficial fan pages about Inglis. Of the groups found, only one referenced the AFL. It can be found at http://www.facebook.com/pages/Greg-Inglis-to-AFL/118712858169963 . Between December 23 and December 25, the page gained zero new followers, maintaining its fan level at 15. Based two links submitted to the page, it dates back to the earlier speculation that Inglis might have made a code switch. There were no fan pages that referenced his possible signing by the Rabbitohs and two fan pages about his abortive move to the Brisbane Broncos. One of these pages, Im going to Brisbane Broncos, LOL JK!! Im Greg Inglis, saw an increase of two members between December 24 and December 25. This increase could be interpreted as annoyance over the continued issues regarding Inglis's perceived loyalties and willingness to keep promises to clubs/fans that he was perceived soon to be signing a contract with. Beyond that, the lack of

creation of groups dedicated to Inglis and the Rabbitohs/Essendon could signal a lack of interest by Facebook fans of those clubs in having Inglis play for them.

Facebook growth indicates that Essendon benefited from the speculation that Inglis was going to switch codes and play for them. The Rabbitohs did not receive an answering bump. Fans were not motivated to join or create pages about the possibility of a code switch for Inglis. There was some benefit for Essendon, but if the latter had happened, it would have made a stronger case of Inglis being a benefit to the club.

Twitter

Twitter is a microblogging site, allowing users to share their thoughts in 140 characters or less to anyone who chooses to follow them. According to Alexa on December 25, 2010, it is the ninth most popular site in Australia. Like Facebook, it is popular with Australian sport clubs; every club in the AFL and NRL has an official account.

Like Facebook, one way to determine if the Rabbitohs or Essendon received any benefit from Inglis's code changing talk is to look at the official account for the team. This data was gathered every day from December 8 to December 25, with the exception of the 22, for the South Sydney Rabbitohs, Melbourne Storm, and Canterbury-Bankstown Bulldogs. As Sydney Roosters data was not gathered, the Newcastle Knights will be used for comparison purposes. Over that same period, data was collected for the Essendon Bombers and Collingwood Magpies. As Geelong Cats data was not, they have been replaced with the Western Bulldogs and Hawthorn Hawks. This data can be found in Appendix 10.

Once this data was collected, the difference, percent difference and slope was calculate for the period between December 11 and December 18, December 18 and December 25, December 18 and December 23, and December 23 to December 25. This data can be found in Table 2.

Table 22

Twitter Follower Statistics

Difference	TheRabbitohs	NRL_Bulldogs	MelbStormRLC	NRLKnights	Essendon_Fc	Collingwood_FC	western bulldogs	Hawthorn FC
11-Dec to 18-Dec	21	22	46	19	36	106	43	44
18-Dec to 25-Dec	22	24	51	25	90	107	25	44
18-Dec to 23-Dec	17	15	45	16	73	88	15	30
23-Dec to 25-Dec	5	9	6	9	17	19	10	14
% 11-Dec to 18-Dec	1.52%	1.49%	1.64%	8.56%	0.47%	1.05%	1.97%	1.12%
% 18-Dec to 25-Dec	1.57%	1.60%	1.78%	10.12%	1.16%	1.05%	1.13%	1.11%
% 18-Dec to 23-Dec	1.22%	1.01%	1.58%	6.72%	0.94%	0.87%	0.68%	0.76%
% 23-Dec to 25-Dec	0.36%	0.60%	0.21%	3.64%	0.22%	0.19%	0.45%	0.35%
Slope 11-Dec to 18-Dec	3.14	3.14	6.74	2.89	4.71	16.18	6.49	6.38
Slope 18-Dec to 25-Dec	3.01	3.63	7.43	3.65	14.21	16.67	3.79	6.62
Slope 18-Dec to 23-Dec	3.35	3.03	8.66	3.15	14.78	17.95	3.08	6.16
Slope 23-Dec to 25-Dec	2.50	4.50	3.00	4.50	8.50	9.50	5.00	7.00

Using the NRL other teams as a benchmark, the Rabbitohs did not derive a follower benefit as a result of the Inglis code change story. On the other hand, Essendon likely derived some benefit from the Inglis story as their percentage growth changed substantially from the period before the Inglis story broke, during the story, and after it was confirmed that Inglis signed with the Rabbitohs. Collingwood, Hawthorn and the Western Bulldogs had much more consistent, but smaller percentage and total growth over all periods.

Another way to look at the Inglis code change flirting on Twitter involves using a tool called Twitter Venn, found at http://www.neoformix.com/Projects/TwitterVenn/view.php . This tool allows users to input three terms. A venn diagram is then created using Twitter search to show how many times these terms were used together. This was done with the keywords Inglis, Essendon and Rabbitohs. The results are viewable in Figure 2. Another venn was created using the keywords Inglis, AFL and NRL. This venn can be found in Appendix 10.
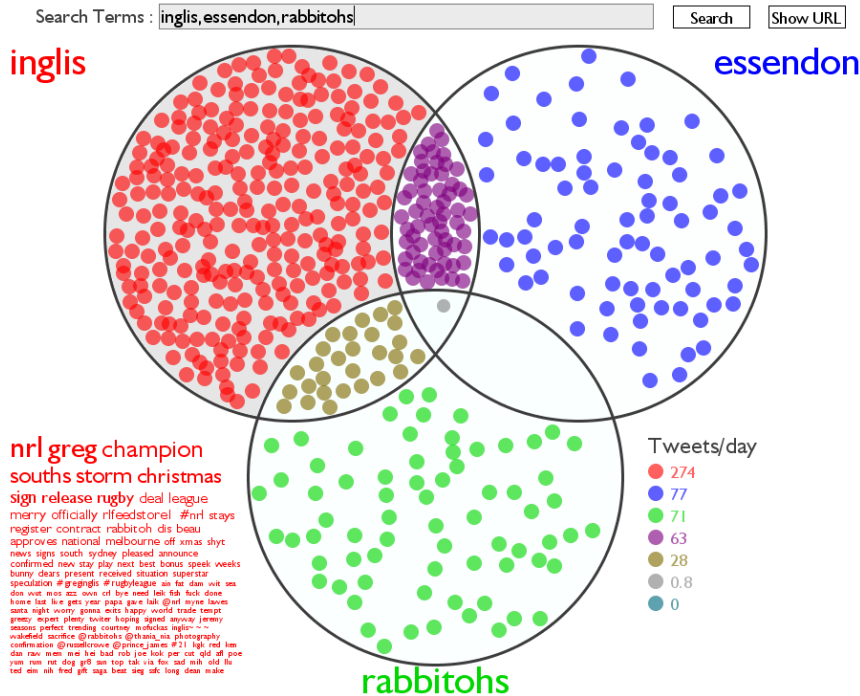
Figure 14 . 25-Dec Twitter Venn.

The Twitter venn suggests that people were more interested in talking about the possibility of Inglis joining Essendon than they were interested in talking about Inglis's contract with the Rabbitohs.

Both Twitter follower patterns and the Twitter venn suggest there was increased interest Essendon as a result of the possible code switch. The Rabbitohs did not benefit from increased followers, nor was there a similar level of conversation about the Rabbitohs as there was for Essendon. The code switch talks helped Essendon.

Wikipedia

Wikipedia is an online encyclopedia that anyone can edit. The English language version has over a million articles. According to Alexa (2010, December 25), Wikipedia is the eighth most popular site in Australia. There is an active movement by Australian Wikipedians to improve the quality of AFL and NRL related articles. Some of these articles have over 2,000 edits.

Wikipedia often acts as a major news portal when scandals hit and related articles often get a large number of page views. During the Akermanis and Monaghan controversies, there was an increase in views to the player's pages; there was a smaller increase in article views for the clubs the athletes played for. Unlike Facebook and Twitter, where users actively discuss a topic, or chose to identify with a club by following or fanning them, viewing a Wikipedia article

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can be seen as a form of passive interest in that no one sees this expression of interest. Reading an article does not imply the same level of interest. Article view data is still worth examining in order to gage the level of non-fan interest around a topic, epitomized by the aforementioned Akermanis and Monaghan situations.

Article view data is available from Wikipedia article traffic statistics at http://stats.grok.se/ . The page views per article for the period between December 1 and December 24, 2010 were recorded for the following articles: Melbourne Storm, South Sydney Rabbitohs, Newcastle Knights, Sydney Roosters, Essendon Football Club, Geelong Football Club, Collingwood Football Club, and Greg Inglis. This data can be found in Appendix 10. A line graph was created using this data for the period between December 10 and December 24 and can be found in Figure 3.
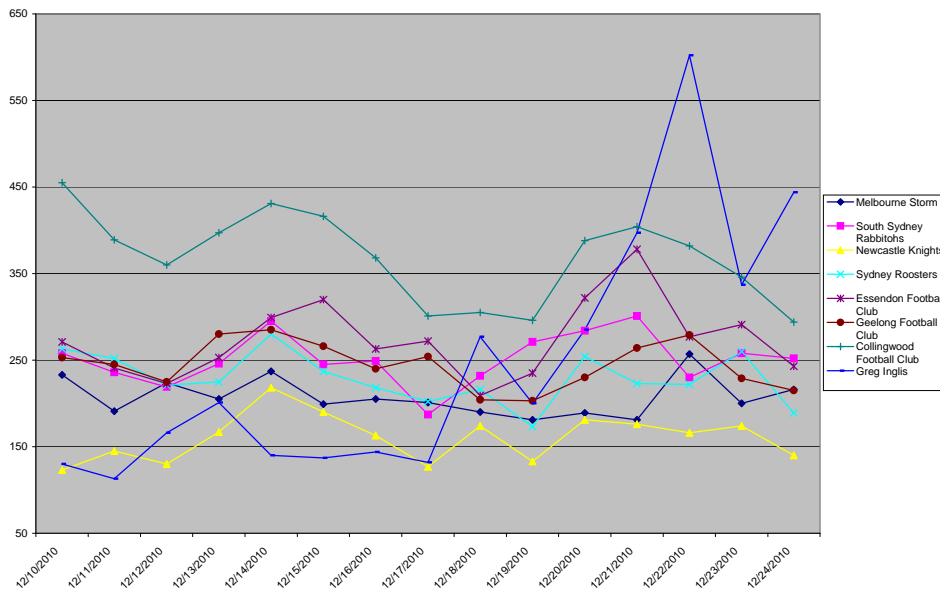

Figure 15 . Wikipedia Article Views.

Just looking at the graph, neither Essendon nor the Rabbitohs saw a large traffic increase on December 22, when the Greg Inglis article saw the greatest number of views. This observation can be verified by looking at the correlation between the club article and the Greg Inglis article. In the period between December 1 and December 24, the Inglis/Essendon correlation was -0.02 and Inglis/Rabbitohs correlation was 0.03. This correlation is so small, it suggests a random pattern between the two. If the period is shortened to between December 18 and December 24, the period when speculation about a code change was at its greatest, the correlation for both strengthens a bit to 0.20 and -0.36 respectively. Still, these numbers still largely imply a random relationship. A meaningful correlation does exist between Essendon and the Rabbitohs in the period between December 18 and December 24: 0.76. This says that views for the articles both went up and down together. For the period between December 1 and December 24, the correlation was 0.45. While the Essendon/Rabbitohs correlation appears

meaningful, the pattern of increasing and decreasing could relate to overall patterns increasing and decreasing interest in the AFL and NRL: There is a correlation of 0.83 between Geelong and Collingwood. Neither of these clubs was involved in any major trades or controversies during that same period.

Wikipedia correlations and the line graph suggest that neither Essendon nor South Sydney benefited with increased page views as a result of the Inglis code switch story. Put in the context of Facebook and Twitter, there was much less interest by the general public in this story. People on Wikipedia did not care much about Inglis's possible code change.

Conclusion

In mid-December 2010, Greg Inglis talked with Essendon's coach about the possibility of playing for the club as the NRL had refused to certify Inglis's contract with the South Sydney Rabbitohs. This topic was talked about on Twitter, Facebook and other places on the Internet. There was speculation that this was a play for media attention by Essendon, and that Inglis was using Essendon to strengthen his position with the NRL. Whether or not this speculation was on the mark, Inglis's actions had an impact on online actions taken by fans.

Alexa data suggests that Essendon benefited from talking with Inglis, while the Rabbitohs may have been punished with less traffic as a result of a major signing not happening. Alexa also suggests that despite traffic patterns changing, the web audience for both clubs did not change: The Rabbitohs and Essendon kept their established demographic patterns. Audience activation or deactivation was inside its own fan community pool.

Essendon also saw a bump in new fans on Facebook, where the Rabbitohs did not. Despite the increase in followers, Facebook fans did not create or join groups and fan pages to support Inglis joining their club. Essendon benefited on Facebook but not as much as they could have.

Twitter data show that Essendon again got a follower bump as a result of Inglis's code change flirting; the Rabbitohs did not.   Beyond follower count, more of the discussion on Twitter involving Inglis mentioned Essendon than the Rabbitohs.

While Essendon saw an increase in followers and traffic on the previous sites, it did not see a similar bump on Wikipedia in response to Inglis's talks with them. Likewise, the Rabbitohs did not see an increase or decrease in article views as a result of the Inglis's actions.

Inglis's actions suggesting he might play for Essendon helped the club activate its fanbase, getting the team increased web traffic, more Facebook followers, more Twitter followers and generated more discussion on Twitter than Inglis and the Rabbitohs. The South Sydney Rabbitohs either were punished for Inglis's possible defection or had no change in fan community behavior. This sort of flirting might be a good thing for clubs who desire some short term attention online.

St Kilda Saints Nude Photo Controversy

Figure 16. December 21, 2010, Herald Sun front page.

        "Saints' Naked Fury" screamed a December 21, 2010 headline on the front page of the Herald Sun. "Defiant teenage girl votes to publish more photos" said a smaller headline. Anthony Dowsley's front page story contained a picture of three St Kilda footballers: Nick Riewoldt, Zac Dawson and Nick Dal Santo. (Dowsley, 2010, December 21) The front-page story sensationalized a situation that had been brewing for several months and had culminated in the release of nude pictures of the three aforementioned players on Facebook.

        The story started back in May 2010, when an unnamed teenaged girl alleged that she had been sexually assaulted by two unnamed St Kilda players that she had met at school sanctioned football clinic held at her school. (Robinson, & Warner, 2010, May 26) (Parker, 2010, May 26) (Hinch, 2010, December 28) The girl also claimed that she had become pregnant with twins by one of these two players. (Robinson, & Warner, 2010, May 26) Police and Education Department investigated the case, because of the possibility of abuse by authority figures bound by duty of care laws. (Hinch, 2010, December 28) The AFL investigated the claim and determined that the girl did not meet the players at a school function. (Robinson, & Warner, 2010, May 26) Rather, she was introduced to the players following a March 27 game versus the Sydney Swans. (Robinson, & Warner, 2010, May 26) The St Kilda Saints alleged that the girl had misrepresented her age to the players, both in person and on Facebook. (Robinson, & Warner, 2010, May 26) After an investigation by the Victorian police, they too decided not to take any action in the case. (Robinson, & Warner, 2010, May 26) The girl later miscarried. (Munro, 2010, December 26) In the meantime, while legal and AFL investigation was ongoing, pictures of the girl dressed in a revealing St Kilda outfit had been forwarded by "St Kilda players, staff at the AFL Players Association, staff at the Department of Justice, the Transport Accident Commission and Melbourne Magistrate's Court." (Levy, 2010, June 4)

The lack of the players being named an issue that some people picked up on. (Parker, 2010, May 26) It would later be a factor when the story re-emerged with a new twist. In the meantime, the May 2010 pregnancy story had largely disappeared by the end of June. [71]

In mid-December, the teenaged girl again made news when the Herald Sun reported that she had slept with a police officer who was investigating her claims of abuse. (Dowsley, 2010, December 21) Around December 18 or December 19, the unnamed now 17 year teenaged girl posted nude pictures of those three players to her Facebook wall and Twitter stream. (Butler & Millar, 2010, December 22) The pictures were allegedly posted after the girl tried and failed to sell them to Riewoldt's agent for $20,000 (Butler & Millar, 2010, December 22) but were also allegedly posted as payback for the Herald Sun article. (Dowsley, 2010, December 21) [72] The girl alleged that she took the pictures when she was in a hotel room with the players. The AFL and Saints allege that she stole the pictures from the computer of a St Kilda player, Sam Gilbert. [73](Butler & Millar, 2010, December 22) (Dowsley, 2010, December 21) Newspapers such as the Herald Sun interviewed the girl and asked her why she published them. (Dowsley, 2010, December 21) The girl complained that she had been abused by the AFL and the Saints in their treatment of her during the earlier story. She felt powerless to take them on. By posting the pictures, she felt she could get her revenge on the organization that had tormented her. (Dowsley, 2010, December 21) By December 20, the Saints had been granted a restraining order, preventing the girl from publishing any more of the nude pictures she allegedly had in her possession. (Butler & Millar, 2010, December 22) The club promised to prevent her from profiting off any from the story, saying they would take legal action to ensure it. (Butler & Millar, 2010, December 22) By December 24, according to Twitter reports and ABC News, the girl had announced she would not post any more pictures. (ABC News, 2010, December 24) The girl went home to Queensland for the holidays, saying she had stopped posting pictures because she felt like she had victimized the players and felt guilty. (Munro, 2010, December 26) The story was largely over in the media by December 25. [74] Australians continued to discuss the topic and a few bloggers tried to start a boycott of St Kilda's sponsors. (Stuchbery, 2010, December 28)

The second part of the controversy largely took place over six days: December 20, 21, 22, 23, 24 and 25. Media attention then largely disappeared but the story continued to be discussed on Twitter under the hashtag #dickileaks. The media covered the story extensively on television, on the radio and in print. The story was the second nude photo scandal to happen in Australia in less than two months. There was a lot of social media buzz on Twitter and Facebook about the controversy, helped the fact that the story broke there and because the girl starting it had over 12,000 followers on Twitter. (Munro, 2010, December 26)

A third and largely unrelated part of the controversy occurred on the morning of January 1, 2011 when the famous AFL football player Brendan Fevola was locked up in a Brisbane jail

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[71] A Google blog search helps support this assertion:
http://www.google.com/search?q=St+Kilda+Saints+pregnant+teenaged&hl=en&tbs=blg%3A1%2Ccdr%3A1%2Ccd_min%3A5%2F1%2F2010%2Ccd_max%3A11%2F1%2F2010
[72] Making the situation even more confusing, there are allegations on Twitter in Tweet's like
http://twitter.com/anthonyqld/statuses/20381277014196224 and on blogs that there was never an attempt to sell pictures to the media, and that the story of selling the pictures was created by St Kilda and the AFL in order to promote their own cause.
[73] Gilbert's pictures have been described by Riewoldt's agent as 'surprise' pictures, where the photographer took a picture without the person's knowledge of the event beforehand. (Hinch, 2010, December 24)
[74] Google news searches showed only one story posted about the situation on the 25th, zero on the 26th and zero on the 27th:
http://news.google.com/news/search?pz=1&cf=all&ned=au&hl=en&q=St+Kilda+Saints+teenaged+nude&cf=all&scoring=n

for being a public nuisance and obstructing the police. (Pierik, 2011, January 1) Critics of the AFL and St Kilda were quick to pick up the story on Twitter and to tag it with the same hashtag, #dickileaks. [75]

The nude photo scandal is a recurring one in Australian sport. [76] This one is a bit unique in that it involved three players having nude photos of them released, and the league and club's legal response in support of their players. It is also unique because of the backstory involved, and because of the revenge factor where the girl who released the pictures did so to get back, not at players, but at the club. The implications are thus possibly a bit further reaching in terms of a club's fanbase than the just the player.

Because of the complexities of this controversy, this chapter is broken up in four sections. The first will look at the impact of the controversy on the demographics of Zac Dawson's Twitter followers and the growth of fan pages about him on Facebook. The second section will look at how the controversy played out with Nick Rieowoldt's fans on Facebook and LiveJournal. The third section will look at the Nick Dal Santo on smaller social networks followers and the growth of fan pages about him on Facebook. The last section will compare St Kilda to other teams in the AFL to see if the controversy impacted the club on Alexa, Twitter, Facebook, Ice Rocket and Google News. The purpose of this is to provide a comprehensive overview on how the situation impacted the four major players in the controversy: Zac Dawson, Nick Riewoldt, Nick Dal Santo and the St Kilda Saints.

Zac Dawson

Zac Dawson joined St Kilda in 2009, after playing for the Hawthorn Hawks 2005 to 2006, and Box Hill in the VFL during the 2007 and 2009 seasons. (Zac Dawson, 2010, December 20) In 2010, he played 20 games for St Kilda and played in all three Grand Finals matches that year for the team. (Zac Dawson, 2010, December 20) A December 27, 2010 search on Google.com. au for "Zac Dawson" brought up 212,000 results. Unlike the other two players involved in this controversy, he is the only one who has a Twitter account, @zacd_6. He is probably the least well known of the players involved in this controversy.

Of the three players who were visible in the photographs, Dawson's picture is probably the least problematic. Hinch (2010, December 24) described the picture and scene:

> Zac Dawson, who has been kept under the radar, is invading Riewoldt's space, grinning (a little self-consciously) at the snapper and holding what looks like a blue condom wrapper only centimetres from his skipper's kipper.

This section will look examine the effect that the controversy had on Zac Dawson's Twitter followers, looking at growth and to see if the controversy changed the profile of who followed him. Beyond that, this section will look at the growth of Facebook fan pages featuring Dawson. The purpose of doing this is to understand how Australian sport fans on Twitter respond when a major athlete if involved in a negative controversy as Dawson is one of several Australian athletes on Twitter to have gotten negative attention as a result of controversy in the

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[75] An example of this was the January 1, 2011 tweet by @ Mel_bourne_oz at http://twitter.com/Mel_bourne_oz/statuses/21022325700825088 that said: "Was this the last person to see Brendan Fevola b4 his arrest http://bit.ly/gorjr4 [REDACTED] #dickileaks." Another tweet that made this connection was posted by @philquin: http://twitter.com/philquin/statuses/21005757755432960 "Me and Fevola: the Obi-Wan Kenobi of Footy Flashers #Dickileaks: http://wp.me/pYxCj-qY "
[76] Recent nude photo controversies included the Brendan Fevola and Lara Bingle story, and the Joel Monaghan Mad Monday pictures.

past four months. [77] Athlete accessibility on Twitter is seen as a positive by many fans as it removes the media barrier. On the other hand, athlete accessibility is often seen as a negative by clubs and leagues as it can cause public relations and sponsorship issues for them. The other purpose is to understand growth and contractions patterns in response to controversy: Do peripheral players see similar growth or contraction as major players who have a higher profile? How will this situation effect Dawson's personal brand and how may Dawson's involvement in this scandal impact St Kilda?

Part of the backdrop to the St Kilda nude photo controversy was the level of fame that the teenaged girl at the heart of the controversy has achieved, with one of those levels of fame being measured by the total number of followers that the girl has accrued on Twitter.   This number topped 12,000 by December 25, 2010. (Munro, 2010, December 26) In terms of Australian sport figures and organizations on Twitter, this puts her close to the Australian Open tennis event, [78] Wendell Sailor of the St. George Illawarra Dragons, [79] the Australian triathlete Daniel MacPherson, [80] and the Rugby World Cup.[81] Of roughly 900 Australian sport related Twitter accounts identified, the teenaged girl's account would rank in the top 20. [82] As the media controversy went on, she continued to update about her feelings and what her actions would be.

It is against the backdrop of the teenaged girl's action that Zac Dawson's Twitter account needs to be viewed. Figure 2 shows a screenshot of Dawson's Twitter updates around the period that the controversy took place.

Figure 17. December 29, 2010 Screenshot of Zac Dawson's Twitter Profile.

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[77] Two athletes other athletes are the cricketer Shane Warne, who gained a lot of attention because of his relationship with Elizbath Hurley. Some of his flirting with her occurred over Twitter. The other athlete who received a lot of attention was Stephanie Rice, who said made a slur against gays on her Twitter account. This statement was picked up by the media. Another St Kilda player was involved in an alleged sexual assault that took place six years earlier, with the investigation taking place in October 2010. The player made a Tweet that was viewed as being "rape apologist," in that it did not condemn rape.

[78] The Australian Open is @ australianopen on Twitter and, as of December 29, 2010, had 13,711 followers.

[79] As of December 29, 2010, Sailor, found on Twitter at @ RealBigDell , had 12,957 followers.

[80] Daniel MacPherson, found at @ DanMacPherson, had 12,151 followers on Twitter.

[81] As of December 29, 2010, @ rugbyworldcup had 11,999 followers on Twitter.

[82] See Appendix 14, December 29, 2010, Australian and New Zealand Twitter Account Follower Totals, for a partial list of those 900 accounts. Only accounts that had more than 1,000 followers were included.
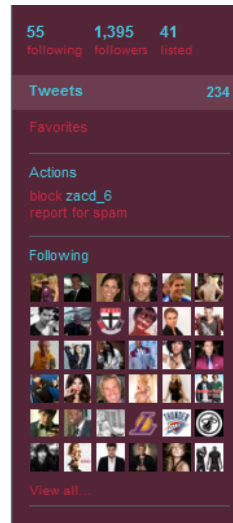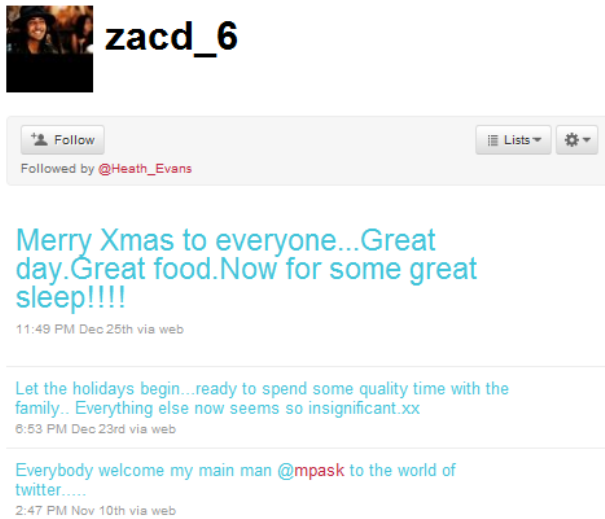
Dawson updated and his December 23 tweet could be seen as referencing the ongoing controversy. That he updates, even if irregularly, probably gave navel gazers, fans and haters a reason to follow him while the story continued.[83] For the media, it gave them another possible outlet to get details regarding the story and Dawson's involvement in it and reaction to it.

The first way that the effect on the controversy as it pertains to Zac Dawson's Twitter account will be looked at is by tracking his follower growth compared to St Kilda's official account, St Kilda fansites and other St Kilda players not involved in the controversy. This data can be found in Table 1 for the period between December 15 and December 26, 2010. [84]

Table 23 .

St Kilda Twitter Account Follower Totals.

Date	zacd_6	stevenbaker10	gramsy_1	go_saints	njbrown17	Robeddy40	RWBFooty	Saints_FC	stkildafc
15-Dec	1290	2776	352	319	1089	859	142	197	5668
16-Dec	1295	2784	352	319	1092	861	142	197	5682
17-Dec	1296	2790	359	319	1095	863	142	197	5684
18-Dec	1299	2796	426	320	1099	867	141	197	5683
19-Dec	1301	2803	436	321	1104	869	141	197	5688
20-Dec	1301	2807	448	321	1113	870	141	197	5697
21-Dec	1326	2849	493	328	1125	879	142	198	5738
23-Dec	1369	2967	679	356	1144	907	142	203	5906
24-Dec	1380	3000	702	368	1147	912	142	204	5946
25-Dec	1387	3012	707	374	1152	921	142	206	5972
26-Dec	1389	3012	709	374	1154	924	142	206	5981

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[83] This is pure subjection on the author's part. A correlation was run for all accounts with 1,000+ followers found in Appendix 14. The correlation was 0.09. This implies that there is no/random relationship between the total number of status updates and the number of followers.
[84] Extended data for the period between December 1 and December 29 can be found in Appendix 13.

In the period leading up to the controversy, December 15 to December 20, Dawson saw an increase of 11 total followers. In the period from when the story broke on the 20th until most of the media attention faded on the 26th, Dawson saw an increase of 88 followers. The slope for follower acquisition during the period from the December 15 to December 20 is 2.71. The slope for the period during the controversy between December 21 and December 26 is 12.71. The controversy clearly gave Dawson a bump in the total number of followers. Jason Gram's slope was 24.2 and 42.2 over the same periods respectively. He has been on Twitter for a shorter period of time than Dawson and has been updating more frequently. [85] Dawson's slope during the controversy was six times amount of the period preceding it. In comparison, Gram's slope was only twice that during the controversy. Steven Baker, not implicated in the scandal, had a slope of 6.6 prior to and 33.11 during. His numbers closely resemble that of Dawson's. Nick Brown and Rob Eddy had slopes of 3.70 and 2.60 before, and 5.77 and 9.03 during it. Thus, of the Saints players identified on Twitter, Zac Dawson's slope really stands out when compared to his teammates. His total number of new followers also stands out, with only two of the other four having beaten him: Baker and Gram. Most signs point to people having followed Dawson in response to the controversy.

Assuming that the data is right, that Zac Dawson saw an increase in followers as a result of the controversy, the next question worth asking is who is now following him and how did the population following him change from the population that followed him prior to the controversy? On November 18, December 18 and December 28, the ozfollowers.pl script found in Appendix 5 was run. This script got a list of all the followers for Zac Dawson, recorded the total number of followers, follows, lists they have. It also recorded their profile description, language, timezone and user inputted location. The user inputted location was run against an 80,000 plus long list of user created locations and standard names found in Appendix 4. The purpose of this list is to identify what city, state and country Dawson's followers are from. If a person's location was unknown or was left blank, an attempt was made to identify their state or country location using their time zone information. For November 18, a city was identified for 578 of Dawson's 1,223 followers. For December 18, a city was identified for 598 of 1,300 followers. For December 28, a city was identified for 655 of Dawson's 1,396 followers. After this data was gathered, the total number of followers per city was tabulated. The complete list of city totals can be found in Appendix 13. Table 2 shows the cities that had a follower total change between December 18 and December 28.

Table 24

Twitter Follower by City Location Difference

City,State,Country	18-Nov	18-Dec	28-Dec	Difference 18-Nov to 18-Dec	Difference 18-Nov to 28-Dec	Difference 18-Dec to 28-Dec
Melbourne,Victoria,Australia	346	362	391	16	45	29
Geelong,Victoria,Australia	1	1	12	0	11	11
Perth,Western Australia,Australia	23	25	30	2	7	5
Adelaide,South Australia,Australia	30	32	35	2	5	3
Brisbane,Queensland,Australia	10	10	12	0	2	2
Sydney,New South Wales,Australia	18	21	23	3	5	2

[85] Like Dawson, he also referenced the controversy in an oblique way, saying " Nothing will break the saints, no matter what crap people try" in a Tweet found at http://twitter.com/gramsy_1/status/16727832835129345 .

East Devonport,Tasmania,Australia	0	0	1	0	1	1
Geelong,Victoria,Australia	11	11	12	0	1	1
Gold Coast,Queensland,Australia	3	3	4	0	1	1
London,England,United Kingdom	2	2	3	0	1	1
Montrose,Tasmania,Australia	0	0	1	0	1	1
Seattle,Washington,United States	0	0	1	0	1	1
Werribee,Victoria,Australia	0	0	1	0	1	1
Parkdale,Victoria,Australia	3	2	1	-1	-2	-1
Warrnambool,Victoria,Australia	5	6	5	1	0	-1

The difference in Twitter follower by locations does not show any strong patterns of unfollowing. The two cities that saw negative growth were both in Victoria, which could be seen as potentially problematic in that Victoria and the Melbourne suburbs are traditional strongholds for the AFL. If St Kilda has a similar pattern of contraction around the area, then this could signal larger problems that Dawson's data suggests. Dawson's growth does suggest national and international interest in the controversy: Dawson gained followers in all states, not including the Australian Capital Territory and Northern Territory. Dawson also picked up followers from the United Kingdom and the United States. If Dawson's involvement is what these followers know of the Australian game, it might hinder the growth of the game internationally.

   Twitter follower data can also be determined by state, where there are fewer unknown locations. In the case of the November 18 data, state location was available for 728 followers, 764 for December 18, and 820 for December 28. The same methodology for cities was used to get this information for states. In some ways, this data is less useful because it can mask unfollows that take place. Still, it is worth looking at in order to see how the story was received nationally and internationally in terms of gaining or losing followers across a wider population. The complete list of states can be found in Appendix 13. States that saw a gain or loss can be found in Table 3.

Table 25

Twitter Follower by State Difference

State,Country	18-Nov	18-Dec	28-Dec	Difference 18-Nov to 18-Dec	Difference 18-Nov to 28-Dec	Difference 18-Dec to 28-Dec
Victoria,Australia	535	562	596	27	61	34
Western Australia,Australia	42	43	50	1	8	7
South Australia,Australia	42	43	47	1	5	4
New South Wales,Australia	40	45	48	5	8	3
Queensland,Australia	25	26	29	1	4	3
Tasmania,Australia	22	23	26	1	4	3
England,United Kingdom	6	5	6	-1	0	1
Washington,United States	0	0	1	0	1	1

Here again it is apparent that the controversy was picked up nationally and internationally. Most of the additional follows were in Victoria, the AFL stronghold. All states saw an increase in the total number of followers, save the Australian Capital Territory and the Northern Territory. These patterns largely support the conclusions based on the city data.

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Beyond the difference in location, it is worth looking at how Dawson's followers use Twitter and if there was a difference in the type of Twitter user follow Dawson before the controversy and after the story was mostly being ignored by the media. The mean, median and mode was calculated for followers, friends, listed and status updates for all of Dawson's followers on November 18, December 18 and December 28. This data can be found in Table 4.

Table 26

Zac Dawson Twitter Followers Stats

Date	Math	Followers	Friends	Listed	Status Updates
18-Nov-10	Mean	183.86	307.44	6.99	965.23
	Median	31	160	0	95.5
	Mode	2	61	0	0
18-Dec-10	Mean	184.70	319.74	7.03	911.05
	Median	32	166	0	86
	Mode	2	118	0	0
28-Dec-10	Mean	177.54	312.46	6.61	895.11
	Median	31	162	0	79.5
	Mode	2	33	0	0

Between the period before the start of the controversy and the period after the controversy was largely over, there was a small but significant change in the type of person following Zac Dawson on Twitter. New followers had fewer people they followed, updated less often, appeared on fewer lists and had fewer friends. In social media terms, these are the followers people want: Messages sent on out by those they follow will more likely be read than if the people followed more accounts. Dawson's new followers are likely the kind that Dawson's sponsors and St Kilda want as these new followers are going to read what he says. The problem though is if these people are following to see how Dawson responds to the controversy; people looking for negative brand message are not good for Dawson's or St Kilda's brand.

The controversy appeared to result in a growth of Twitter followers for Zac Dawson. These followers were located across Australia and internationally. They followed fewer people and updated less often. While these numbers could be construed as positive, against the backdrop of the teenaged girl's total followers, the numbers suggest navel gazing behavior, which could have long term negative consequences for Dawson's personal brand and St Kilda's goodwill amongst fans in the AFL.

Early on the morning of December 21, before the controversy had fully gained steam, a search was done on Facebook to identify Facebook groups featuring Zac Dawson. Thirteen groups were found. From December 21 to December 28, each group had the total membership checked at 7:00 AEDT using a script, facebook_followers.pl, found in Appendix 13. The results for the full period are available in Appendix 13. An abbreviated version of the results for the period between December 21 to December 25 are found in Table 5. Groups that had no change were removed.

Table 27

Zac Dawson Facebook Groups

Name	Type	Url	21-Dec	22-Dec	23-Dec	24-Dec	25-Dec	Difference
Give Zac Dawson a FRIGGIN game!	Common Interest	gid=26587 636537	107	107	107	107	106	-1
who is zac dawson?	Just for Fun	gid=11768 293827190 3	280	280	279	279	279	-1
ZAC DAWSON	Sports & Recreation	gid=19861 9550653	292	290	291	291	291	-1
Zac Dawson for All-Australian Fullback of the Century	Sports & Recreation	gid=22974 254446	64	64	64			
zac dawson should get facebook	Just for Fun	gid=15904 3742851	62	250	250	250	250	188

Of the thirteen groups, three lost members, one switched from public membership to closed membership and another group added 188 members. The latter group, because of the consistent membership totals at 250, was likely done as a result of one person using multiple accounts to get to a specific number. This assumption is made because the total got to 250 and then did not change over the course of a week.

The Facebook contraction indicates that Dawson's involvement in the controversy was perceived as slightly unfavorable by some of his supporters, who left and thus disassociated themselves from him. Dawson did not see any benefit as a result of increased interest on fan pages and groups that were created by fans. His fan base on Facebook groups was small and overall, was largely not impacted by the event.

As a peripheral player in this controversy, Zac Dawson did not generate a large amount of interest. He only got 88 new followers on Twitter in response to the controversy. The location of his follower growth was spread across the country. The followers that Dawson got on Twitter followed fewer people and updated less often. There was some contraction of Dawson's fanbase on Facebook. As a non-famous athlete not being focused on as much by the media, Dawson appeared to get more of a free ride by fans that continued on in their lack of interest of him. For other less famous athletes involved in similar situations, this may be good news as they are likely to avoid similar culpability. Dawson's presence on Twitter did not appear to aggravate the situation, which supports the idea that athlete accessibility is good. Beyond that, there are some minor indicators that Dawson's involvement may hurt his personal brand and that it may have long term negative consequences for St Kilda's brand.

Nick Riewoldt

Nick Riewoldt is one of the superstars of the AFL. In 2009, he broke up with long time girlfriend Stephanie McIntosh, a well known Australian actress and singer. (Stephanie McIntosh, 2010, December 22) A December 27, 2010 search on Google.com. au brought up 258,000 results when the search term "Nick Riewoldt" was used. A search for Riewoldt Kilda brought up 383,000 results. As of December 26, 2010, a Nick Riewoldt fan page on Facebook has over 4,000 fans. When he went down with an injury during the 2010 season, so important is he to that team that people wondered how the team would do with out him. He has the popularity, all around good looks and television presence that he regularly appeared as an analyst while convalescing. He is the current captain of the St Kilda Saints. Of the three players involved in this controversy, he had the most visibility prior to the start of the controversy. During the

controversy, he was the player that the press chose to focus on above all others including Sam Gilbert, the player who took the pictures.

Riewoldt's pictures was described by Hinch (2010, December 24) of 3AW News Talk radio:

> Riewoldt says Gilbert snapped the unauthorised pic of him naked as he got out of bed. Sleeps in the nude like most people.
> Look at the picture. As thousands of you have. What do you notice, apart from the fact that Riewoldt has waxed his pubic area. And, perhaps, that he is well-endowed.
> Any normal man, sprung like that, would instinctively, inherently, try to cover his genitals. Riewold does not. His hands are on each side of his penis. As if posing.

The picture is not as bad as that of Nick Dal Santo, and is worse than of Zac Dawson.

Beyond the release of the picture featuring Riewoldt, the player has had greater visibility and involvement during the controversy because of his actions in response to the controversy and because of the alleged actions of his agent. His involvement in the situation has also been elevated because St Kilda drew the greatest amount of attention to the picture involving him, choosing to ignore the more sexually explicit picture of Nick Dal Santo that showed Dal Santo masturbating. Riewoldt held a press conference on December 21 to explain the pictures. A club spokesperson was quoted by Bryce Corbett (2010, December 22) on *The Punch* as saying: "Let's not forget" that "he is the five-time best and fairest winner of this football club and was all-Australian captain last year". During the press conference, Riewoldt told reporters "This photo was taken on a holiday by a teammate when I got out of bed over 12 months ago ... by a teammate who I trust. And I asked that it would be deleted then and there and clearly wasn't. And I'm bitterly disappointed at my teammate for that." (Brodie, 2010, December 21) During Riewoldt's press conference, St Kilda's CEO jumped in to clarify that Riewoldt's picture was taken from Sam Gilbert's computer with out Riewoldt's knowledge or consent. During Riewoldt's press conference, aired live on some Australian television and radio stations, Riewoldt also affirmed his support for his team mate and the club: "Sam and I are both professionals, and we will both give everything we've got to the St Kilda football club and we will have a great working relationship going forward." (Brodie, 2010, December 21) While this saga was going on, Riewoldt's agent repeatedly referred to the 17-year-old girl at the heart of the situation was "that woman." (Hinch, 2010, December 24) This type of phraseology aggravated a number of people observing the situation. (Hinch, 2010, December 24)

Riewoldt's fame, Riewoldt's full frontal nudity, Riewoldt's press conference and St Kilda's actions as they pertained to Riewoldt's involvement are likely contributing factors in how the controversy played out. These variables provide a backdrop from which to explore how the controversy effected Riewoldt's fan base, and by extension, St Kilda's fan base. This section will explore demographic changes, community size changes, and comparative growth of pro-Riewoldt and anti-Riewoldt groups on Facebook and LiveJournal. Facebook was chosen over other social networks because it is Australia's most popular social network and because the controversy started there. Outside of Twitter, it is probably the social network that is most involved in discussing the situation. Twitter's lack of groups for people to join, lack of demographic data available on the site and the necessity of doing more of a textual analysis are

why it is not explored more in this section. [86] Beyond Facebook, LiveJournal is the only other site to be analyzed as it provides some demographic information about its users. The purpose section is to understand who Riewoldt's fans are and how the controversy effected or did not effect demographic shifts.

Facebook provides demographic details about people who are interested in keywords that advertisers enter on their "What do you want to advertise?" page located at http://www.facebook.com/ads/create/ . On December 20, 26, 28 and 30, this page was checked, with various demographic data collected about people on Facebook who are interested in Nick Riewoldt. This data can be found in Appendix 13. Facebook's data is pulled from people who list people on their profile, group membership and fan page likes. Given that, it is fair to assume that some people who are counted as Riewoldt fans may belong to anti-Riewoldt groups; the two types of fans cannot be separated. At times, numbers do not add up, such as the total number of Australian men and Australian women interested in Riewoldt may not add up to the total number of people in Australia interested in Riewoldt. This is because not everyone puts all their demographic details in their profile. The absence of this may skew actual results, but it is the authors belief, despite the lack of evidence, that non-inclusion of demographic data is consistent across all groups; consequently, the author draws conclusions based on that assumption.

The first group to be looked at is the international reception for Riewoldt. On December 20 and 30th, the total number of fans in New Zealand and the United States were checked. For New Zealand, on December 20, there were fewer than 20 fans of Riewoldts. This was unchanged by December 30, 2010. In the case of the United States, there were also fewer than 20 fans on December 20. By December 30, this number had changed to 100. Interest in Riewoldt had not grown in New Zealand, but it had grown in the United States, where the AFL has been trying to grow the game and where the local leagues have been semi-successful in using social media to help Australian expatriates play and to get Americans interested in playing the game. That Americans took an interest in Riewoldt may be a negative, because it could hurt the league's ability to grow their international audience by making a joke of one their most visible players.

Across the whole of Australia, there were 11,880 people on Facebook who were interested in Riewoldt on December 20. By December 26, this number had gone up to 12,060. It went up again on December 28 to 12,180. By December 30, the number was again down to 11,880. The overall fluctuation was 300 total people, or 2.46% of totals fans based on the December 28 high. That number is not particularly significant. It is when Australian fans are broken down more that the results get more interesting.

Across Australian states, there was no change in the total number of people on Facebook interested in Riewoldt between December 20 and December 30 in the Australian Capital Territory, the Northern Territory, Queensland, Tasmania, Victoria and Western Australia, a 20 person increase in New South Wales, and an 80 person increase in South Australia. The two states that saw growth in interest in Riewoldt are very different in terms of their relationship with the AFL: One is a traditional AFL strong hold and one is not. That interest in Riewoldt was not

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[86] When the story first broke, the author attempted to find Riewoldt fansites on their own domains in order to explore how the controversy impacted on their traffic. None were found. Beyond that, Riewoldt data was collected alongside Zac Dawson and Nick Dal Santo information on smaller sites. Some of that data is available in Appendix 13. As the numbers did not change much, the author felt it would mostly be a repeat of the conclusions reached in the Dal Santo section and thus did not complete a similar analysis for Riewoldt.

higher in New South Wales is likely a good thing because the AFL is hoping to grow the game there, with an expansion team from the area set to start playing in the league in 2012.

Information about the total people interested in Riewoldt on Facebook was also collected on December 20 and December 30 for the following cities: Adelaide, Alice Springs, Broome, Cairns, Darwin, Devonport, Goulburn, Hobart, Melbourne, Perth, Rockhampton, Townsville, Warwick. Of these cities, three saw a change in the number of people interested in Riewoldt: Adelaide and Melbourne both saw an increase of 20 people, and Hobart saw an increase of 40 people. The other cities remained unchanged. These three cities are all in AFL territory. Riewoldt originally being from the city may explain the increase in interest from people living in Hobart. (Nick Riewoldt, 2010, December 23)

The controversy appeared to create additional interest in Riewoldt amongst women. There were 5,400 female Australian fans on December 20, 5,520 on December 26, 5,420 fans on December 28 and 5,560 female Australian fans on December 30, 2010. This is an increase of 2.87% and, percentage wise, is slightly above the overall interest increase. The numbers for women interested in men remained unchanged. The numbers for women interested in women increased by 20. Thus, homosexual female fans were more likely to be interested in Riewoldt as a result of the controversy than their heterosexual counterparts. This may suggest that heterosexual female fans were more upset by the controversy than their lesbian counterparts because they did list Riewoldt as an interest at the same rate as the whole Australian population.

Interest in Riewoldt by Australian men on Facebook moved around: 6,340 on December 20th, 6,540 on December 26th, 6,540 on December 28th and 6,360 on December 30, 2010. Interest by men went up by 200, only to come down and be 20 more than on the day before the controversy. For homosexual men, the numbers did not change. For heterosexual men, the total number of people interested in Riewoldt increased by 20. This situation is an inverse of women and suggests that responses by gays, lesbians, heterosexual women and heterosexual men were different and that all had different concerns regarding various aspects of the controversy.

For college graduates in Australia, the total number of people interested in Riewoldt prior to the scandal on December 20th was 1,060, on December 26th when the scandal began to be ignored by the media was 1,140 and remained that amount of December 30th. For people in college, the number was 460 on December 20th and was 380 on December 26th and December 30th. The total number of people in high school interested in Riewoldt was consistent across all three dates: 1,080. During the scandal, Riewoldt gained fans who had finished college, lost fans who were in college and remained unchanged amongst high schoolers. Like orientation, this suggests that these three different peer groups had different concerns over the scandal. The loss of fans from the starting period amongst those in college is one of the only groups to experience loss amongst all populations and may signal institutional problems for St Kilda and the AFL in how its responded to the controversy. It suggests that this group of soon to be wage earners who the club and league will be dependent on in the future for revenue may dislike the tactics used. Losing this group could also be a problem because historically, the Australian rules has been depicted as the sport for the more educated and middle class while rugby league has been portrayed as the game for the more working class.

Another way at looking at Facebook demographic data for Riewoldt involves looking at the ages of fans. This data was gathered on December 20 and December 30. For the group between 20 and 29 years old, there was an increase of 140 fans over that period. For the group between 30 and 39, there was a decrease of forty fans over that period. For the group between 40 and 40, there was no change between December 20 and December 30. For the group between

50 and 59, there was an increase of sixty people interested in Riewoldt. For the group between 60 and 64, there was an increase of forty people. Older fans were more likely to be interested in Riewoldt in the period after the controversy, whereas people in their 30s were less likely to be interested in Riewoldt.

When all the Nick Riewoldt Facebook demographic data is examined together, it suggests that there are institutional problems for either the St Kilda Saints or the AFL based on who stopped being interested in Riewoldt or who became interested in Riewoldt. Heterosexual women did not respond but heterosexual men did. University students lost interest but college graduates gained interest. 30 to 39 year olds lost interest but the cohorts below and two levels above them gained interest.

Beyond Facebook's demographic data, another way of understanding how a fan community responded is by looking at fan page and group expansion and contraction. This data was collected for Nick Riewoldt from December 20 to December 30th. The December 20th data was collected at 18:00 AEDT and was found doing a search on Facebook for Nick Riewoldt. On that date, 202 total fan pages and groups were found. From December 21 to December 30th, the total number of members was recorded at 7:00 AEDT using a script, facebook_followers.pl, found in Appendix 13. The results can be found in Appendix 13. The total number of groups was much higher than the total for both Dal Santo and Dawson, confirming the interest in and popularity of Riewoldt.

Of the 202 groups, at least one was subsequently deleted and two others moved from public to private. Thirteen saw a loss of between one and four members. Eighty-nine saw no growth or contraction in membership.   Forty-six saw an increase of one or two followers. Five saw a growth of one-hundred members or more. Of the five that saw one hundred plus increases, two have names that suggest they are pro-Riewoldt: Nick Riewoldt and Nick riewoldt fans! The other three have names that imply a negative Riewoldt sentiment: I never cry. lol jk I'm Nick Riewoldt., I can kick a goal from 1 metre out lol jks im Nick Riewoldt, and Whats red, white and black and crys like a little girl?? NICK RIEWOLDT. Of the other groups in the top ten for most membership gains, four express a negative sentiment towards Reiwoldt in their names and one implies a positive sentiment. If the membership growth of the pro-groups and negative groups, the total is 813 and 953 respectively: Negative sentiment Riewoldt groups grew faster than positive sentiment groups.

Facebook users had a mixed reaction to Riewoldt related groups. A number of them joined pro groups and anti-groups. On the other hand, most groups did not see much membership change as a result of the controversy and very few saw losses. If liking or joining a fan page or group is seen as expressing allegiance or solidarity to a group or expressing interest in a specific, more people were willing to do that than the inverse of disassociating from groups by quitting them. That group willing to express an opinion is the important part here: A lot more people were willing to align themselves with some Riewoldt sentiment than they were to disassociate. The vocal support of both issues probably indicates larger problems for Riewoldt and his club: People are less content to disassociate and quietly leave but rather feel the need to be vocal in their position. This means that the issue likely will have a longer shelf life than if people had chosen to remain quiet or disassociate.

LiveJournal is a popular Australian blogging site. Its characteristics are discussed more in the section about Nick Dal Santo. One of LiveJournal's features is that it allows people to list interests, and many people list very athletes. On December 20 and December 30th, the total number of people interested in Nick Riewoldt was checked. There was no change in totals or

composition of the six people who listed Riewoldt as an interest. Of the six who listed as an interest, two listed Nick Dal Santo as an interest, with a crossover of 33%. Of the six who listed Riewoldt as an interest on LiveJournal, only one has updated since the scandal broke [87] and in her recent updates, she has not mentioned the situation. Location wise, only two of the six list a city of residence and both are from Melbourne. Five of the six list a country of residence and all of those are from Australia. Four of the six list a year of birth: 1983, 1989, 1990 and 1990. This puts the mean year of birth at 1988 and the mean year of birth at 1989. The demographic composition puts them into a group of colleged-aged fans who are likely ideal fans in terms of who the AFL is trying to cater to.

Facebook showed a small demographic shift in terms of who was interested in Nick Riewoldt: Fans were gained for people between 50 and 64 years of age and between 20 to 29 years of age. Both men and women became fans of Riewoldt in the period after the controversy, with relatively big gains for lesbian women and heterosexual men. Riewoldt also gained fans amongst college graduates on Facebook. Interest increased around Hobart, Riewoldt's home town. While those groups gained, Riewoldt lost fans in college and fans whom were between the ages of 30 and 39. These shifts occurred while people were active in joining groups and fan pages in support or condemnation of Nick Riewoldt. Over on LiveJournal, Riewoldt's fans are in their early 20s and their stated interest in the athlete did not change as a result of the controversy but neither did it lead them to state a position, unlike their peers on Facebook. If LiveJournal is ignored, the Riewoldt data suggests that this is a controversy that effected his fanbase and will have long lasting consequences, as people did not remain silent, instead choosing to take sides for him or against him.

Nick Dal Santo

Nick Dal Santo was drafted by St Kilda at the start of his career and has been an important component to the team since his 2004 season. (Nick Dal Santo, 2010, December 25). A December 27, 2010 search on Google.com. au for "Nick Dal Santo" brought up 325,000 results. As of December 28, 2010, he had 3,660 fans on Facebook. [88] Of the three players, he is the second most popular.

Of the players photographed, Dal Santo's picture is probably the worst. Hinch (2010, December 24) described the picture and scene:

> Then there's the other photo of Dal Santo, presumably taken by 'artist' Gilbert. Apparently the Bill Henson of the footy set. The club hasn't even attempted to explain this one.
> Dal Santo is captured, with his penis exposed, playing with himself.

This section will look at the size of the fan community for Nick Dal Santo on Facebook and on a selection of other, smaller social networks and websites to see if the controversy resulted in a response amongst them. Smaller sites are important because they give an idea as to the wider world's awareness of Australian sport events and insight into how niche communities

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[87] This user is http://queeniegalore.livejournal.com/ .
[88] The number comes from http://www.facebook.com/ads/create/ . When Zac Dawson was put in, the name was not included as an interest. Riewoldt 12,180 fans.

view them. Sites referenced include 43 Things, Alexa, bebo, BlackPlanet, blogger, Care2, delicious, digg.com.au, ebay, Facebook and LiveJournal.

43 Things is a goal setting site. As of December 28, 2010, Alexa ranks the site as the 2,833 most popular in Australia. People use the site to goals related to athletes, including ones like "Meet Michael Jordan" [89] and "See Lebron James play." [90] On December 21, 26 and 28, the author search 43 Things for the phrase "Dal Santo." There were no search results. On December 28, in order to verify that there was nothing related to Dal Santo on 43 Things, a Google search was done using the phrase: "Dal Santo" site:43things.com. This too resulted in zero results. Nick Dal Santo was not popular enough to rate a goal before the event; his involvement did not rate highly enough for 43 Things's users to create one.

When the controversy first happened, Google was searched in an attempt to identify Nick Dal Santo fansites or a personal site. In addition, the AFL website and Wikipedia were both checked. No fansites were found. If they had been found, it would have been possible to try to get data from Alexa regarding fansite rank.

Bebo is a social network owned by AOL. As of December 28, 2010, Alexa ranks it as the 874th most popular in Australia and 159th most popular in New Zealand. The Australian sport community on bebo has become mostly inactive, despite a high point where groups like the Canberra Raiders dance squad had their official internet presence on it. Early on December 21, 26 and 28, Bebo was searched for Nick Dal Santo. On both dates, 2 people and 1 group were found. The group was a general group dedicated to the St Kilda Saints. The two people were both female and one listed her age as 18. The picture of Nick Dal Santo masturbating did not activate the bebo community; no one decided to add or remove him as an interest in response.

BlackPlanet is a niche social networked geared towards African Americans and other non-Asian, non-Caucasian minorities. The size of the Australian sport community on the site is small but growing, with one person having listed the NRL as an interest early in 2010 and four people having listed it as an interest by early December 2010, zero people had listed the AFL as an interest and by December four people had. BlackPlanet's user profile search was used on December 21, 26 and 28th to search for people who listed Nick Dal Santo as an interest. On all three dates, the total results was zero. BlackPlanet's community was not activated in such a way as to add Nick Dal Santo as an interest.

Blogger is a popular blogging service run by Google. According to Alexa on December 28, it is the ninth most popular site in Australia. Users can list their interests on their profile page and a number of Australians have done that in relation to their favorite leagues, clubs and athletes. On December 20, 21, 26 and 28, a profile search for Nick Dal Santo was conducted. [91] On all four occasions, no one was found to have listed him as an interest. The controversy did not activate any of his fans, new or old, to list him as an interest.

Care2 is a social networked aimed at people who want to do good and help make the world a better place. It offers its members the ability to blog, to upload pictures, to create petitions, to personalize their profiles, to join groups, and to create and send e-cards. Nick Dal Santo was searched for on December 20 and December 26, 2010. On both occasions, there were zero search results across all content types. This means no one blogged about the situation, nor

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[89] Goal can be found at http://www.43things.com/things/view/91151/meet-michael-jordan . 37 people have this as a goal on December 28, 2010.
[90] Goal can be found at http://www.43things.com/things/view/842695/see-lebron-james-play . 4 people have this as a goal on December 28, 2010.
[91] The search can be found at http://www.blogger.com/profile-find.g?t=i&q=Nick+Dal+Santo .

created a petition to express an opinion regarding Dal Santo's actions. This suggests that the commnity either was not aware or did not care.

Delicious is a social bookmarking site. In December 2010, Yahoo announced they were looking for a buyer for the site and if they could not find one, they were planning to close it. This decision was made despite the fact that Alexa ranked the site as one of the top 250 sites world wide in December. There has been an active Australian sport community on the site since at least 2008, if not earlier. As of December 28, St Kilda's website has been bookmarked by 35 different users. On December 23, 26 and 2, Nick Dal Santo was searched for. On all three days, the search result was 1 bookmark. This bookmark did was posted prior to October 2009, was bookmarked by one individual and did not reference the controversy. No one was interested enough to add a bookmark about the controversy. The lack of new links may partly be a result of Yahoo's decision to possibly close the site, but is also probably a result of lack of interest as witnessed by behavior on other sites.

Digg is a social news site. Users can submit news stories that other users can vote up or down. As of December 28, 2010, Alex ranked it as the 109th most popular site in Australia. The site is important enough that the AFL have an official account, where they submit their own news stories. The dig page about the link includes how many diggs the link has, the date the link was submitted and allows people to make comments on the link. A search was done for "Nick Dal Santo" on December 28, 2010. There were 11 search results. Of these, two were submitted in the period after the controversy broke. Figure 3 shows a screencap of these two submissions.

Figure 18. Screencap of Nick Dal Santo related Digg submissions.

One article was dugg three times and one article was dugg once. Most of the site looked at so far are sites where people would list Dal Santo if they were a fan of his or where they would join a group to express displeasure regarding his actions. Digg is different and caters to an audience of people looking for news. Thus, it is less surprising that people referenced him here, where they might not otherwise. Despite the submissions though, no one was interested enough in the topic on the site to comment on the two submissions.

ebay.com.au is a popular Australian auction site. As of December 28, 2010, there are over 500 items on sale or auction related to the St Kilda Saints. A search was run for Nick Dal Santo on December 23, 26 and 28. There were 49, 53 and 51 results respectively. It is hard to

interpret what this means as most auctions last one week. Auctions ending on the 23 would have been listed the 16th, four days before the start of the controversy. Items ending on the 28th would have been listed on the 21, the day the controversy started. This monitoring period included a holiday, which could have complicated item pick up and sales. This could have discouraged people from listing items, despite the potential interest in Dal Santo items as a result of the controversy. In this case, no conclusion can be made regarding what the number of listings mean in terms of how it relates to the controversy.

Around 6:00 AEDT on December 21, a search was done on Facebook to identify Facebook groups and pages that mentioned Nick Dal Santo. Ten groups and pages were found. From December 21 to December 28, each group had the total membership checked at 7:00 AEDT using a script, facebook_followers.pl, found in Appendix 13. The results for the full period are available in Appendix 13. An abbreviated version of the results for the period between December 21 to December 25 are found in Table 6. Groups and fan pages that had no change were removed.

Table 28

Nick Dal Santo Facebook Group and Fan Pages

Name	Type	Url	21-Dec	22-Dec	23-Dec	24-Dec	25-Dec	Difference
nick dal santo	Sports & Recreation	gid=6067599314	245	245	245	246	246	1
Nick Dal Santo appreciation!	Sports & Recreation	gid=1547703677 52	86	86	86	85	85	-1
Nick Dal Santo Wanging Out	Page	Nick-Dal-Santo-Wanging-Out/1752557991 62886	2	3	3	4	6	4
NICK DAL SANTO WIN A FUCKIN HARD BALL GET FOR ONCE	Sports & Recreation	gid=2029949029 99	36	36	36	35	35	-1

Like Zac Dawson, the scandal did not have much of an effect on the size of Facebook groups and fan pages featuring Nick Dal Santo. The one group that saw growth was likely created in response to the situation and only gained four members, topping off at six. That membership increase is hardly notable. Thus, while the pictures of Nick Dal Santo were the most problematic, he was not punished by having the fan base for him on Facebook contract significantly.

LiveJournal is a popular blogging service with elements of social networking involved like the ability to add friends, join communities and customize a user profile. As of December 28, 2010, Alexa ranks the site as the 103rd most popular site in Australia. The site has a number of Australian sport communities, including ones for the Socceroos, Brisbane Lions, Collingwood Magpies, NRL and Tim Cahill. A profile search was done on December 20 and 28 for Nick Dal Santo. The total result was 5 on both dates. Of these five accounts, only one had updated since the controversy broke and that user did not post a public entry referencing it. [92] Of the five

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[92] The LiveJournal account that was updated was http://kei-sainter.livejournal.com/ .

people who listed him as an interest, three listed their hometown as Melbourne, one listed their hometown as Canberra and one did not list a hometown. All five listed their year of birth; the group's mean year of birth was 1988.8, the median year of birth was 1989 and the range was 1986 to 1991. Amongst that demographic of almost 20-something fans, none were so outraged by the situation that they felt compelled to remove Dal Santo as an interest or to update their LiveJournal about him. Like other networks, there was no real activity.

The examination of smaller networks show that Nick Dal Santo does not have a large fan base. The fan base that he did have was not motivated to disassociate from the athlete as a result of the controversy. On sites that allowed picture uploading like Care 2, no one uploaded images related to Dal Santo. Of the sites with blogging components like Care 2 and LiveJournal, no one updated to reference the situation. Ebay results were too ambigious to draw a conclusion about. Digg and Facebook were the two sites that saw the largest amount of activity around the time of the controversy, and both did reference it. The level of activity was small, and in the case of digg, did not necessarily get referenced by fans or haters of the player and league. On the whole, niche communities, smaller social networks and websites did not react to Nick Dal Santo's involvement in this latest AFL controversy.

St Kilda Saints

St Kilda has been at the heart of this controversy. Its players have been splashed in print in publications like the Melbourne's Herald Sun with photographs of players in their St Kilda jumpers. The girl at the heart of the scandal has been branded as the "St Kilda Girl." (Herald Sun Editorial Staff, 2010, December 29) When the scandal involving the girl broke in June, St Kilda was implicated in ways its player were not with the press referring to the situation involving two unnamed St Kilda players. (Sheahan, 2010, May 27) (Newstalk ZB, 2010, May 27) (Riley, 2010, May 30) These links between alleged victim, players, club and league continued on as the story broke again with the release of pictures in late December. (Dowsley, 2010, December 21) (Phelan, 2010, December 20) (AAP, 2010, December 21)

Dating back to May, there were two narratives, two perspectives being put forth both by the media and fans. There was the perspective of the players, St Kilda Saints and the AFL, and there was the perspective of the teenaged girl. Back them, columnists like Riley (2010, May 30) of the *Herald Sun* took the side of the teenaged girl. This battle of two perspectives, of who did what, whom was guilty and who was to blame extended into December, when the pictures were released. People again took sides. Singh, (2010, December 28) a journalism student at the University of Sydney, had her editorial in support of the teenaged girl posted on *The Age*'s website. The *Herald Sun* editorial staff took the side of the players and club, citing the invasion of privacy as part of their rationale, saying that "The best outcome may be for the girl to apologise for what she has done and accept counselling." (Herald Sun Editorial Staff, 2010, December 29)

As the story wound down in the media, it was continuing to gain traction with a number of social media activists claiming that St Kilda had victimized the girl, that the league and club were engaging in misogyny in their attempts to keep their all important female and family friendly audience (PQ, 2010, December 28) (Hinch, 2010, December 29) and perception of superiority over rugby league because of their moral superiority. (Tedeschi, 2010, December 23) There were allegations that AFL and St Kilda or their supporters were "astroturfing," trying to derail legitimate conversations about the scandal in order to silence critics of the league, team

and players. [93] (Foale, 2010, December 31) There were claims that the AFL and St Kilda were behaving like bullies, who sought to destroy the reputation of a 17 year old girl in order to protect their own reputations. (Kim, 2010, December 28) Derryn Hinch posted several blog entries critical of the AFL and St Kilda's actions. Links to these posts were shared on social networking sites like Twitter. People following the controversy could and did keep up with new blog posts and the discussion by following the #dickilieaks hashtag. The message shared in some of the blog posts was one that clearly painted St Kilda in an unfavorable light:

> The comparison to Vatican cover-ups of sex abuse seems more and more apt. As with the Catholic Church, the institution of AFL football has lost its moral bearings over Dickileaks in the scramble to protect its reputation from outside attack. And, like the Vatican, the Saints (and the AFL and its flunkies in the media) become complicit in the crimes they seek to cover up. (PQ, 2010, December 28)

After having held a press conference on December 21 and responded to media requests, St Kilda and its spokespeople became mostly silent on the topic by December 24, 2010. They did not subsequently mention the controversy on their Twitter account again and, as of December 31, there was only one reference to the controversy on their home page. After December 24, the official method for handling continued discussion appeared to be silence and ignoring it.

It is against this backdrop that the impact of controversy on St Kilda needs to be examined as the Internet played a key role in the distribution of pictures, publicity regarding that dissemination, why the mainstream Australian sport media picked up the story, and the refusal of the story to die despite the club's silence. This section will explore the impact that the St Kilda nude photo controversy has had on the club's fanbase and try to determine if the story will have an impact beyond the team to the league. This section will also seek an answer to how effective St Kilda's crisis management strategy was in terms of managing the online fan response. This will be done by looking at behavior by fans and non-fans as it pertains to St Kilda and the AFL in the period prior to the release of the photos, in the period between December 20 and December 25 when the story had the most media play, and the period between December 26, 2010 and January 1, 2011 when the story largely continued unreported on social media sites like Twitter and on blogs like Derryn Hinch's website. Google New's chart tracking mentions of the story will be looked at to provide additional context for media interest as it pertains to other online discussion. IceRocket, a site that tracks blogs, will also be looked at in order to compare historical interest in teams across the blogosphere. When all these things are looked at as part of one picture, it should become clear as to how the club impacted and was impacted by this latest scandal.

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[93] These allegations also made their rounds on Twitter:
http://twitter.com/AnthonyQLD/statuses/20137700006830082 dated December 30, 2010 says " AnthonyQLD: @vidposter @its_k_isabella Tough men hiding behind fake twitter accounts to harass a 17yo girl -Their mothers will be very proud #dickileaks" http://twitter.com/eunce/statuses/19874436001824769 dated December 29, 2010 says: " eunce: RT @philquin: fake twitter a/cs for defending sexual predators and vilifying teenage girls suggests evolution still has work to do #dickileaks" http://twitter.com/aussiebluejade/statuses/19622374638886912 dated December 29, 2010 says: " aussiebluejade: @pauldwilkie @adam_m_smith @HumanHeadline @CatherineDeveny Wondering why Paul needed to use a fake Twitter for that tweet #dickileaks "

Google News.

Google provides many charts and ways to visualize information on the content found in its archives and how users try to access that content. One such visual tool that Google provides shows how many news story were posted around a specific event and the total number of stories posted by date. For this controversy, Google News grouped articles around two stories. The first grouping is around Riewoldt and the nude photos with the chart available in Figure 4. The second grouping involves the teenaged girl and the chart is in Figure 5.
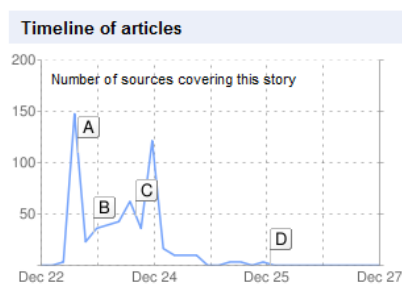
Figure 19. Google News total story count for Riewoldt pictures.

Figure 20. Google News total story count for teenaged girl.

These Google News charts confirm that the story started around December 19, when the girl announced her intended actions on Facebook and Twitter, picked up a huge amount steam in the media very late on December 20, early on December 21, peaking again later on December 21 after Riewoldt gave his press conference. The picture story was done in the media by December 23. The first peak on the teenaged girl aspect of the story peaked when the media and the AFL launched an attack on the girl's credibility and peaked again late on December 23, early on December 24 when the media began to question attacks on the girl. The teenaged girl story then ended largely ended by early on December 25. This data supports the author's observations and assumptions in this paper regarding media coverage of the story.

IceRocket.

IceRocket is a blog search engine. One of the search tools IceRocket provides is a way to visualize the total number of blog posts by day for the past 30 days that mention user inputted keywords. Like the Google News charts, IceRocket's charts provide another way of viewing how the scandal played out. IceRocket's search results pull from a different content type, blogs, that do not include as much media coverage. Instead, it could be said that IceRocket represents a wider perspective based on Australian and international bloggers. "St Kilda", "Australian Football League", Nick Riewoldt, Zac Dawson and Nick Dal Santo were searched for and the resulting graph can be found in Figure 6.
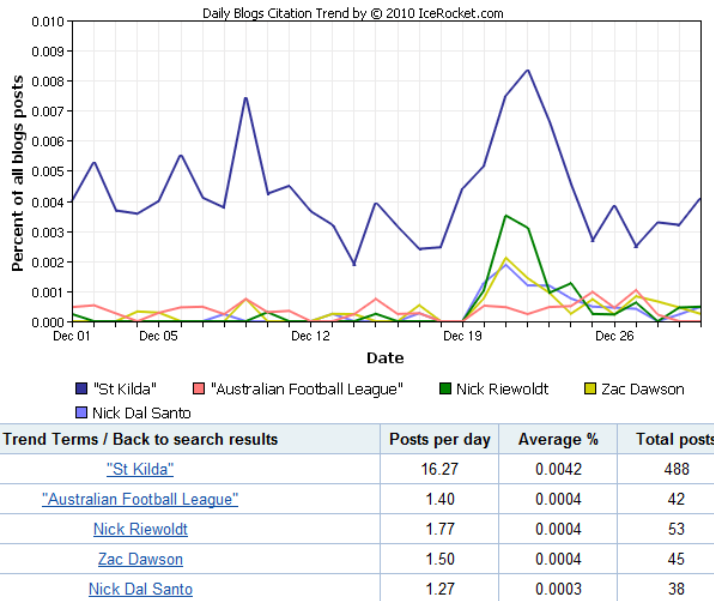

Trend Terms / Back to search results	Posts per day	Average %	Total posts
"St Kilda"	16.27	0.0042	488
"Australian Football League"	1.40	0.0004	42
Nick Riewoldt	1.77	0.0004	53
Zac Dawson	1.50	0.0004	45
Nick Dal Santo	1.27	0.0003	38

Figure 21. IceRocket trends chart.

Like Google News, the story appeared to peak in the period between December 20 and December 24, 2010. The number of mentions at the height of the controversy was not much greater than a peak around December 9. The   difference is that the peak lasted longer during the period of the controversy. The other difference is that discussion of players peaked during the later period, while the peak did not around December 9. There appears to have been a second smaller peak related to the controversy around December 26, which coincides with Twitter data referenced later in the St Kilda section. Blog posting volume related to St Kilda immediately dropped on the 27th of December before increasing again. After the 26th of December, discussion of the three players continued at a rate elevated from the pre-controversy period. Against the backdrop of the Google News data, this suggests that interest in the St Kilda nude photo controversy continued even after media interest dropped off.

Twitter.

Twitter played a central role in this the St Kilda nude photo controversy, with a large part of the public discussion taking place on the network. It is through Twitter that some journalists like Derryn Hinch have been promoting their continued coverage, coverage that their own media outlets won't publish, of the St Kilda story. It is also the platform that the teenaged girl at the heart of the controversy interacts with journalists and others on, helping to further her own narrative involvement. There are many ways to look at Twitter. One way is to look at who is tweeting about the controversy using the popular controversy related #dickileaks hashtag and what those users have tweeted about sport wise prior to this. Another way is to look at the volume of tweets being posted about the controversy using the #dickileaks hashtag. A third way to look at the controversy is to use a venn diagram to see what sort of associations people are making when they tweet about parties involved in the controversy. A last way to look at the controversy is to look at the differences between followers of the AFL, St Kilda and the teenaged girl at the heart of the controversy.

TwapperKeeper is an application that allows users to archive tweets across the whole of Twitter based on keyword and hashtags. One a user a notebook for keywords and hashtags, Twapper Keeper plugs into Twitter's API and attempts to pull the last 1,500 tweets from search. (FAQ, 2010, October 27) The archives are than accessible to several applications that allow for tweets to easily be analyzed. Prior to December 29, 2010, the author had created 121 archives for tags and keywords related to Australian sport. [94] On that date, notebooks were created for #dickilieaks and #dikileaks. On December 30, notebooks were created for Nick Dal Santo, Nick Riewoldt, #skfc, #stkilda and @stkildafc. On December 31, notebooks were created for #dalsanto and #riewoldt.

One application that TwapperKeeper powers is Summarizr. Summarizr tracks the total number of tweets for a hashtag or keyword, total number of people who Tweeted it, total hashtags found in those Tweets, top ten people who Tweeted that hashtag, top ten @ replies including that hashtag, top ten conversations between people involving that hashtag, and top ten urls mentioned in Tweets including that hashtag.

The people who tweeted, were recipients of @ replies and engaged in conversations is one of the most important pieces of information that Summarizr provides. #dickileaks was the hashtag adopted by critics of the controversy early during the stage involving the photos being released. [95] The top ten people across various categories can give an idea as the relative interest the participants had in the AFL prior to and during this controversy based on the other archives there were included in. The top ten tweeters of this tag as of the morning of January 1, 2011 were AuxiliaryEgo (90),[96] AnthonyQLD (45), Blackmask_13 (44), JanetJane89 (40), MsMirf (37), tradrmum (37), Ian__P (31), fishcoteque (29), NakedSaints (27), and yamiexup (26). The top ten recipients were HumanHeadline (292), CatherineDeveny (123), Its_K_Isabella (121), mikestuchbery (72), MichaelByrnes (59), LeslieCannold (56), aussiejustice (53), MsMirf (45), AuxiliaryEgo (40) and AnthonyQLD (34). The top ten people conversations with pairs of Twitter users using this tag were (12) Blackmask_13 <--> MsMirf (9), (5) MsMirf <-->

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[94] A list of all the notebooks created by the author can be found at
http://twapperkeeper.com/allnotebooks.php?type=&name=&description=&tag=&created_by=purplepopple
[95] Summarizr's information about the #dickileaks hashtag can be found at
http://summarizr.labs.eduserv.org.uk/?hashtag=dickileaks . A screenshot of this information from January 1, 2011 can be found in Appendix 13.
[96] The number in (brackets) indicates how many tweets they made, received or used in a discussion with some one featuring the #dickileaks hashtag as of the morning of January 1, 2011.

tradrmum (10), (13) AnthonyQLD <--> Its_K_Isabella (1), (5) mollyfud <--> tradrmum (3), (3) AnthonyQLD <--> MsMirf (5), (3) cyclingscotty <--> tradrmum (5), (5) MsMirf <--> rob_jj (2), (3) Blackmask_13 <--> mollyfud (4), (2) mollyfud <--> SharpContrast (4), and (4) aussiebluejade <--> pauldwilkie (1). With the exception of @Ian__P, [97] @mikestuchbery[98] and @MichaelByrnes , the rest of the Twitter users on that list only appeared in the #afl notebook[99] or did not appear in any other sort related notebooks found on TwapperKeeper. The lack of the most active users of the #dickileaks tag using other Australian sport related tags suggests that the outrage came from outside the AFL and St Kilda's existing fanbase. This can be perceived as a positive for the AFL and St Kilda in that they did not offend their existing fanbase. It can also be perceived as a negative for the AFL and St Kilda as it likely will make it more difficult for the both to grow their fanbases.

   Another tool that can be used to analyze Twitter hashtag usage is What the Hashtag?!. Like Sumarizr, it provides statistics regarding hashtag usage. One statistic it provides is the total count of tweets using a #hashtag for each day of the last seven. The total uses for #dickileaks for the period between December 25 and December 31 on What the Hashtag?! were available on the site. [100] A graph of this data can be found in Figure 6.
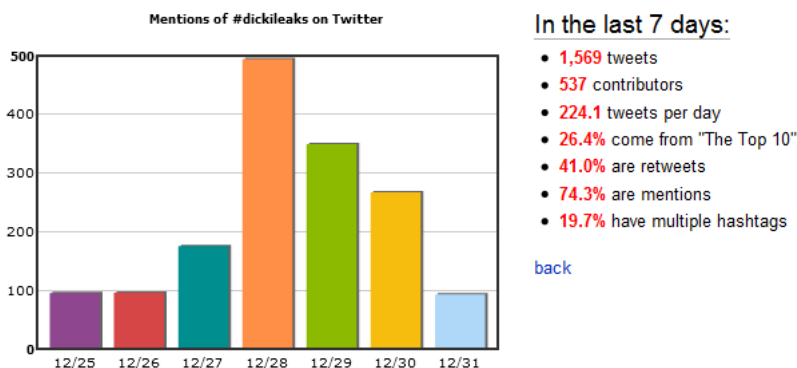

Figure 22. What the Hashtag?! screenshot for #dickileaks

This chart shows that interest in the scandal, using this hashtag, peaked on December 28, a few days after the media had gone silent on the story. December 31's hashtag usage total was only 6 less than the total for December 26. Based on this hashtag alone, this suggests that Twitter

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[97] @Ian_P appeared in the #nrl and #cricket notebooks.
[98] @mikestuchbery appeared in the #dreamteam and #fevola notebooks. DreamTeam is an AFL fantasy football site. Fevola is a famous AFL player involved in his own share of scandals in the past.
[99] AuxiliaryEgo , @JanetJane89, @tradrmum, @fishcoteque, @NakedSaints, @yamiexup, @Its_K_Isabella, and @LeslieCannold were the Twitter users who appeared in the #AFL notebook. These were separated out from other tags like #nrl or #cricket or #theashes because the author observed that many people using the #dickileaks hashtag were also including #afl in their tweets.
[100] http://wthashtag.com/Dickileaks is the location of What the Hashtag?! 's #dickileaks information.

interest in the controversy peaked later than media and blogger interest as expressed in the Google News and IceRocket graphs.

Another tool available to do an analysis of the content of Tweets involving the controversy is TwitterVenn. TwitterVenn creates Venn diagrams based on keywords that a user selects. The service uses Twitter's search API to find Tweets that mention the two or three teams the user selected, determines if the terms were used together or independently, counts the total Tweets and then creates the Venn. (Clark, 2010) TwitterVenn's usage of Twitter's search API suggests that it can only pull the 1,500 most recent Tweets for each of the keywords searched for. Figure 8 shows the total references to St Kilda, AFL and dickileaks as they pertain to each other. [101]
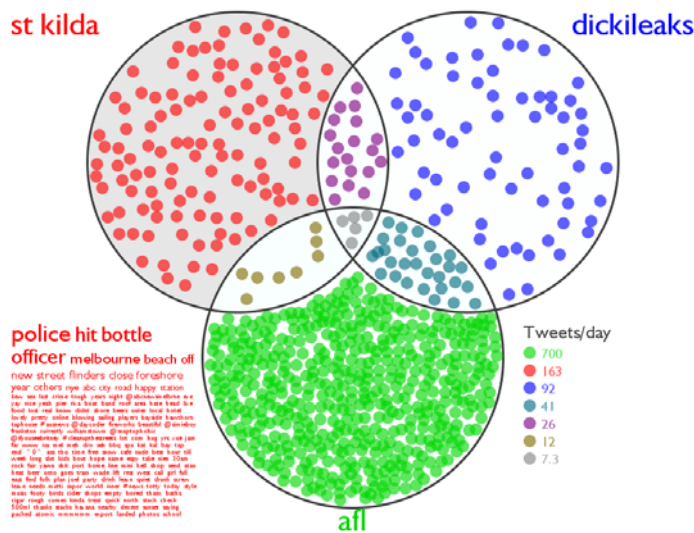

Figure 23. TwitterVenn for St Kilda, AFL, Dickileaks

This Venn suggests that more people Tweeting about the controversy associated the scandal with the AFL than they associated it with St Kilda.[102] If this is true, it suggests that the scandal may have longer-term consequences for the AFL in terms of reaching new audiences than St Kilda has. The good news for the AFL though is that there is a lot of discussion involving the league and comparatively little of it involves the scandal or the St Kilda Saints; most people tweeting about the topic aren't doing so involving an AFL damaging hashtag.

While content analysis provides some insight into how people think about a topic, more useful data may involve who follows a topic, what people are happy to have others know who

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[101] This Venn can be found at http://www.neoformix.com/Projects/TwitterVenn/view.php?q=st+kilda,dickileaks,afl and was created at 10:00 AEDT on January 1, 2011.
[102] This may be a bit misleading because there are more ways to make short hand references to St Kilda than there are ways to make references to the AFL. Tags that have been used for St Kilda include #skfc, #gosaints, St Kilda Saints, Saints.

they follow, who people identify with in terms of who they follow. One way of processing that information is to compare the people on Twitter that follow the major parties involved in this controversy: the teenaged girl, the St Kilda Saints and the AFL. Follower data for all three was gathered using ozfollowers.pl, a script found in Appendix 5. The teenaged girl data was gathered on December 28, 2010. The AFL and St Kilda Saints data was gathered on December 26. Once this done, the total followers by city was calculated, along with the mean, median and mode for total followers, friends, list appearances and status updates for all followers of those three accounts. This data is available in Table 7.

Table 29

Teenaged Girl, St Kilda, AFLStatistics for Twitter Followers

Account	Math	followers	statuses	friends	listed
Girl	Mean	787.4375	658.2617	230.4234	13.57498
	Median	12	20	49	0
	Mode	0	0	1	0
St Kilda	Mean	1962.346	1033.214	1910.21	44.42562
	Median	27	42	92	0
	Mode	1	0	1	0
AFL	Mean	170.0228	608.3221	246.3457	5.990682
	Median	19	30	74	0
	Mode	0	0	1	0

This data suggests that each party involved in the controversy has its own unique audience. Followers for the teenaged girl[103] do not appear on many lists, they follow fewer people than the AFL and Saints and are followed by more people than the AFL. Her followers are less active than Saints fans but more active than AFL fans. Based on this data, if all three parties were to post a message on Twitter, the girl and the AFL would have a better chance of their message being received than the Saints. The girl's audiences updates and likely reads her. That is probably worth knowing and may explain why the Saints and AFL attempted to discredit her: Her audience can easily listen to her.

  Another way of looking at follower data is to compare what cities each account's followers come from. This data is picked up when OzFollowers.pl is run. The program looks at the user inputted location and compares that to a list of human and machine generated conversions to city, state and country. Once this was done, the total followers by city for each account were tabulated. Table 8 shows the top ten follower cities by account.

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[103] Her account had roughly 12,600 followers when it was checked on December 28, 2010.

Table 30

Total Followers for girl, St Kilda, AFL by City

Location	girl	Location	stkildafc	Location	AFL
Melbourne, Victoria, Australia	2299	Melbourne, Victoria, Australia	1270	Melbourne, Victoria, Australia	3335
Sydney, New South Wales, Australia	696	Sydney, New South Wales, Australia	138	Perth, Western Australia, Australia	590
Perth, Western Australia, Australia	321	Perth, Western Australia, Australia	100	Sydney, New South Wales, Australia	537
Adelaide, South Australia, Australia	318	Adelaide, South Australia, Australia	90	Adelaide, South Australia, Australia	509
Brisbane, Queensland, Australia	249	Brisbane, Queensland, Australia	73	Brisbane, Queensland, Australia	365
Canberra, Australian Capital Territory, Australia	99	Geelong, Victoria, Australia	45	Geelong, Victoria, Australia	143
Geelong, Victoria, Australia	68	Canberra, Australian Capital Territory, Australia	37	Canberra, Australian Capital Territory, Australia	141
Gold Coast, Queensland, Australia	67	Gold Coast, Queensland, Australia	28	Gold Coast, Queensland, Australia	130
London, England, United Kingdom	42	Hobart, Tasmania, Australia	21	London, England, United Kingdom	79
Hobart, Tasmania, Australia	31	London, England, United Kingdom	20	Hobart, Tasmania, Australia	68

The girl has a larger audience in Melbourne than the Saints. She has many more followers than the AFL and Saints have in Sydney. Aside from that city, she does not have more followers than the AFL in any of their respective top ten. The girl has more followers than St Kilda has in every city on the list of top ten cities. That the girl's popularity by city tracks well with the AFL and Saints; it is not a good sign for either organization. The matching rank of popularity by city confirms national interest in the story. Interest in the controversy was not contained to a small geographic area around where the girl was from or Melbourne where the media appeared to give the story the most attention; interest paralleled the AFL's market on Twitter.

Twitter follower location data can also be looked at from the perspective of Australian state. The script that gathers locations can fill in country and state information if the location field is blank or is determined to be unknown. It does this by using the time zone field. Twitter's time zones for Australia are state, not time zone specific. This means that there are fewer unknowns on that level. The totals can be visualized in Figure 9.
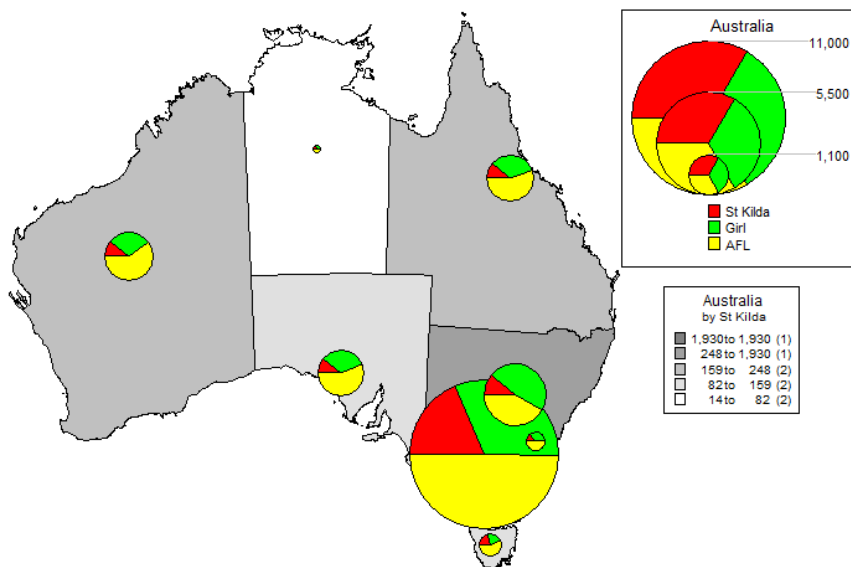
Figure 24 . Twitter Followers for Girl, St Kilda and AFL by Australian State.

With the exception of New South Wales, the follower totals by state mirror that of the top ten total followers by city. New South Wales differs because there are more followers in New South Wales for the girl than there is for the AFL: 1080 to 952. The difference is 128. The AFL has an expansion team planned for the Sydney area that will join the league in 2012. Negative associations for the AFL in the New South Wales are especially problematic for them if they hope the team will be successful. If locals associate the league with the actions of St Kilda's organizational response and the player's alleged treatment toward the girl, this could have far-reaching and negative consequences.

Overall, Twitter suggests that the results are not ideal when it comes to how users reacted to the controversy. The most popular people discussing the controversy using the #dickileaks tag did not appear to be fans of the league, not having participated in other on Twitter conversations featuring Australian sport related hashtags. While the team and the league may have started to ignore the controversy by the 24th of December, Twitter users continued to discuss it with peak usage for the #dickileaks hashtag happening on December 28, 2010. More people were using the #dickileaks hashtag in connection with the AFL than they were using it in connection with the Saints, signaling that participants connected the players to league wide attitudes rather connecting it to institutional problems inside a single club. The follower statistics for the girl, St Kilda and the AFL suggest that of the three, the girl has more ready access to the audience that follows her because they update frequently and follow fewer people than St Kilda; this means they are more likely to see her on message tweets than St Kilda followers are. The girl has more followers in every city of the top ten cities she is popular in than St Kilda. This reinforces the idea that St Kilda's ability to share its message to current and future fan base is difficult because

the girl has greater reach in those cities. When looking at follower data by state, there appear to be institutional problems for the AFL as the girl has more followers than in New South Wales than the AFL does. If New South Wales's potential fans make the connection between football players and sex, this may make it harder for the AFL to market the GWS Giants because of negative associations. The ability for the AFL and St Kilda to reach a new market on Twitter as a result of this controversy was likely severely damaged.

Facebook.

Facebook is Australia's largest and most popular social network. Size alone makes it worth considering in order to understand how the sport community on the site responded to the controversy. This section will look at Facebook data from two perspectives: Demographic shifts in the Saints fanbase on Facebook, and growth of the Saints Facebook official fan page compared to other teams in the league.

Facebook provides demographic information about its user interests at http://www.facebook.com/ads/create/ . Details regarding the methodology and issues involved in using this can data are outlined in the Nick Riewoldt section. For this section, that data was collected on December 20, December 26, 2010 and January 2, 2011. The complete data set for this information is available in Appendix 13.

One of the first numbers worth looking at is the total number of fans who are interested in the team. On December 20, this number was 47,960. By December 26, this number was 47,880. On January 2, 2011, this number had contracted to 47,220. Since the day the story broke, the St Kilda Saints have seen a gradual erosion in the total number of people interested in the team.

The total number of fans can also be broken down by gender. For women, the total number of fans on December 20 was 23,580, on December 26 was 23,540, and on January 2, 2011 was 23,340. For men, the numbers were 23,880, 23,680 and 23,660. The losses for the whole club were not just contained to a single gender: They say a decline in interest amongst both genders.

Gender data can be further broken down by sexual orientation: Men interest in men, men interested in women, women interested in women, women interested in men. Like gender, not everyone makes their orientation information available on their profile so the numbers will not add up to the total number of fans for St Kilda. For men interested in men, the total number of fans remained level at 260 on all three dates. For men interested in women, the totals were 13,040 fans on December 20, 13,220 fans on December 26, 13,080 on January 2, 2011. For women interested in women, the number remained consistent on all three dates: 920. For women interested in men, the total for December 20 was 8,440, and for December 26, 2010 and January 2, 2011 was 8,380. The size St Kilda's GLBT fanbase was unchanged, declined amongst its heterosexual female fanbase and saw a small increase amongst heterosexual male fanbase.

A third way of looking at this data involves looking at level of education: College grad, in college and in high school. For the first group, the total number of college graduate St Kilda fans was 5,240 on December 20, was 5,280 on December 26 and was 5,220 on January 2, 2011. For St Kilda fans in college, the total was 760 fans on December 20, and was 800 on December 26 and January 2, 2011. For high school fans, the total was 1,560 on December 20 and 26, and 1,580 on January 2, 2011. Amongst college graduates and those in college, there was a slight decline. For high school fans, there was a slight increase.

Overall, the Saints saw a small contraction of their fanbase on Facebook. In general, they saw similar small contractions across most of the groups looked at including men, women, women interested in men, college graduates, and those in college. They saw no change for women interested in women, and men interested in men. They saw small increases amongst men interested in women, and current high school students. That they saw a contraction at all probably is bad news for the club. That it is the loss occurred between men and women is also a problem. That they did not see any significant growth for these sub-populations is probably even worse. It suggests that however Facebook fans got their information about the scandal, the story did not resonate with any of those populations in such a way that they felt a need to show solidarity with the club and become fans of them on the network.

A second way to look at Facebook is to compare St Kilda's official Facebook fan growth with that of other clubs in the league to see if St Kilda's fan acquisition rates differed from other AFL teams. Use the facebook_followers.pl found in Appendix 12, the total number of fans for official fan pages was recorded on December 1, 2, 3, 4, 5, 9, 11, 15, 16, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, and 31. The complete table can be found in Appendix 13. Table 9 shows a selection of these teams from the period between December 11 and December 31.

Table 31

AFL Facebook Page Growth December 11 to December 31

Date checked	St. Kilda Saints	Carlton Blues	Geelong Cats	GWS Giants	Hawthorn Hawks	North Melbourne Kangaroos
11-Dec-10	59,252	53,529	7,413	974	32,580	19,588
15-Dec-10	59,644	53,930	7,423	1,078	32,699	19,784
16-Dec-10	59,761	54,059	7,429	1,086	32,713	19,828
21-Dec-10	60,145	54,495	7,443	1,115	32,837	20,012
22-Dec-10	60,274	54,567	7,453	1,121	32,873	20,040
23-Dec-10	60,352	54,617	7,460	1,133	32,896	20,068
24-Dec-10	60,427	54,662	7,463	1,141	32,921	20,087
25-Dec-10	60,495	54,700	7,464	1,147	32,938	20,102
26-Dec-10	60,519	54,730	7,474	1,150	32,946	20,114
27-Dec-10	60,565	54,773	7,477	1,153	32,961	20,129
28-Dec-10	60,611	54,819	7,479	1,153	32,978	20,135
29-Dec-10	60,671	54,862	7,471	1,155	32,987	20,139
30-Dec-10	60,738	54,915	7,477	1,158	33,004	20,137
31-Dec-10	60,758	54,937	7,471	1,161	32,999	20,132

In the period between December 11 and December 16, before the controversy happened, St Kilda gained 509 fans. In the period between December 21 and December 26, at the height of the media coverage of the controversy, St Kilda gained 374 new followers. In the period between December 27 and December 31 after most of the media coverage had died down, St Kilda gained 193 new fans. Both in terms of difference growth and percentage growth found in Table 10, St Kilda matches up with compare Melbourne based AFL clubs like Carlton, Hawthorn and North Melbourne.

Table 32

Math for Facebook AFL Fan Growth

	St. Kilda Saints	Carlton Blues	Geelong Cats	GWS Giants	Hawthorn Hawks	North Melbourne Kangaroos
Diff: Dec-11 to Dec-15	509	530	16	112	133	240
Diff: Dec-21 to Dec-26	374	235	31	35	109	102
Diff: Dec-27 to Dec-31	193	164	-6	8	38	3
% Diff: Dec-11 to Dec-15	0.85%	0.98%	0.22%	10.31%	0.41%	1.21%
% Diff: Dec-21 to Dec-26	0.62%	0.43%	0.41%	3.04%	0.33%	0.51%
% Diff: Dec-27 to Dec-31	0.32%	0.30%	-0.08%	0.69%	0.12%	0.01%

The data in Table 10 suggests that the controversy did not adversely effect the Saints in terms of getting followers for their official fan page.

Facebook's demographic suggests the controversy hurt the team in key demographic groups like men, women and amongst the college educated amongst the population of Australian users on the site. At the same time that St Kilda appeared to lose broad interest on the site, the Saints ability to acquire new fans for their official fan page did not appear effected; St Kilda acquired these new fans at similar rates to other teams in the AFL.

Conclusion.

If St Kilda's organizing of a press conference and later silence could be interpreted as controlling the narrative that the media and fans consumed, St Kilda was mildly successful: Google News shows the media stopped reporting on the story shortly after the court action was suspended for the holidays and when St Kilda stopped talking to the media, and updating their Facebook and Twitter account with their version of events regarding the controversy. On the other hand, St Kilda appears to not have controlled the narrative using IceRocket and What the Hash?! data. Fan discussion on blogs appeared to peak around the time that St Kilda was actively involved, but blog discussion levels for the club and its players plateaued at a higher level than in the period prior to the controversy. On Twitter, the level of conversation peaked several days after media interest peaked. The timelines suggest St Kilda was not prepared to effectively control the fan response to the story and. The timeline also suggests the club failed to anticipate how the social media community would respond and they were unprepared to deal with Internet fall out.

A textual analysis of Twitter data suggests that Twitter users connected the nude photo controversy more with the AFL than with the Saints. Looking at who was tweeting about the controversy suggests they are not the same people that are interested in Australian sport: The #dickileaks Tweeters are a potential fanbase for the Saints and AFL; they are not part of the current fan base. Looking at the profiles of who is following the AFL, the Saints and the teenaged girl on Twitter, the AFL appears to have problems as the girl has more followers in

New South Wales, where the AFL has a new expansion team, than the league has. St Kilda has its own problems in that their followers average number of people they follow is high when compared to the teenaged girl, meaning that she can more effectively share her message with her 12,000 followers than the Saints can share with their 6,000 followers. The girl's comparative Twitter reach could cause problems for the AFL and St Kilda as they try to grow the AFL fandom on Twitter.

On Facebook, the Saints both lost fans and gained fans. Demographic data made available from Facebook's advertising information shows that the club lost fans, both men and women, college students and college graduates.   During the controversy, St Kilda continued to gain fans on their official fan page at a rate comparable to their peers. Facebook data shows the club did not benefit from the controversy by growing their fanbase at a higher rate.

When looked at together, the picture that emerges suggests potential long-term problems for the club. They were not able to control the online narrative. Fans associated the photo controversy with both the club and the league. The team saw small losses on Facebook in important demographic bases. The Saints could not use the situation to leverage their Facebook position. As legal action continues in the New Year, the club will have to weigh these issues when making decisions if they do not want to continue to potentially harm their fan and consumer base. Those decisions will need to be made in conjunction with the AFL as the controversy has led numerous people to drawing negative associations about the league and its management.

Conclusion

What impact did the St Kilda nude photo controversy have on Dawson, Riewoldt, Dal Santo and the St Kilda Saint's fan communities? How did the scandal impact the AFL's fan base? Do peripheral players see similar growth or contraction as major players who have a higher profile? How will this situation effect Dawson's personal brand and how may Dawson's involvement in this scandal impact St Kilda?   Was there and what was the demographic shift for Nick Riewoldt, one of the AFL's stars, in response to a controversy featuring a vindictive teenaged girl publishing pictures of Riewoldt in the nude? How do fans on smaller networks respond when a major controversy breaks featuring a well known but not super famous player like Dal Santo? How well did St Kilda manage the controversy online in terms of getting positive results for their team's fan base?   These are a few of the questions that have been asked and answered by this chapter.

As a peripheral participant who was not the focus of major media attention, Zac Dawson largely did not benefit from this. On Facebook, there was a small contraction in the total number of fans. On Twitter, Dawson's growth pattern was higher than that of his less popular teammates. His new followers came from around the country, followed fewer people and updated less often. Zac Dawson's involvement probably hurt his personal brand some, but it probably hurt St Kilda and the AFL more as the media and Twitter fans clearly associated him with those organization.

As a major star, Nick Riewoldt's involvement was played up by St Kilda, the media and fans on Facebook and Twitter. His fanbase was effected by the controversy with shifts in who was interested in him. Reiwoldt gained fans who were between 50 and 64 years of age and between 20 to 29 years of age, amongst college graduates on Facebook, gained fans in his home town of Hobart. Despite these gains, the total number of people joining anti-Riewoldt groups in the period after the controversy broke was greater than people joining pro-Riewoldt groups. The

fandom shifts on Facebook suggest that there will be long term consquences for Riewoldt's involvement and not all of them are positive.

Despite being better known than Dawson, Nick Dal Santo's fanbase on smaller networks is not very large. Despite having the most potentially damaging picture of the three athletes involved, the small community for him that does exist did not respond by disassociating from him. At the same time, the community did not respond by uploading content related to Dal Santo, by blogging about Dal Santo or by adding him as an interest. On the whole, niche communities, smaller social networks and websites did not react to Nick Dal Santo's involvement in this latest AFL controversy.

The controversy was not good for St Kilda on Facebook or Twitter. On Facebook, the team saw a loss of interest in important demographic groups like men, women, women interested in men, college graduates, and those in college.   The contractions for the club were different than the ones for Riewoldt. On Twitter, users clearly associated the players with the club, the league and the controversy. The timeline of activity suggests that St Kilda was not successfully able to control the online social media narrative regarding the controversy.

The results of the controversy were almost universally negative. Online fans did not respond by showing solidarity with the team.   The anti-community related to St Kilda and its players grew. The narrative could not be controlled. Female fans were lost on Facebook. People associated the actions of the players with the club and the league. Being a less well-known player only provided a little shielding from the online blowback. The fanbase on smaller networks was not activated. The indicators suggest that more controversies like this will do more harm to the AFL and its clubs than they can afford if they hope to grow their market.

Fun with #Fevola @BrendanFevola05

One of the recurring themes in this dissertation has been there are is a difference between those who identify with and show allegiance to a club or team versus those who talk about or are generally interested in the latest sporting event. This chapter will examine those differences on Twitter in the context of Brendan Fevola's New Year's actions.   The purpose is to determine the crossover numbers for those who discuss Brendan Fevola and those who follow him on Twitter.

On January 1, 2011 at approximately 4:30am AEST, Brendan Fevola was "arrested for being a public nuisance and obstructing Brisbane police". (Nicholson, 2011, January 2)(Cartwright & Morton, 2011 January 1) This incident was the most recent of a number major and minor scandals plaguing the Brisbane Lions footballer in the past several years. He's had problems with alcohol abuse and gambling. (Nicholson, 2011, January 2) There were "recent scandals involving a nude photo of Lara Bingle and an allegation of exposing himself to a married woman". (Nicholson, 2011, January 2)

The incident resulted in a fair amount of chatter on Twitter, with users contrasting Fevola's actions and the Lion's response to the incident that had happened with St Kilda less than two weeks earlier. One of the popular #hashtags discussing the Fevola incident was #fevola. During September 2010, Brendan Fevola was in the news so the author of this chapter created an archive of #fevola related Tweets on TwapperKeeper. [104] TwapperKeeper maintains a log of all tweets that mention the term. On January 2, 2011, this archive was downloaded. The archive contained 757 tweets made by 565 users. Brendan Fevola is on Twitter at @BrendanFevola05. A list of all Brendan Fevola's Twitter followers was created on December 28, 2010. At that time, he had 6,370 followers.

The two lists of users were compared to determine which users were just Fevola followers, which were both Fevola followers and #fevola users, and which used #fevola but did not follow Fevola. The results are visible in Figure 1.
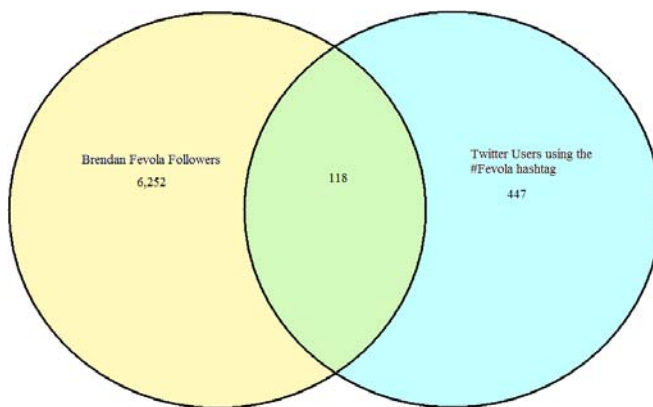

Figure 25. Brendan Fevola Twitter Followers versus #Fevola Hashtag Users.

Putting this data into perspective, 20.885% of all the people who tweeted #fevola followed him. 1.8524% of all his followers made a tweet containing #fevola.

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[104] This archive can be found at http://twapperkeeper.com/hashtag/Fevola

The percentages suggest two unique audiences are at play in regards to Fevola: Those who are interested in following him and those who are interested in commenting on his actions. The first and larger group can easily be defined as his fans. The second group of non-followers can more easily be defined as not his fans in the sense that they don't wish to show allegiance with Fevola by following him. Just because you follow some one and are interested in what they say does not mean that you will tweet about them. Just because you are interested enough in a topic to tweet about it does not mean you will follow a person.

Popularity of Australian sport fandom on Twitter

During December 2010, there were numerous controversies and events that took place in Australian sport fandom. They included the St Kilda nude photo controversy.   The start and continuing of the Australian Tennis Open series, the WNBL, NBL, A-League, W-League, the Ashes, Big Bash seasons also took place. Beyond these, there were a few Ironman and gold related events that took place. In AFL, there was the courting of the Greg Inglis by the Essendon Bombers, and players starting to report in for training with their clubs. In soccer, there was increased excitement as the Socceroos geared up for the Asian Football Confederation's competition. Netball Australia was busy promoting its test series against the Jamaica Sunshine Girls. In surfing, there were a number of surf and surf life saving related carnivals held in Australia. In cricket, there was Australia's failure during the Ashes and Ponting stepping down as captain. Cricket also dealt with continuing news of former Test cricketer Shane Warne's sexual high jinks. For the NRL, the year concluding saw a review of the greatest plays, players, games of the year and saw the revisiting of major scandals like the Joel Monaghan one. December 2010 also saw a number of important signings take place in the NRL.

December was a very big and important month in Australian sport as evidenced by all the events that took place during it. The lack of AFL and NRL games give other sports a chance to grow more against the two dominant leagues in the country. Cricket players and basketball players like Corey Williams[105] have been on television talking about their accounts. The sporting situation in December is different than other months. Many of the sport organizations took advantage of their many events and all the news stories in order to further promote themselves on new media such as Twitter and Facebook. Tennis Australia posted frequent updates to their accounts, letting Australians know how their players were performing. AFL clubs were trying to encourage people to become members. Triathletes were talking about their training for events. Studying the communities of fans that athletes, clubs, leagues and federations develop on Facebook and Twitter is useful as it provides insight into the size and nature of Australian sport fandom and the relative popularity of one sport versus another. Facebook has several hindrances in doing geography based research,[106] research that is important in order to understand where sports stand in comparison to one another and for measuring the relative success of a sport in promoting their game on a regional basis. Given this, the next biggest network available for doing large scale geographic work to understand relative popularity of Australian sport online is Twitter. To better understand geographic patterns and make them work in terms of visualizing popularity on a map, the decision was made to use Australian federal electorates, as each electorate has roughly the same number of people in it and most Australians would be generally familiar with these boundaries.

There were five steps to do get this data. First, create a list of Australian and New Zealand sport related Twitter accounts. Each account should then be connected to a sport. See Appendix 15 for the list of accounts included and the sport associated with them.   Second, list all the follower information for those Twitter accounts using the script OzFollowers.Pl found in Appendix 5. The user inputted location is cross referenced with city, state, country locations,

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[105] Williams is on Twitter at @chomicide .

[106] Facebook geographic data can only really be monitored using http://www.facebook.com/ads/create/ . The geography does not allow for discrete monitoring of individual people and the results include overlap. At the same time, the form requires that each city be checked individually for each sport. When looking at Australia, there are over 5,000 cities that would need to be individually checked for each sport. These factors, when combined together make Facebook not very useful for examining narrow location specific trends on the discrete level.

using the location list found in Appendix 4. The data was gathered between December 22 and December 28. Third, combine all followers by sport removing duplicate entries, for example Person X follows @AFL, @stkildafc, @zacd_6, @harry_o, Person X gets counted once for Australian Rules, not four times. Fourth, total number of individual sport fans by city and then total all the cities in the electorate the city is from. The data can be found in Appendix 16 - Australian city location to electorates.[107] The following cities were left off the totals: Brisbane, Perth, Sydney, Melbourne, and Adelaide. These cities were left off because they would skew the results, as people that say they are living in Melbourne are actually probably living in a different suburb. [108] If a town is included in multiple electorates, it is counted in all those electorates: Brunswick and Brunswick East are counted for both Melbourne and Wills. [109] The completed result totals can be found in Appendix 17 - Australian Twitter Sport Electorates.

   To make the data easier to understand, it has been visualized using electoral maps that can be found in Figures 1 to 10. If there was a tie between the total number of people for the most popular sport in an electorate, cricket was the sport chosen to represent the electorate. [110] In one case, there were no people representing an electorate. This electorate has been filled with black.

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[107] This list was created using the official list of Australian polling places by electorate found at http://results.aec.gov.au/15508/Website/HouseResultsMenu-15508.htm.
[108] The CBD of these centers is very tiny. There are probably more people claiming to live in Melbourne on Twitter than actually living in Melbourne CBD proper.
[109] As a result of a programming error, the two ACT electorates were left off the list of electorates.
[110] In the cases where ties were present, it was always cricket and one or more sports. Cricket was chosen because it was in season when the maps were created.

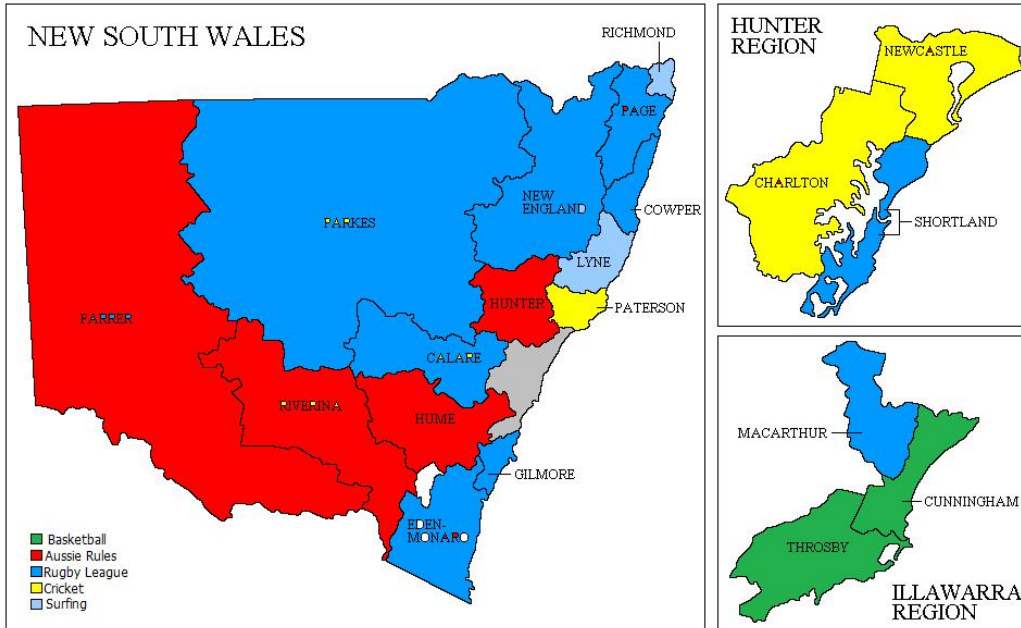*Figure 26.* New South Wales electorates by most popular sport on Twitter.

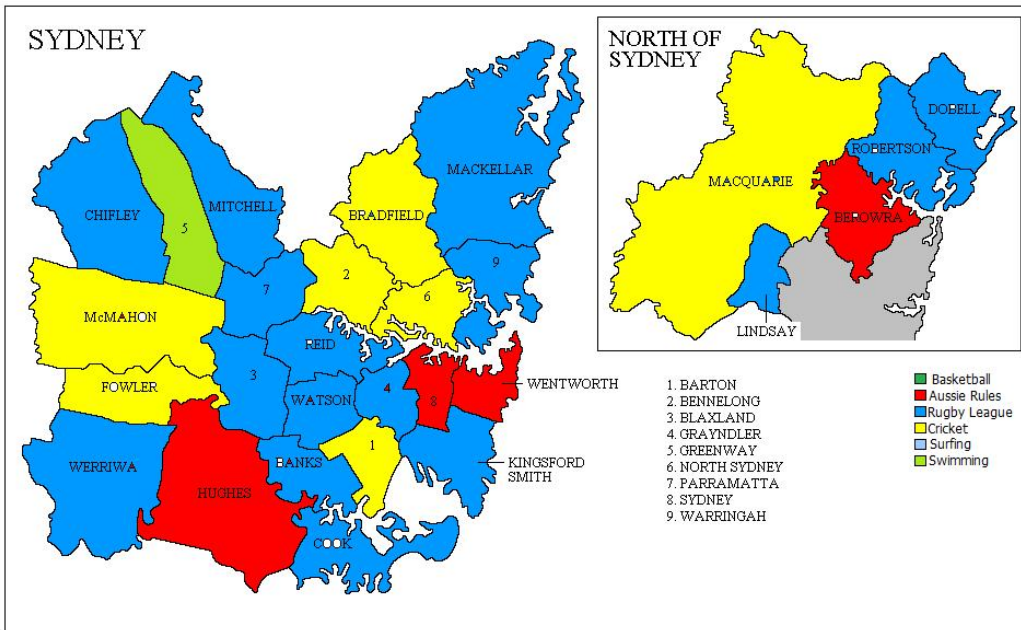*Figure 27.* Sydney electorates by most popular sport on Twitter.

Figure 28. Northern Territory electorates by most popular sport on Twitter.
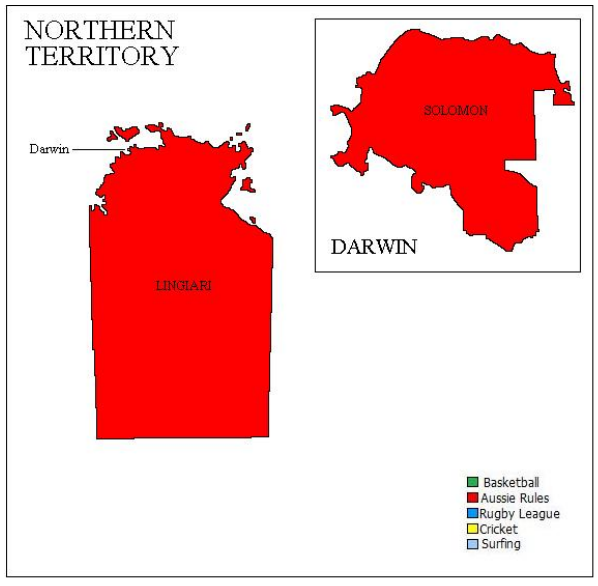

Figure 29. Queensland electorates by most popular sport on Twitter.
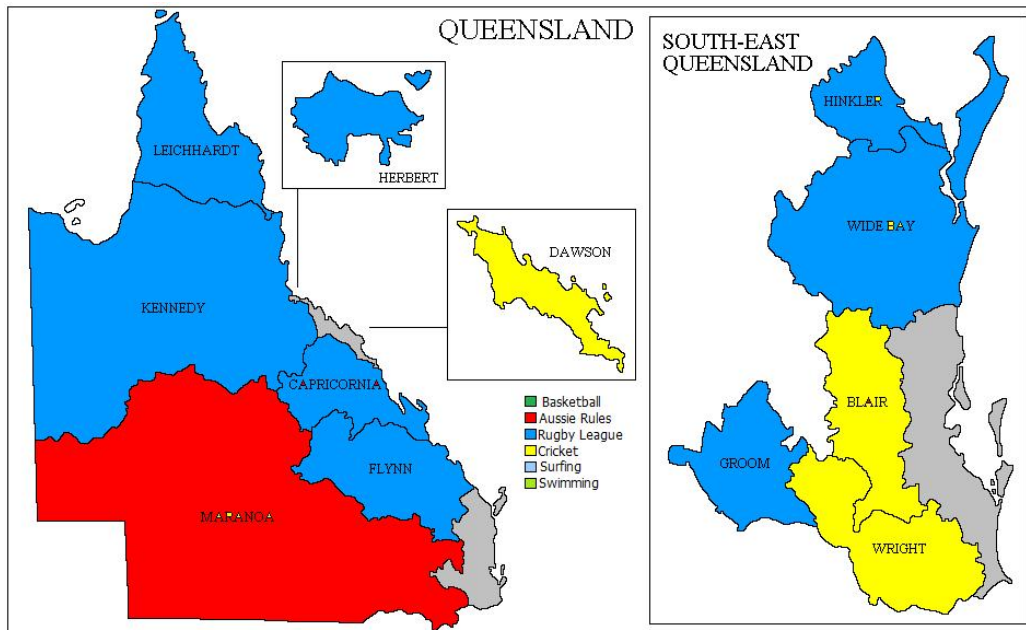
Figure 30. Brisbane and Gold Coast electorates by most popular sport on Twitter.
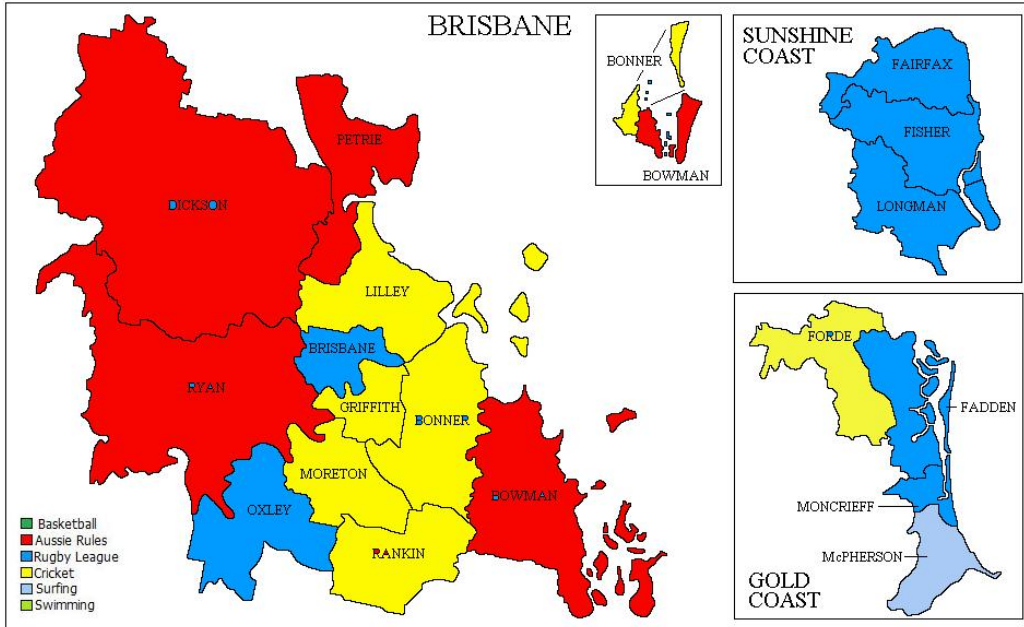

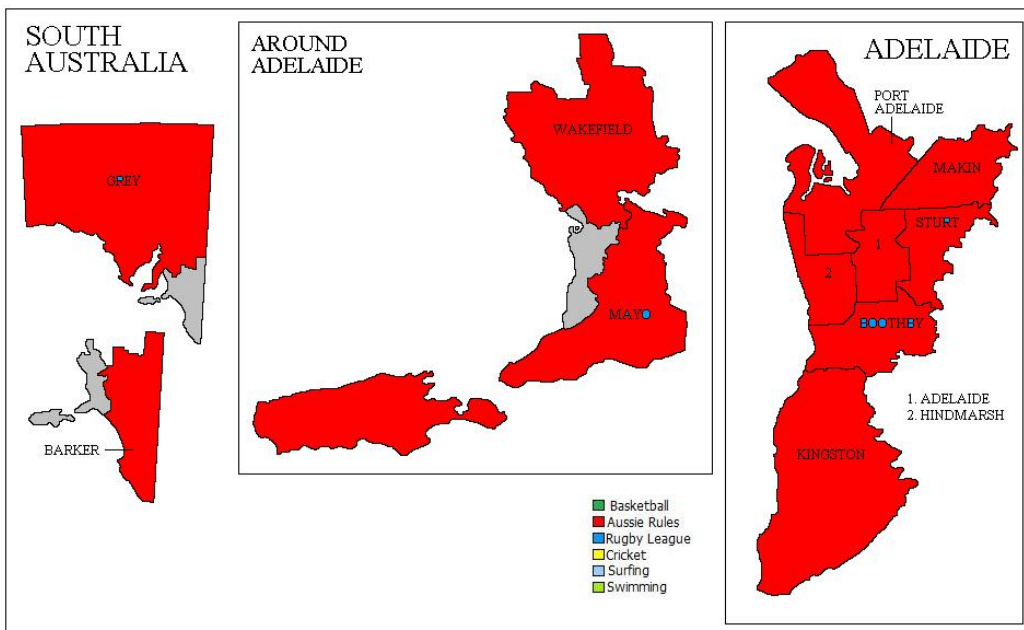*Figure 31.* South Australia electorates by most popular sport on Twitter.

Figure 32. Tasmania electorates by most popular sport on Twitter.
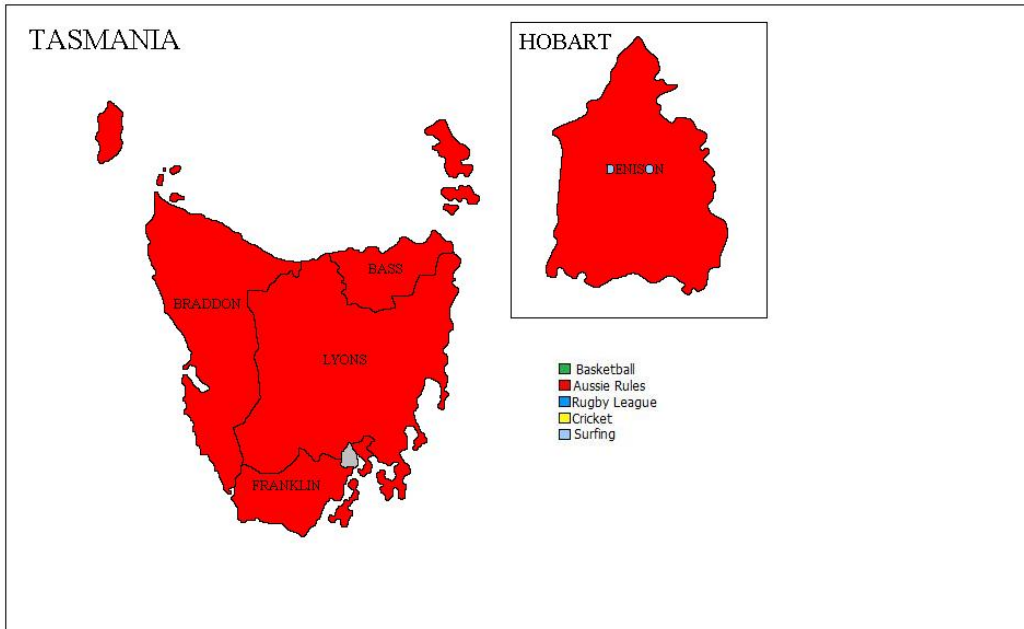

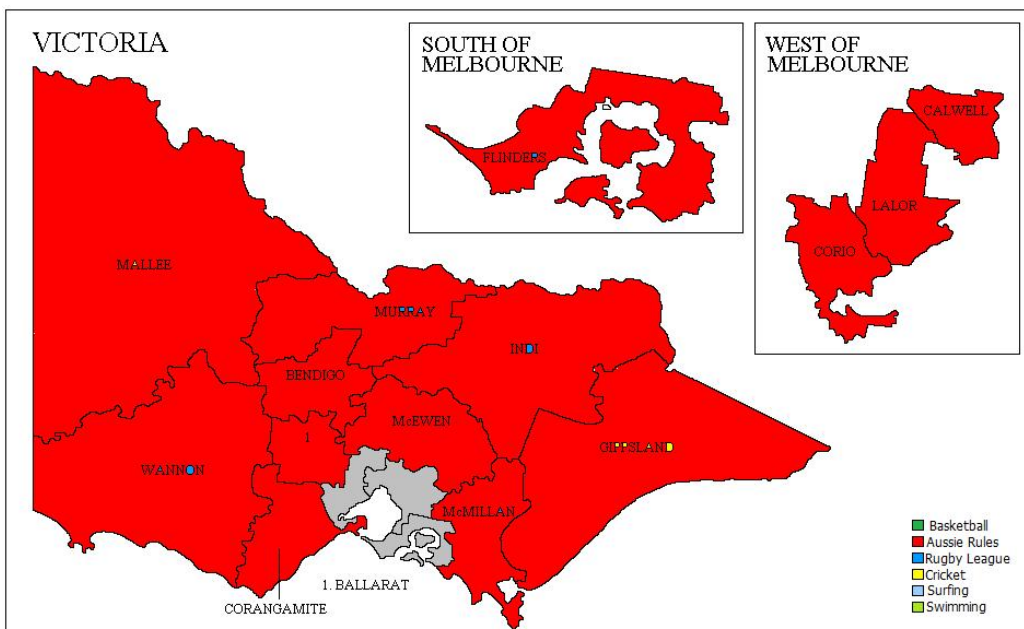*Figure 33.* Victoria electorates by most popular sport on Twitter.

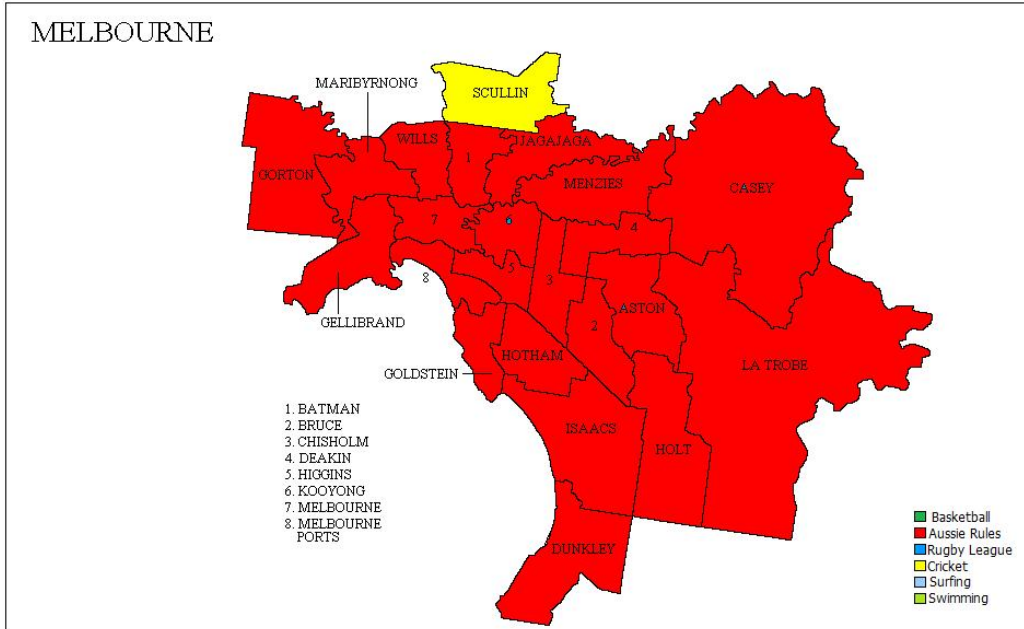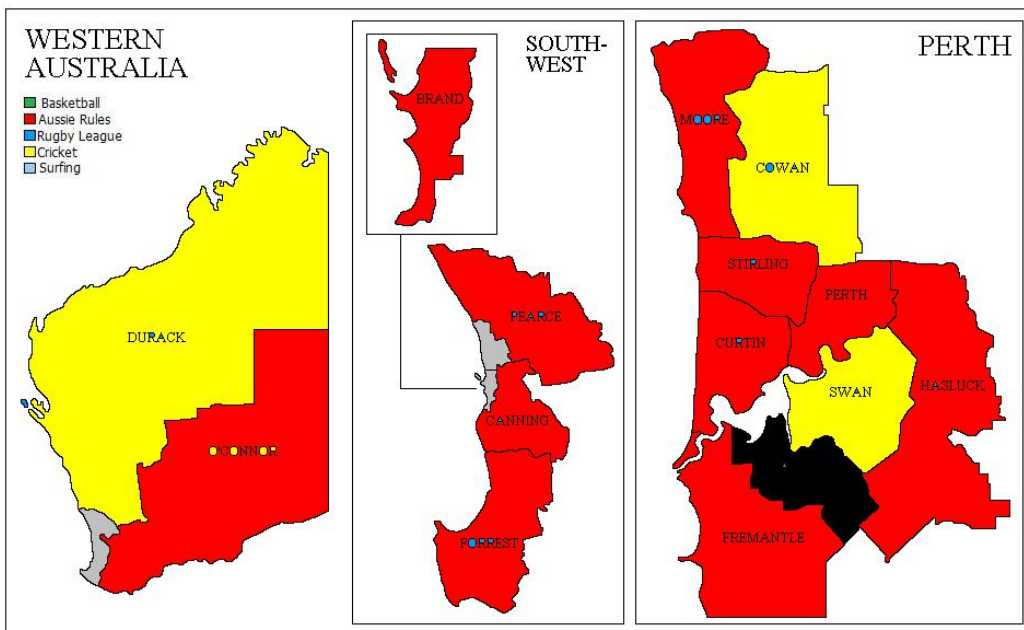*Figure 34.* Melbourne electorates by most popular sport on Twitter.

Figure 35. Western Australia electorates by most popular sport on Twitter.

The geographic patterns for Australian rules and rugby league largely comply with the Barassi-line, documented in *A national game, The history of Australian rules football* by Hess, R., Nicholson, M., Stewart, B., & De Moore, G. (2008). Where the Barassi-line is not accurate, it favors Australian rules who have achieved a larger audience in parts of Queensland and New South Wales. Cricket, often described as Australia's national summer game, was the only sport that encroached on Australian rules dominance behind Barassi-line. That encroachment was limited and only occurred in four electorates visible in Figures 9 and 10.

Beyond the traditional distribution of cricket, rugby league and Australian rules fans, there are other sports: The inclusion of these less popular sports is noteworthy given the limited documentation demonstrating that these areas are or are not home to sport fan communities interested in basketball, surfing and swimming. The popularity of surfing in Richmond, McPherson and Lyne are easily explainable as they are all home to large surfing communities. The popularity of basketball in Cunningham and Thorsby is harder to explain as is the popularity of swimming in inland Greenway.

On the whole, Twitter follower patterns by electorate tend to confirm that patterns of regional sport popularity still exist. They show potential problems for the NRL, in that Australian rules has encroached on their strongholds. It also shows that neither sport should be particularly concerned about soccer, as it has not gained a particularly strong hold in any region in Australia.

Derryn Hinch: Journalist traffic versus Wikipedia traffic in response to St Kilda

controversy

Derryn Hinch has been described as a shock jock. (Rebecca, 2010, March 22)(van den Berg, 2010, September 21) (Woolveridge, 2005, May 19) It is a label that he does not use to describe himself. (Hinch, 2010, September 21) He has been involved in several Australian controversies that touch on politics, crime and sport. Most of these controversies had connections with things he said on the radio. (Derryn Hinch, 2010, December 28)

During the St Kilda nude photo controversy, Hinch was one of the loudest voices in questioning the AFL and St Kilda. He made multiple blog posts about the subject, demanding answers to questions he asked pursuant to that controversy. (Hinch, 2010, December 24) (Hinch, 2010, December 28) (Hinch, 2010, December 29) (Hinch, 2011, January 14) He has interviewed the girl who published the pictures. He promoted his blog entries on his Twitter account at @humanheadline. When most of the media dropped the story, Hinch continued to follow it. A December 27, 2010 tweet by Hinch claimed his site got more than 2 million hits in December. [111]

This purpose of this chapter is to examine two things. The first is the veracity of Hinch's claim regarding getting 2 million hits.   It is important to have an accurate number about the likely volume of traffic to Hinch's website as most of the traffic between December 19 and December 27 was likely a result of the St Kilda controversy. If Hinch's numbers are to be believed, the controversy had a much wider audience than the St Kilda chapter in this dissertation would have you believe. Once the likely volume of traffic to Hinch's website has been determined, it will be compared to the traffic to related articles on Wikipedia. The secondary purpose to help understand how traffic to "shock jock" media sites differs from latent, likely non-fan interest in the story as measured by Wikipedia article views.   "Shock jock" journalist driven media site and Wikipedia likely cater to two distinct audiences. Understanding how these different audiences function can help provide greater understanding for how Australian sport fandom responds to major controversy and where an audience interested in these controversies turns to for information.

The first thing that needs to be done is to determine the accuracy of Derryn Hinch's traffic data. His claim is that he received 2 million hits in the period between December 1 and December 28. In order to verify this data, the method he used for determining his hit totals needs to determined. This was done using Quarkbase, a web site analysis tool that can tell you what tools a website has installed. Hinch.Net was checked[112] was found to only have Apache/2.2.3 (Webserver) installed. This contrasts with OzzieSport.com,[113] the author's website, which has QuantCast (Traffic Monitoring), wordpress (Blog), Google Analytics (Traffic Monitoring), StatCounter (Traffic Monitoring), Apache/1.3.41 (Webserver), and WordPress (Traffic Monitoring) installed. Hinch does not have popular traffic monitoring tools like Quantcast or Google Analytics installed. He does not have software like Wordpress that has its own statistics package installed. Hinch's lack of having Google Analytics and Quantcast installed means that

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[111] The tweet can be found at http://twitter.com/HumanHeadline/status/19162849876115456 . It says: "More than 2 million hits on hinch.net in Dec. Hoped for spinoff: Read Liver blog too and join organ donor register."
[112] The Quarkbase page for his site is found at http://www.quarkbase.com/hinch.net
[113] The Quarkbase page for OzzieSport is found at http://www.quarkbase.com/ozziesport.com

he does not have industry standard traffic measuring tools installed; his method of counting traffic is not the accepted one. Further, this shows Derryn Hinch's method of counting traffic involves server statistics. Server statistics count hits differently than Google Analytics and Quantcast. Server generated statistics may include all non-human access including Google bot access, pingback spam, other bots accessing the site, Baiduspider , Alexa, MSN bot, Yahoo slurp, the Internet Archive, Google Adsense access, etc. It counts as hits all internal pages and images that the site maintainer accesses. It counts every human accessed file as a hit: If a web page has 100 images, two .css files and two java script files, that would count as 105 hits. A January 17 image count for Hinch's main page reveals that there are 51 images that load off his server: Visiting his main page would mean at least 52 hits to his server. Assuming everyone who visited only his main page was actually human, divide 2,000,000 by 52 equals 38,461 views of his home page. Total page views of 38,461 suggests a scale of traffic different than 2,000,000. This disconnect is part of the reason that Google Analytics, not server statistics, are an industry standard.

Another way of looking at the problems for Hinch's server statistics is to compare them to actual totals from another site. In this case, the other site is OzzieSport.com's statistics as the author has access to them. They are visible in Figure 1.
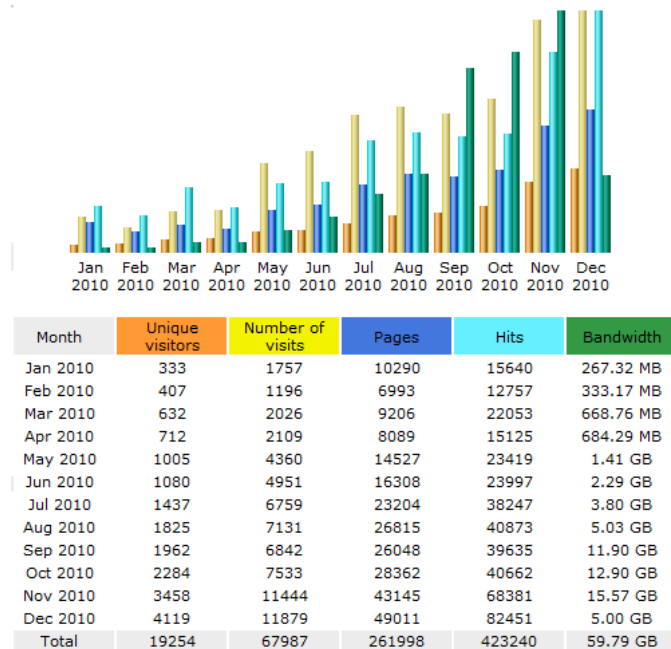

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2010	333	1757	10290	15640	267.32 MB
Feb 2010	407	1196	6993	12757	333.17 MB
Mar 2010	632	2026	9206	22053	668.76 MB
Apr 2010	712	2109	8089	15125	684.29 MB
May 2010	1005	4360	14527	23419	1.41 GB
Jun 2010	1080	4951	16308	23997	2.29 GB
Jul 2010	1437	6759	23204	38247	3.80 GB
Aug 2010	1825	7131	26815	40873	5.03 GB
Sep 2010	1962	6842	26048	39635	11.90 GB
Oct 2010	2284	7533	28362	40662	12.90 GB
Nov 2010	3458	11444	43145	68381	15.57 GB
Dec 2010	4119	11879	49011	82451	5.00 GB
Total	19254	67987	261998	423240	59.79 GB

Figure 36. OzzieSport.com server statistics.

The chart in Figure 1 is the traffic as measured by Awstats, a server side method of tracking my traffic. The raw stats generated by AwStats say OzzieSport received 4,119 visits, 11,879 page

views, 49,011 page views, 82,451 hits in December 2010. [114]   In the context of Hinch's site, Hinch received 24.25 times the amount of traffic as OzzieSport.com. Where server statistics falls down is that it suggests much smaller amounts of traffic. The ratio for OzzieSport total hits to total visitors is 20.02. Assuming Hinch's ratios are similar to OzzieSport's statistics, Hinch had 99,900 visitors. Like the recalculation based on hits, this number suggests that Hinch's traffic is not as high as the 2 million figure would lead one to believe.

Server statistics, for reasons explained above, are generally not viewed as reliable and are not used by most industry people to measure traffic to a site. The statistic package that is used is Google Analytics.   Sites like Twitter, MySpace, answers.com, dailymotion.com and myYearbook.com all have Google Analytics installed. (Google Analytics, 2011, January 17). As of June 2010, an estimated " 23.48% of Alexa's 10,000 most popular websites" have Google Analytics installed. (The Biggest Google Analytics Sites, 2010, June 3) Google Analytics works by using " a first-party cookie and JavaScript code to collect information about visitors." (How does Google Analytics work? - Analytics Help, 2011). Hinch does not have Google Analytics installed. Given that, rough estimates need to be made regarding how much traffic he may have gotten using known variables. In this case, Google Analytics data and server data are available for OzzieSport. OzzieSport's Google Analytics data is found in Figure 2.
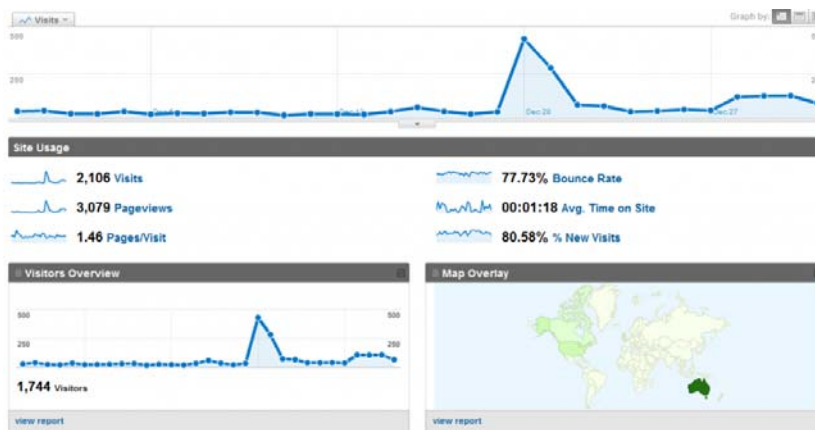

Figure 37. OzzieSport.com's Google Analytics information for December 2010.

Where Ozzie had 4,119 visitors according to server data , OzzieSport had 1,744 visitors according to Google Analytics. The server statistics recorded 2.36 times more visitors than Google Analytics.   Using these numbers as a base and assuming that Hinch had 99,900 server recorded visits, Hinch had an estimated 42,330 visitors that would have been counted by Google Analytics. Using the same OzzieSport numbers, Hinch had an estimated 1250000 page views

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[114] Awstats says: "Robots shown here gave hits or traffic "not viewed" by visitors, so they are not included in other charts. Numbers after + are successful hits on "robots.txt" files." This means the data in Figure 1 does not include Google bot, Yahoo slurp and other bots. It is unknown exactly what server method of counting Hinch uses. Other programs do count bot access as total visits because the focus is on bandwidth usage. Bot access counts against bandwidth usage.

according on his server. Using OzzieSport's server to Google Analytics ratio, Hinch had 78,616 page views.

The data suggests the Hinch's website likely had around 42,000 visitors and 79,000 page views. Hinch's numbers may be accurate in terms of how many hits he received to his website but are misleading when compared to the industry standard count of Google Analytics.

The second purpose of this chapter is to determine the level of Hinch's traffic compared to Wikipedia. In order to do this, the total article views needs to be determined for the period between December 20 and December 28. To determine this, statistics were gathered at http://stats.grok.se/ for the St Kilda Saints, Nick Riewoldt, Zac Dawson, Sam Gilbert and Nick Dal Santo articles. This data can be found in Table 1.

Table 33
St Kilda related Wikipedia article total views

Date	Nick Riewoldt	Nick Riewoldt Corrected	Zac Dawson	Zac Dawson Corrected	Sam Gilbert	Sam Gilbert corrected	Nick Dal Santo	Nick Dal Santo corrected	St Kilda Football Club	St Kilda Football Club corrected
1-Dec-10	67		13		13		14		272	
2-Dec-10	83		10		15		19		298	
3-Dec-10	64		10		12		21		244	
4-Dec-10	60		15		15		19		233	
5-Dec-10	83		8		10		11		210	
6-Dec-10	76		11		15		17		258	
7-Dec-10	89		13		7		12		284	
8-Dec-10	86		5		15		24		359	
9-Dec-10	79		7		13		24		274	
10-Dec-10	80		13		9		20		280	
11-Dec-10	51		9		22		15		222	
12-Dec-10	67		4		7		10		210	
13-Dec-10	58		14		16		15		267	
14-Dec-10	68		7		16		16		249	
15-Dec-10	84		11		24		11		250	
16-Dec-10	73		17		16		16		265	
17-Dec-10	52		11		11		13		248	
18-Dec-10	60		9		21		14		187	
19-Dec-10	47		11		14		15		200	
20-Dec-10	2,500	2,430	1,000	990	262	248	751	735	454	201
21-Dec-10	6,500	6,430	1,100	1,090	1,700	1686	1,400	1384	934	681
22-Dec-10	3,400	3,330	328	318	1,000	986	780	764	613	360
23-Dec-10	2,100	2,030	233	223	796	782	456	440	430	177
24-Dec-10	1,300	1,230	253	243	642	628	495	479	353	100
25-Dec-10	611	541	56	46	254	240	150	134	214	-39
26-Dec-10	492	422	39	29	463	449	108	92	278	25
27-Dec-10	335	265	25	15	123	109	67	51	180	-73
28-Dec-10	286	216	27	17	79	65	76	60	132	-121
December 1-19 average	69.8		10.4		14.3		16.1		253.2	
Total corrected		16,895		2,967		5,191		4,138		1,310

When the total increased article views are added together, the result is 30,501. Derryn Hinch's page views has been estimated at 79,000. Wikipedia's totals are less than half of Hinch's. This suggests that more people turned to Hinch for news about the St Kilda nude photo controversy than people turned to Wikipedia.

In conclusion, Hinch's 2 million number is misleading in that it is derived from an industry standard number. It was corrected for, arriving at a number of around 42,000 visitors and 79,000 page views from December 1 to December 28. During the major part of the controversy, more total people turned to Derryn Hinch and his website than people turned to Wikipedia for information when total page/article views is the measure. When controversy happens, sport fans still turn to traditional media presented by journalists online.

Conclusion

The purpose of this dissertation was threefold:

1. Benchmark the characteristics of Australian sport fandom online;
2. Demonstrate how the characteristics of Australian sport fandom online change as they relate to events that take place in Australian sport; and
3. Provide a methodological framework for conducting a population study online.

Meeting the purposes was done by completing a population study, supplemented with other methodologies, using events to provide a framework for the analysis. Events examined included:

* Melbourne Storm salary cap violations;
* An AFL game played in Darwin;
* Western Bulldog's Jason Akermanis's homophobic comments;
* Julia Gillard's elevation to Prime Minister and the Western Bulldogs;
* Australian checkins at the FIFA men's World Cup;
* Canberra Raiders versus Wests Tigers fandoms in lead up a playoff game;
* Canberra Raider's Joel Monaghan Mad Monday pictures;
* Cyclist Anna Meares three gold medals at the World Championships;
* Greg Inglis code switching contemplation;
* December sport fandom events;
* St Kilda nude photo controversy; and
* Brisbane Lion's Brendan Fevola's drunken New Year celebration.

Population characteristics of Australian sport fandom

One of the over riding characteristics of Australian sport fandom is that it is national: There appear to be no large geographic areas that are not represented when looking at major sports like Aussie rules, rugby league and cycling. The size of the population of fans may be smaller in some areas but a community still generally exists. This national population of fans can be seen when looking at shifts in follower patterns for Anna Meares in response to her gold medals. It can be seen in where people were tweeting from during the Joel Monaghan controversy. It is evidenced in where Zac Dawson's followers come from. The sport electoral map for Australia also suggests strong national support for sports like cricket and Australian rules.

Parts of this dissertation examined regional interest in clubs. One chapter that did this looked at the comparative interest in the Melbourne Demons and the Port Adelaide Power in the Northern Territory using Google.com.au search result totals. This method found that the Melbourne Demons are the more popular team of the two in the Northern Territory. Most of the references for the club were found in the major cities of Darwin and Alice Springs.

The FIFA men's World Cup was an opportunity to compare directly compare Australian fans to other nations' fans. The sites chosen to make comparison were Foursquare and Gowalla. Total checkins for all matches were recorded. The average total number of checkins for all games that a national team played in were calculated. Using this method, Australia was fourth from the bottom on Foursquare. The country only beat New Zealand, Japan and Greece. On Gowalla, Australia finished twentieth out of thirty-two nations. They were tied with France, South Korea and Honduras.

The Canberra Raiders played the Wests Tigers in semi-final game as part of the Raider's campaign to make it to the NRL Finals. In the lead up to the game, demographic information was acquired about both team's fanbases. Looking at Twitter and Facebook, it was discovered that the Canberra Raiders had a larger fanbase outside of the ACT (Australian Capital Territory) than in it. Inside the ACT, the Raiders had a larger fanbase than the Wests Tigers. On Facebook, the Raiders community has a smaller percentage of female fans than the Wests Tigers. Raiders fans are more educated than their West Tigers counterparts.

Cycling is a popular Australian past time and many world class cyclists are on Twitter. Before and after Anna Meares won gold at the Melbourne World Cup, information on the geographic location of her Twitter followers was attained. Her new followers were geographically distributed through out the country, in all the major Australian states.

A list of Australian and New Zealand sport related accounts on Twitter was created. The follower information for every account on the list of over 950 accounts was then attained. Followers were then sorted by sport, duplicate followers were then removed, totaled by city and city totals were then totaled by Australian federal electorate. The results mostly confirmed traditional Australian sporting patterns: AFL dominance in Tasmania, South Australia, Western Australia, Northern Territory and Victoria. Rugby league dominance was confined Queensland and New South Wales. Cricket was popular in electorates scattered in both Aussie rules and rugby league territory. There were isolated pockets where other sports were dominant, including surfing in Richmond, McPherson and Lyne, basketball in Cunningham and Thorsby, and swimming in Greenway.

In the period when the St Kilda nude controversy took place, St Kilda's largest fanbase was in Victoria. The second most popular state for St Kilda fans on Twitter to be from was New South Wales. Western Australia and Queensland came in third and fourth. On Twitter, St Kilda is most popular in Melbourne, followed by Sydney, Perth and Adelaide. The order for St Kilda is slightly different than the AFL, where the most popular cities on Twitter are Melbourne, Perth, Sydney, Adelaide and Brisbane. Zac Dawson, a St Kilda player involved in the controversy. His Twitter follower growth by city in the period after the story broke was largely confined to traditional AFL territory.   On Facebook, Nick Reiwoldt gained fans in the period after the controversy who were between 50 and 64 years of age and between 20 to 29 years of age, amongst college graduates on Facebook, gained fans in his home town of Hobart. For the Saints on Facebook, the team saw a loss of interest after the news broke in important demographic groups like men, women, women interested in men, college graduates, and those in college.

Population characteristics matched with general league and sport related geographic and demographic patterns described in the literature review. The AFL's strong holds were in Victoria, South Australia, Tasmania, Western Australia and the Northern Territory. The NRL's strong holds were in the ACT and New South Wales.   Australia's cycling and cricket fan populations are distributed around the country. Australia's soccer fan community is not as large as other nation's communities.

How Australian sport fandom responds to events

Patterns of how Australian sport fandom responded to certain event types began to emerge for controversies involving players not behaving properly. In this case, the teams were largely not impacted, with their online fanbase growing at rates similar to other teams in the league they belong to that were not involved in the controversy. Beyond that, there were not

enough chapters grouped around specific event types to accurately predict how fans would behave given similar circumstances in the future.

The Melbourne Storm controversy was the major negative team controversy that involved the whole club, not just a player or players on that team. The short term social media patterns demonstrated that the fan base for the team actually grew, as more people identified with the team either out of solidarity or to navel gaze. Much of this growth occurred on Twitter and Facebook. Smaller networks showed no growth, suggesting the controversy was not enough to cause people to login and either support or shun the club.

The Akermanis controversy hurt Akermanis's personal brand. While the controversy caused him problems, the controversy did not negatively impact the Western buldogs: Fans did not link the club and player on Wikipedia or Twitter. On social networks like bebo, blogger and 43 Things, people did no remove the Western Bulldogs as an interest.

Julia Gillard was frequently linked to the Western Bulldogs in month before she became Prime Minister. Social media data was inconclusive in trying to reach a conclusion to the question of her impact on the Western Bulldogs in that period. Some data like Twitter suggested she had no impact, as the Bulldogs growth was similar to other teams in the AFL. There was no correlation between Wikipedia article views for the Western Bulldogs article and the Julia Gillard article. Facebook fanpage likes for a few Western Bulldogs groups lost members in the period that Julia Gillard was most linked to the team. The Western Bulldogs Australian Alexa rank improved compared to other teams in the league. The data when put together does not provide a conclusive answer.

The Joel Monaghan Mad Monday situation was reminiscent of the Jason Akermanis one. The controversy did not negatively impact the Canberra Raiders and people did not appear to link the player with his club. In response to the situation, fans were not motivated by the Monaghan situation to show increased levels of allegiance to or solidarity with the Raiders. The data suggested that while the situation may not be a problem for the Raiders in growing their fanbase, it could be problematic for the NRL as more people linked the league to the player than people linked the team to the player.

Anna Meares is on Twitter and won three gold medals at the Melbourne World Cup. Her victories resulted in an increased number of followers on Twitter. Gold medals translated into social media success

In December 2010, it looked like Greg Inglis's contract with the South Sydney Rabbitohs would not be approved by the NRL. Given this, he flirted with switching to the AFL and talked to the Essendon Bombers. This code flirting helped to activate the Essendon Bombers fanbase on Twitter and Facebook, and to their website. In contrast, the South Sydney Rabbitohs saw no similar benefit in terms of fan growth on Twitter and Facebook, or in terms of traffic to their website.

The St Kilda nude photo controversy that occurred in December was months in the making and unlike the Jason Akermanis and Joel Monaghan story, it did not have a quick ending that did not adversely impact on the team. In this controversy, there was no solidarity shown to the team by increased followers, likes or people listing the team as an interest on various social networks. The anti-St Kilda and anti-players involve grew on Facebook. On Twitter, people made negative connections between the players, the team and the league.

During the St Kilda nude photo controversy, there were numerous sources of information for additional details regarding the story. Two such sources were Wikipedia and Derryn Hinch, a journalist who is sometimes referred to as a shock jock. The question asked was: What source

did people interested in the story turn to? The answer was that people turned more to the journalist for information than they turned to Wikipedia. Derryn Hinch's repeatedly publicizing his writings about the story kept the story in the public eye longer and resulted in increased traffic to his site.

Australian sport fandom generally rewarded excellence: Anna Meares's Twitter follower count went up in response to gold. Essendon benefited from talking to a popular, star NRL player. A link with a highly visible politician did not appear to harm a team or help a team, but the data was so inconclusive, it is hard to full understand the impact. Controversy helped some teams like the Melbourne Storm and the Western Bulldogs grow their fan population. Controversy had little impact on clubs like the Canberra Raiders. Controversy hurt St Kilda, the NRL and the AFL in their ability to grow their fan populations.

Providing a methodological framework for doing a population study online

This dissertation has provided several methods for conducting population studies online, with each method providing its own insights into how those community functions and what the characteristics for each of these communities are. The methods involved depended on the purpose of individual chapters, the insight that was attempted to be gained and the social networks involved. This section reviews some of the methods used and tries to explain their value in ways that might not have been examined in the chapter where that methodology was used.

One of the problems identified in this dissertation was how to measure online interest in rural areas, where it is harder to identify people using location. This problem was demonstrated in trying to measure the level of interest in the Melbourne Demons and Port Adelaide Power, the two teams that played a game in Darwin, in the Northern Territory. Measuring online interest may not be feasible. The best method determined to gauge interest online involved Google. A list of Northern Territory cities and towns was created. These towns were then paired with "Melbourne Demons" or "Port Adelaide Power" and the total search results were recorded. This method helped to determine comparative interest in these teams in rural Northern Territory locations.

Geolocation services are tools that can be used to measure a crossover between pure social media sport fandom and barracker, at match, sport fandom. Geolocation methodology as a population study is rather simple: Count the number of checkins at an event.   The population in this case is the people who checkin. This methodology involves populations that could be described as more transitory than other types as the population exists for the extent of that match. This methodology can be useful at international events for determining the relative popularity of one nation's fans to another and help suggest the social media savvy and interest level. It can also be useful in determining the comparative size of local sport fan communities, helping to provide insight into the barracking size of a team when match attendance figures are hard to come by. This method can also help sport marketers make more informed decisions.

Throughout most of this dissertation, the assumption was following on Twitter was an expression of allegiance or showing solidarity in support of a team. At times, it was also treated as a way for navel gazers to get information about a controversy directly from the source. When looking at tweets, the assumption was the content could not be easily categorized as being positive, negative or neutral: Tweets just demonstrate interest around a topic. One method of looking for relevant populations who were interested in a club or player and interested where the assumption could be more readily made that their interest was positive was used in the Brendan

Fevola chapter. This method compared the population that followed the player and the population that tweeted about the player. This number would probably be a much more accurate barometer of relevant interest than followers or total tweets about a topic alone as it measured the interest levels amongst existing fans.

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