American Sports Fans: What Makes Them Tick, and Sometimes Explode, and What Attributes of the Arena Contribute to Fan Incidents

by

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ABSTRACT

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This study of fan behavior at professional sporting events in select United States (U.S.) cities addresses three points: theoretical explanations of fan violence (from Europe and the U.S.); amount and type of fan violence/aggressive behavior occurring at professional sporting events and what characteristics of the arena contribute to incidents (examined across sport and city); and suggested measures for individual organizations and cities to combat the problem. In the U.S., fan violence is typified by a November 2004 incident during a National Basketball League game at the Auburn Hills Arena in Michigan that involved fans and players and led to multiple arrests and the suspension of some National Basketball Association players. This event is now commonly referred to as the "Basketbrawl." Yet, despite increased attention paid to fan behavior in the U.S., little research has been conducted on the behavior of spectators at professional sporting events. This study begins to fill this gap by examining the seriousness (assault versus non-assault) of arrests at sporting events in the U.S. Using a binary logistical regression

model; the research shows that offender demographics are predictors of crime seriousness. However, the characteristics of the stadium, such as parking structure and whether the stadium was indoor or outdoor, were not. The research serves as a starting point to examine other attributes of the stadium and implement policies to keep incident numbers down and less serious.

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CHAPTER 1:

INTRODUCTION

This study of fan behavior at professional sporting events in select United States (U.S.) cities addresses three points: theoretical explanations of fan violence (from Europe and the U.S.); the amount and type of fan behavior/incidents occurring at professional sporting events (examined across sport and city) and what characteristics of the arena contribute to incidents; and suggested measures for individual organizations and cities to combat the problem. In the U.S., a November 2004 incident during a National Basketball League game at the Auburn Hills Arena in Michigan involving fans and players typified fan violence. The incident led to multiple arrests and the suspension of some National Basketball Association (NBA) players and fans. This event is now commonly referred to as the "Basketbrawl." Yet, despite increased attention paid to fan behavior in the U.S., little research has been conducted on the seriousness of incidents and the contribution of stadium attributes to the behavior of spectators at professional sporting events. Based on incidents such as the NBA brawl, there is good reason to believe that fan violence is on the rise in the U.S., and that European models explaining fan behavior, which are extensive, may not be applicable here, as the social structures differ. This study begins to fill this gap as it examines the etiology of fan violence in the U.S. by examining data from Boston, Cincinnati, and Orlando, and applying theoretical models and methodologies not used in the European tradition. It also examines whether certain

stadium, sport, and offender characteristics have an effect on the seriousness of crime occurring at sporting events in the U.S. While most research available is conducted on a micro-level and qualitative; this study addresses the problem on a macro-level and quantitatively.

Violence has been part of sporting events since medieval times. In the eighteenth century, even though European football had become more political because of industrialization and social change, most injuries resulting from incidents at matches were due to overcrowding rather than fan violence. The term *hooligan* emerged around 1898 as a descriptive term for a group of rowdy youths, generated from the name of a deviant, Patrick Hooligan (Dunning, Murphy, & Williams, 1988). Spectator violence per se, however, is a recent phenomenon, occurring at high rates in Europe over the past three decades (Haley, 2001). In England, the violent fans, also known as the football hooligans, emerged strongly in the 1960s and 1970s as working class thugs, who gained pleasure through violence against rival spectators at or near football matches (Sir Norman Chester Centre for Football Research, 2001). Indeed, in the post-World War II era, due to the emergence of a counterculture, which encompassed other movements, such as mods, rockers, and racial movements, fan violence at football games came to be known as the "British disease" (Marsh, Fox, Carnibella, McCann, & Marsh, 1996).

Scholars and practitioners have examined the root causes of fan behavior, yet, even though research —particularly, that on the European "hooligan"—is extensive, no study to date has looked at crime seriousness, based on assault and non-assault crime, attributed to fan incidents in the U.S. It is uncertain whether extant studies are applicable to the U.S., since the social context and structure of professional games are different from

those in Europe. “Hooliganism” is an organized type of violence, for example, while fan violence in the U.S. seems to be more spontaneous (Sir Norman Chester Centre for Football Research, 2001a). In Europe, the United Kingdom (U.K.) in particular, specific “crews” are associated with teams. These groups appear before, during, and after football matches as a cohesive group. Groups of individuals may contribute to incidents at sporting events but, in the U.S., the incidents are generally not seen as organized, premeditated events. Here, the violence tends to be spontaneous, “resulting from an overzealous or intoxicated crowd” (Madensen & Eck, 2008, p.4). Much of the European research focuses on the organized incidents and on the class structure that is more rigid in Europe than in the U.S. Even though this study reviews such works to provide a theoretical framework, the primary focus is on the amount and seriousness of fan behavior/violence in the U.S., in addition to stadium attributes, and the measures that can be taken to address the problem. As will be discussed, neo-classical theories may be especially relevant to the study of fan behavior/violence in American professional sports.

After football hooliganism came to the fore in the mid-1960s, much of the research in Europe focused on working class alienation, and the racial, political, and religious climates in certain European countries. Although the motivation and organization behind acts of hooliganism may differ—for example, the Celtic versus Rangers rivalry in Scotland arising out of Protestant and Catholic beliefs, or the violence in Italy engendered by fascist sentiments—the acts themselves are often similar. Because of the comparable nature of the incidents, situational crime prevention techniques used in Europe to curb hooliganism may be applicable in the U.S. Common incidents include drunk and disorderly conduct, pitch (football/American soccer field) invasions, riots,

assaults, vandalism, and muggings (Sir Norman Chester Centre for Football Research, 2001a). In England, the initial academic and media reaction responded to what occurred at football matches in the country (Williams, Dunning, & Murphy, 1984). It was not until the 1970s that hooligan research focused on what occurs while teams travel throughout Europe, South America, and elsewhere.

This research is timely because of the recent focus on fan violence by the U.S. media and the growing concern expressed by professional sporting organizations. The mentioned "Basketbrawl" evoked such concern. Much like schools or the workplace, stadiums and arenas are structures in which vast numbers of people gather. Understanding how to control such a heavily populated environment is crucial. Extensive research has been conducted on school safety, and even school safety during sporting events, but little has been done of professional sporting events. Professional sports organizations, specifically the National Football League (NFL), Major League Baseball (MLB), National Basketball Association (NBA), and the National Hockey League (NHL), need to focus on the issue and examine ways to alleviate the problem, making fans safer and more comfortable.

The following literature review focuses on studies on football hooligans in the U.K. and how such models may or may not apply to the U.S. This discussion is followed by an examination of research specific to sports violence in the U.S. and theoretical explanations of fan violence. Next, it examines the amount of fan incidents/violence and seriousness of such incidents resulting from professional sporting events—including hockey, basketball, baseball, and football. Data analyzed for this dissertation includes data from both indoor arenas and outdoor stadiums, examining whether certain attributes

result in more serious crime. Descriptive statistics are used to examine the amount and seriousness of fan incidents across sport and city. In addition, a binary logistic regression is used to examine if stadium attributes, along with offender characteristics, can be seen as predictors of crime seriousness (assaults vs. non-assaults). Finally, suggested measures for individual organizations and cities to combat the problem will be presented. Data has been provided by specific city police departments (Boston, Cincinnati, and Orlando); along with open source data from professional sports organizations. Because the data provided by the cities and organizations have no identifying variables attached, the study involves no human subjects issues. Anecdotal qualitative information from field observations at sporting events also omits names and other identifying information, and no individual interviews were conducted.

CHAPTER 2:

LITERATURE REVIEW AND RESEARCH QUESTIONS

Literature Review and Theoretical Context

The purpose of this dissertation is to examine the amount and type/seriousness of fan behavior incidents in the U.S and what characteristics of the stadium or arena contribute to such incidents. It has been stated that "In America which is often characterized as a land bubbling with violence, sporting hooliganism, apart from racial disturbances, seems to be largely unknown" (Goodhart & Chataway, 1968, p. 144). While there has been much research conducted on the subject in other countries, U.S. research has mainly focused on the psychological aspects of why fans commit violence at sporting events. Even so, few models in the literature examine the aggression exhibited by fans and spectators of sports and even fewer assess the amount or type of spectator violence. Most European models focus on hooliganism—a type of organized violence not present at sporting events in the U.S. These works are mostly qualitative and, as an argument for fan violence, often focus on the class struggles in British society. Such an argument cannot be made for American fan violence. The literature review introduces previous works on the topic from abroad and the U.S., and on how fans identify with their team. This research study sought to explain the amount and seriousness of fan violence and not simply the motivation to commit violence. It includes situational factors that can affect motivation and opportunities to commit such offenses, such as the

attributes of the arena or stadium. This study of fan incidents/violence in the U.S. employs both qualitative and quantitative methods.

As a result of sporting events, violence is nothing new. Societies have been struggling with it for centuries. This dissertation and research, however, is concerned with what is considered contemporary and modern fan behavior. The first research report on this involved the hooligans of Great Britain.

While hooligans can often be violent, it is not always the case, and the behaviors of fans are more appropriately considered to be aggressive. Often, whether in Europe or the U.S., incidents involve crimes that either are considered status offenses or are non-violent. In reaction to the hooligan problem in the U.K., various reports led to the implementation of measures to combat the problem. Prior to the 1960s, the country experienced spectator disasters, which were addressed in two reports: the *Shorrt Report* in 1924 and the *Moelwyn-Hughes Report* in 1946 (Sir Norman Chester Centre for Football Research, 2001b). Both reports introduced measures ensuring that the police would be responsible for maintaining security at sporting events. In 1968, *The Harrington Report* was published. Harrington was a British psychiatrist who attempted to examine "modern" football violence. The report was based on questionnaire data, direct observations, and help enlisted from the police and transport organizations. The focus was on individual pathology not necessarily group dynamics. The report's primary finding was that hooligans are immature, having lost control (Marsh, et al., 1996). Harrington wanted to focus on the here and now, not offering any suggestions for preventing such behaviors, and for this reason, his findings were criticized.

Sir John Lang (1969), the Vice President of the Sports Council, authored *The Lang Report*. Lang reported on the outcomes of a working group, which included members of the leagues, the Home Office, and the police. There were no academics in the working group; its main concern was actual events at football matches. The group made 23 recommendations. The major three were: 1) to obtain maximum cooperation between football clubs and the local police; 2) overall acceptance of the referees decisions by everyone—the fans, the players, and the coaches; and 3) the creation of only all seat stadia—no standing terraces (Marsh, et al., 1996). In the 1970s, the *Wheatley Report* (1972) was commissioned in response to spectator over-crowding and chaos at a 1971 Celtic versus Rangers football match, where 66 people died at Ibrox Park in Glasgow, Scotland. After an investigation, it was determined that, due to a structural failure, fans were crushed to death trying to escape from the stadium rubble (Sir Norman Chester Centre for Football Research, 2001a). In 1975, the first Safety at Sports Grounds Act was written, giving stadia certificates of safety (Sir Norman Chester Centre for Football Research, 2001).

Eventually it became apparent that serious changes needed to occur. Two more recent major incidents acted as catalysts for change in how authorities should handle over-crowding, and football hooliganism. The first was the 1985 Heysel Stadium incident in Belgium. Thirty-nine people were killed at the hands of Liverpool Football Club hooligans (Inglis, cited in Perryman, 2001). The second incident, in 1989, was at Hillsborough Stadium in Sheffield, England. There, 95 people were killed (Inglis, cited in Perryman, 2001). The deaths were mainly a result of over-crowding and the collapsing of terraces.

From 1985-1990, football club teams in the U.K. were banned from European competitions. In response to both incidents and many others, Sir Justice Taylor was called on to formulate some solutions. *The Taylor Report* recommended and succeeded at taking down standing terraces in 1989 (Marsh, et al., 1996). All seat stadia replaced them. More money was put into the sport to keep fans safe from over-crowding. While this does not address hooliganism specifically, it aided in the overall safety of the spectators. All seat stadia allow officials to better control attendance and the comfort of spectators. The Football Spectators Act in 1989 suggested another measure. This called for spectators to have identification (ID) cards (Marsh, et al., 1996). The language of the act states,

> An Act to control the admission of spectators at designated football matches in England and Wales by means of a national membership scheme and licences to admit spectators; to provide for the safety of spectators at such matches by means of such licences and the conferment of functions on the licensing authority in relation to safety certificates for grounds at which such matches are played; and to provide for the making by courts and the enforcement of orders imposing restrictions on persons convicted of certain offences for the purpose of preventing violence or disorder at or in connection with designated football matches played outside England and Wales (Office of Public Sector Information, 1989).

Unfortunately, many clubs did not comply and the measure quietly disappeared.

Practitioners and researchers alike have succeeded in reducing the problem of hooliganism in the U.K. During the 2003-2004 season, there was a 10% decrease in football related arrests. Banning orders increased due to the *Football (Disorder) Act of 2000,* which banned certain fans profiled as "hooligans" from attending matches (Home Office, 2000). The *Football (Disorder) Act of 2000* was created as, "An Act to make further provision for the purpose of preventing violence or disorder at or in connection with association football matches; and for connected purposes" (Home Office, 2000). In addition, most football related arrests were conducted off the football grounds; thus,

showing a decrease in hooligan activity at the matches. Tables 1 and 2 show a listing of stadium tragedies in the U.K. and responses to the tragedies, respectively. These tables highlight the extent of stadia tragedies and how the U.K. took measures to combat the problems.

Table 1

Selected Football Stadium Tragedies in Britain

Date	Stadium, City	What happened?	Outcome
1902	Ibrox Park, Glasgow	Terrace collapsed	50 killed, 500 injured
1914	Hillsborough, Sheffield	Wall collapsed	80 injured
1914	Turf Moor, Burnley	Spectator crushing	1 killed
1946	Burnden Park, Burnden	Spectator crushing	33 killed, 400 injured
1957	Shawfield, Rutherglen	Barrier collapsed	1 killed, 50 injured
1961	Ibrox Park, Glasgow	Barrier collapsed	2 killed
1971	Ibrox Park, Glasgow	Crushing/barrier collapse	66 killed. Hundreds injured
1985	Valley Parade, Bradford	Fire	56 killed, hundreds injured
1985	St. Andrews, Birmingham	Wall collapsed	1 killed
1989	Hillsborough, Sheffield	Spectator crushing	96 killed, hundreds injured

Note. From Sir Norman Chester Centre for Football Research (2001a).

Table 2

Responses to Stadium Tragedies

Report	Date	Why?	Methods & suggestions
Shorrt Report	1924	Overcrowding at 1923 Football Association (FA) Cup Final	Addressed the conflict between law enforcement and stadium officials. Recommended a single entity be responsible for safety
Moelwyn-Hughes Report	1946	33 people killed at Burnden Park, Bolton	Recommended limited attendance (stadium was over capacity)
The Harrington Report	1968	Address general football violence	Using survey data, Harrington examined "who" were hooligans and found they were "immature"
The Lang Report	1969	Events occurring at modern football matches	23 recommendations including: all seat stadia
Wheatley Report	1972	66 people died at a match in Glasgow	Resulted in the Safety and Sports Grounds Act
Safety at Sports Grounds Act	1975	See Wheatley Report	Distributed safety certificates to stadiums

Report	Date	Why?	Methods & suggestions
The Taylor Report	1989	Heysel Stadium, Belgium and Hillsborough Stadium, Sheffield incidents	Removed all standing terraces
Football Spectators Act	1989	See The Taylor Report	Provided ID cards/licenses to fans and stadiums (did not last)
Football (Disorder) Act of 2000	2000	To further prevent violence	Banning orders

Note. From Gardiner (2001) and Marsh et al. (1996).

Hooliganism in the U.K.

In his research, Marsh (1978) employed direct observation and interviews and submerged himself in the football culture. He attended football matches, traveled back and forth with other fans (often on the trains, which took fans to and from), and went to the local pubs in which fans spent their time when not at the stadia. After conducting interviews with spectators, Marsh (1978) concluded that hooliganism was ritualized behavior occurring on a weekly basis that allowed men to release aggression and gain a sense of self-worth. Groups of young men used aggressive behavior related to football matches to gain notoriety among their peers. Less concerned with social structures than individual behavior, Marsh argued that most fan behaviors were not as violent as the public was led to believe. After criticism of his work by sociologists from the Leicester School (e.g., Dunning, E.G., Murphy, P., & Williams, J., 1988), Marsh revised his conclusions based on the changing nature of the sport in the 1980s and 1990s. Marsh has nonetheless continued to maintain that more violent acts of hooliganism are—paradoxically—a direct result of the policies and measures taken to combat the problem, together with a moral panic created by the media (Marsh, 1978). Marsh's work is similar to that of Turner and Killian's (1972) emergent norm theory which puts forward that behaviors commonly regarded as not traditional become the norm as the crowd reacts to an event. This theory is comparable to labeling theory and social identity theory in that what seems to be deviant behavior to the masses may become a new set of norms (Becker, 1963; Turner & Killian, 1972). As Guttmann states, "Build a cage to hold a person and that person is likely to act like a caged animal" (1986, p. 172). In short, if

society does not shame individuals for deviant behavior, the individuals may not feel inclined to act out.

Marsh's research (1978) may be loosely applicable to present day fan behavior in the U.S. since increased media attention has generated a stronger interest among professional sport organizations. For instance, after the "Basketbrawl", the NBA announced that they were committed to making the game a safer activity for spectators (Perkins, 2004). While some small measures have been taken (e.g., "jerk hotlines" and texting capabilities for fans to report incidents during games), it remains to be seen if specific measures have been effective. This dissertation tests whether certain structural characteristics, such as indoor or outdoor stadiums and whether a parking lot is present or absent (see the section entitled *Situational Crime Prevention*) can be attributed to the seriousness of fan incidents, and investigates whether certain characteristics can assist organizations in preventing incidents from occurring.

Taylor (1971) and Clarke J. (1978) conducted research similar to Marsh's (1978) theory. Both maintain that current measures to combat hooliganism create more violence and/or aggression among young fans. In other words, the problem is not as severe as the media and others portray it, but working class men react to this false perception, a backlash effect (Taylor, 1971; Clarke, J., 1978). The expectation is that youth will act in a deviant manner, and therefore, conform to the characterization. In addition, the aggression exhibited at football matches in recent years is due to the

bourgeoisification[1] of the sport (Taylor, 1971). Both scholars agree that changes in the game have led to increased middle class fan attendance, which in turn alienates the working class; the more prominently represented class attending games in previous years. According to Taylor, the working class becomes alienated because they have been excluded from the decision-making process regarding their local club and the sport in general (Taylor, 1971). Hooliganism occurs as an attempt to recapture their Saturdays and the game they once enjoyed watching with their peers.

Taylor (1971), like Marsh (1978), eventually modified his original ideas. The emergence of skinheads and fighting gangs led to the modern definition of hooliganism (Dunning, et al., 1988), in which gangs act aggressively to vent frustrations about their working or underclass status. Taylor pointed out that by the late 1970s all classes feared the hooligan. He argued the public feared young men, who were reacting to the current state of affairs in England (e.g., unemployment) and the changes in the operation of the game itself (Taylor, 1971). In other words, hooliganism has little to do with the game or sport of football and more to do with the societal problems of the moment.

Meanwhile, Clarke J. (1978) explained hooligan acts as an attempt to exert control after commercialization of the sport and working class alienation from the game. Football became more about sponsors and ticket sales than ever before. Clarke (1978) also maintained that, unlike the pre-World War II period, when most fans attended matches with family members; today, fans began attending with like-minded peers

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[1] *bourgeoisification* definition n.

The act or process of adopting or the condition of having adopted the characteristics attributed to the bourgeoisie: "*Bourgeoisification, deplorable as it is, has good points too"* (Robert M. Adams) (yourdictionary, n.d.).

rooting for the same team and experiencing the same alienation. In addition, fans of football do not have to travel the great distances that sports fans in the U.S. have to in order to view matches against rival teams in different cities. In reaction to hooliganism in the U.K., reports led to the implementation of measures to combat the problem.

It is believed that Taylor's (1971) and Marsh's (1978) theories will not be strongly applicable to professional sports in the U.S. because they have always been commercialized but have allowed various social classes to attend. Professional sporting events in the U.S. have always relied upon heavy ticket sales (see Appendix C) and merchandise marketing to sustain the teams and the expensive state-of-the-art structures where the teams play. However, most stadiums and arenas allow for a certain number of seats to be sold at a lower cost. Put differently, this view would expect that, since U.S. fans have always spent a great deal of money to attend sporting events, and have not experienced a significant change in costs in the last couple of decades, they may not feel at odds with the sporting organizations as much as fans in the U.K. Also, it is hypothesized that incidents in the U.S. would be independent of city since, as mentioned earlier, U.S. fans have to travel further to matches in rival cities.

The Leicester School

In response to the above research, sociologists at Leicester University sought to find a more appropriate explanation for football hooliganism. Basing their work on Elias' (1978) civilization process, Dunning, et al. (1988) assumed that societies move towards a more civilized world in a process that does not always penetrate the working or lower classes. In other words, the deviant behaviors of hooligans are very similar to that of the society's deviant subculture. This research, characterized by masculinity and aggression,

differed from Taylor's (1971) and Clark's (1978) in that it claimed the working class had found a way to legitimize (through the civilization process) their football hooliganism. Although the extensive work by the Leicester School has been applied to other nations, the theory is most applicable to England, the researchers' primary area of focus. As mentioned above, Dunning, et al. (1988), believe the class structure and the rigidness of English society exemplifies the idea of the higher classes moving towards a civilized world without the lower classes. Moreover, like most research on hooliganism, the Leicester School's work has been criticized for being unempirical and relying upon observations and anecdotal evidence.

Much like Taylor (1971) and Marsh's (1978) theories, the theories of the Leicester School may not be applicable to U.S. The U.S. does not have the same economic or social issues within professional sports as Europe does. Attending professional sporting events has always been expensive in the U.S. (see Appendix C), thus, alienating the lower classes or relegating them to the "nose bleed" or "bleacher" seats. For example, every year, the cost of attending a professional sporting event in select cities across the U.S. makes the news (*Sports Illustrated*, 2000). The rigid class structure of British society does not exist in the U.S. The state of the art stadiums in the U.S. allow all classes to attend while being separated by one another (e.g., the sky box versus the bleacher seat, or the floor seats versus the nose bleed seats). Even as these ticket prices increase year after year, individuals still attend. In addition, the theories on hooliganism emerging out of the U.K. may not be applicable because fan behavior and incidents at sporting events in the U.S. appear to be less organized and more spontaneous than in the U.K.

As Young (2002) points out,

> …due to the unique social and structural context of North American sport (travel on a huge continent is geographically and financially prohibitive, fan support between numerous sports and levels of sport is widely distributed, team franchises are extremely mobile, high season ticket sales are normative, etc.), fan fighting at North American sports has not expressed itself in terms of the routinized rival gang episodes of British and European soccer, and certainly organized "super crews" or "firms" of fighters in the English sense have not appeared to date (p. 246).

Social Identity Theory

Social identity theory (SIT), developed by Tajfel and Turner (1979), not only helps to explain the roots of football violence, hooliganism, and fan behavior in general, but may also apply to fan behavior and violence in U.S. professional sports. Identity researchers believe that, because people create social identities within their own communities, fans identify with the team and other supporters. The local football club, in sum, becomes their community. In other words, "football fans not only identify very closely with the club they support, the club symbolically becomes a part of their own identity" (Finn, 1994, p. 101). Spinning from the theory of social identity, self-categorization theory explains collective, crowd behavior. Reicher (1987) maintains that crowd behavior and crowd violence, in particular, can be understood as social actions that are determined by the group's identity, and Allport (1924) maintains that the individual in a group is the same as he would be alone but only more. Turner (1982) theorizes that, in order for a crowd to be defined as such, three criteria must be met: members of the group are face to face; the group acts in a way that is ambiguous; and any formal means of gaining consensus is obstructed.

SIT may be useful in explaining the problem of fan violence because such behavior involves relationships with others and can lead to some satisfaction for the fan.

When fans with such high identity come together, there may emerge "a shared commitment to engaging in competitive violence" (Giulianotti, 2001, p. 141). The concept of the football community as a symbolic part of personal identity that is heightened when something is at stake may apply to fans of professional sports in the U.S. Those who identify more strongly with their team, regardless of sport, may be more inclined to act out at professional sporting events. As Osgood, D.W., Wilson, J., O'Malley, P., Bachman, J. & Johnston, L. (1996) state, "Deviant exploits bolster a social identity as brave, adventuresome, or tough only when they come to the attention of others" (p. 639).

This dissertation discusses the idea of fans acting out in the presence of the larger group by the attendance or seating capacity of the stadium or arena. Similarly, Bryan and Horton's (1976) study on fan identification found that team sporting events lead to more incidents than individual sports, more incidents occur when the losing team becomes angry, teams from larger school's are more likely to have incidents, and games among more traditional rivals are more likely to have incidents.

Wann and Branscombe (1989) examined whether the cues given by spectators of more aggressive sports like boxing and hockey were more likely to be perceived as hostile than the cues of spectators of nonaggressive sports/activities like billiards and golf. They found that, "…viewer aggression increases during and following violent contact sports (such as football, boxing, etc.) but no such increase is found subsequent to viewing nonviolent sports (i.e., gymnastics, swimming, etc.)" (p. 28). They found that the ambiguous behavior of spectators at more aggressive sports is more often interpreted as aggressive and hostile by others. Since not testing the aggressive nature of the individual

sports, looking at only team sports, and using the *Sporting News* city rankings of sports-minded cities as a test of fan identification, this dissertation hypothesizes that type of sport will have no effect on crime seriousness. In addition, Wann, Carlson, and Schrader (1999) sought to determine whether more highly identified fans would report more aggression and hostility than less identified fans would. Wann (1997) initially defined *team identification* as the amount someone may feel psychologically connected to a particular team. In a later study, Wann, et al. (1999) defined *hostile spectator aggression*, as behavior that "involves violent actions that are motivated by anger with the goal of harming another person" (p. 279). The researchers concluded that highly identified fans report more aggression, both hostile and instrumental, than others do. Even though the study proposed here will not focus on the psychological aspects of fan violence, fan identification research, as mentioned earlier, is pertinent in that social identity theories may help explain why fan violence exists. It is hypothesized that, based on this, fans who highly identify with a team will commit more offenses than those who are not. Mentioned earlier, this is examined by looking at various cities *Sporting News* rankings. Participating cities that rank higher on the *Sporting News* rankings will have more overall incidents and will influence the seriousness of crime committed during sporting events.

Rational Choice and Routine Activities Theory

The rational choice theory of crime (Cornish & Clarke, 1986) argues that criminals are rational free thinkers who act on the perception that, "the benefits outweigh the costs" when it comes to criminal activities (Lanier & Henry, 2004, p. 100). These basic principles and the components of routine activities theory (Cohen and Felson, 1979) commonly explain hooliganism. The theory is applicable to fan incidents since, when

others are present at the opportunity for crime; peer encouragement may make the occurrence of the crime more likely. Cohen and Felson (1979) organized their theory around the basic concepts of place, time, objects, and persons. When all three elements are in place—motivated offender, suitable target, and lack of capable guardian, crime is likely to occur and potentially at high rates—the theory being centered around the crime not the offender. However, much like situational crime prevention (discussed below), routine activities theory assumes that individuals make choices before committing crimes. If locations, such as streets or stadiums are maintained and controlled, individuals will be less inclined to commit crimes (Cohen & Felson, 1979).

Routine activities theory helps provide an explanation for fan behavior at professional sporting events in the U.S. Fans are often motivated due to the nature of the game, their targets are situated in close proximity, and there is a lack of security and/or crowd control. Variables, such as age of stadium/arena attendance (seating capacity), and perhaps alcohol consumption may help to explain how routine activities theory plays into fan behavior, as they allow for all three elements of routine activities to converge. In other words, if offenders are motivated (fueled by alcohol and fan identification), potential victims are vulnerable (because of alcohol and by being within close proximity of others), and there is a lack of appropriate security measures in place (older stadiums/arenas), more incidents may occur. Also, the close proximity of individuals, through high seating capacity, could lead to more heated engagements with other fans, thus resulting in more serious incidents. Some have argued that drugs or alcohol induce deindividuation which, in turn, lead to anti-normative behavior (Zimbardo, 1970). Although data on alcohol sales and/or consumption was not available for this research,

routine activities theory helps explain how alcohol contributes to criminal activity and behaviors. For instance, suitable guardians are lacking when individuals (whether offender or victim) over-consume alcohol. However, others are being made more responsible for potential offenders and their consumption of alcohol. Recently, individuals have sued concession companies for over-serving during sporting events (Slezak, 2003). Therefore, while others are acting as capable guardians, it is unknown if such measures are being carried out to their fullest, or are indeed working.

Older stadiums and arenas do not have the state of the art facilities—such as comfortable seating—that newer ones do (as was the case in the U.K. when they made the switch from standing terraces to all seat stadia). In addition, as will be explained below, older stadiums may not have the number of bathroom facilities that newer ones do, creating longer lines, and thus, creating a tenser environment for individuals attending. It is expected that older stadiums, stadiums with open parking structures, and stadiums with higher capacity levels, will have more serious fan incidents. Again, this is due to the nature of fan aggression – the closer individuals are together and the more uncomfortable they are while viewing professional sports organizations, the more aggressive one may become resulting in more serious incidents such as assault.

Situational Crime Prevention/CPTED

Originally developed by Ronald Clarke (1980), situational crime prevention is concerned with where and when crime occurs. Crime is considered to result from the human decision-making process placed in context, depending on location and time (rational choice and routine activities theories). Theories, such as rational choice and routine activities provide the theoretical base for situational crime prevention. The

research in this dissertation also incorporates social identity theory to look at motivational factors. It is theorized that changing any of these aspects can prevent crime. Situational crime prevention's core goals to reducing criminal activity are to "increase risks; reduce rewards; reduce provocation; and remove excuses" (Cornish & Clarke, 2003, p. 90). Clarke (1997) maintains that the "avoidance of risk and effort plays a large part in target selection decisions" (p. 7). In other words, coupled with the principles of routine activities theory, fans attending professional sporting events will sometimes assess the risk before committing an act of aggression. With this in mind, organizations and stadiums need to examine how to decrease these risks before incidents ensue. Brantingham and Faust (1976) describe the process of general crime prevention as three separate categories: primary, secondary, and tertiary. Primary prevention involves identifying factors that have some influence on just about anyone. The initial prevention effort often involves examining basic sociological and economic conditions in society. Secondary prevention focuses on the specific individuals who may be considered high-risk for being victims of crime—such as specific locations often hit by vandals or specific populations, such as the elderly (Brantingham & Faust, 1976). The final aspect, called tertiary prevention, attempts to prevent recurring crime. While these approaches to prevention are certainly embedded to a degree in situational crime prevention, situational crime prevention "considers crime within a crime analysis framework where criminal events are analyzed in context and are considered to be the results of a sequence of human decisions" (Brantingham & Brantingham, 2005, p. 275).

Other academics and practitioners, such as environmental criminologists and those utilizing Crime Prevention Through Environmental Design (CPTED), use

situational crime prevention techniques to strengthen the foundation of their work. For example, Jeffery (1971) examined how changes in specific areas, such as lighting and fencing, could reduce crime. In addition, Newman (1972) looked at how modifications in building design and urban planning could reduce opportunities for crime. The general principles behind CPTED are in regards to access control, surveillance, and territorial reinforcement. Timothy Crowe, a well-respected practitioner in the field of CPTED, who has worked on a variety of well known projects, such as the Broward County (Florida) schools, approaches crime prevention by first examining the behaviors desired through a structures design and the actual use and management of the space in question. Once these two aspects are looked at, only then are specific strategies applied to attempt to reduce undesirable behaviors (Crowe & Zahm, 1994). The idea of CPTED is not only to reduce the amount of crime in an area or specific location but also to try and lessen the fear of crime (Crowe, 2000). In essence, those practicing CPTED can be seen as experts in risk management. Using the existing environment can be very useful for obtaining the desired effects of CPTED.

This dissertation will employ a methodological approach similar to what Clarke (1997) considers standard for a situational project. The approach includes five important steps and the first two will be crucial components to this research:

1. collection of data about the nature and dimensions of the specific crime problem;
2. analysis of the situational conditions that permit or facilitate the commission of the crimes in question;
3. systematic study of possible means of blocking opportunities for these particular crimes; including analysis of costs;
4. implementation of the most promising, feasible and economic measures;
5. monitoring of results and dissemination of experience. (p. 15)

This approach is used in this dissertation research. First, data on fan incidents including location, parking area, and offender and structure characteristics will be collected. Second, based on the data, analyses will be conducted on those conditions—location and structure (age of structure, type of parking structure, indoor or outdoor stadium/arena). Based on this, it is assumed and expected that serious incidents will be prevented in newer facilities that will have more state-of-the-art security techniques in place (cameras, hotlines, etc.). As Wortley states,

> Urban renewal and other environmental beautification programs may be successful crime prevention strategies not just because they increase the commitment of residents to guardianship, but also because they make it cognitively more difficult for offenders to justify vandalism and other crimes by removing the excuse that the area is rundown in any case. (1996, p. 122)

The same can be asserted for sports stadiums and arenas. Facilities with outdoor parking lots allow for more pregame tailgating. Outdoor parking lots are used as a space for individuals to gather for longer periods before events and consume more alcohol (routine activities) before entering the stadium, leading to greater possibilities for more serious fan incidents. As Hibbert said, "…very little violence occurs inside the stadium, within the bright lights" (cited in Stover, 2006, p. 44). Finally, policy suggestions are made on how organizations may utilize the analyzed data and conclusions to restructure and prevent further incidents at professional sporting events in the U.S.

The Office of Community Oriented Policing Services publishes "Problem-Specific Guides" and one such guide is, *Spectator Violence in Stadiums*. In it, Madensen and Eck (2008) provide general suggestions for all organizations and parties involved in stadium events to attempt to curb violence. The research focused on publicized incidents and offered the following venue characteristics as being associated with violence:

performance proximity, noise level, seating arrangements, place reputation, temperature, and stadium location. This research examines similar characteristics by looking at location, city ranking (reputation), and attendance (capacity levels). Madensen and Eck (2008) focus on seating in their report. Much like the U.K., their research suggests there are more issues with fan behaviors when general admission and lack of assigned seats are available. For the purposes of this research, seating is not examined, as all stadiums and arenas in the study have assigned seating at various price points (see Appendix C).

It is important to note that this dissertation will discuss and provide policy suggestions based on situational crime prevention in general (see Table 3) but that certain techniques, such as Crime Prevention Through Environmental Design (CPTED) are "site and situation specific" (McCormick, 2006, p. 35).

Table 3

Examples of Situational Crime Prevention Techniques that may be Applied to Fan Behavior

Increase effort	Increase risks	Reduce rewards	Reduce provocations	Remove excuses
a. target harden	a. assist natural surveillance	a. identify targets	a. avoid disputes	a. set rules and post instructions
b. screen exits	b. place managers	b. disrupt markets	b. neutralize peer pressure	b. assist compliance
c. deflect offenders	c. strengthen formal surveillance	c. deny benefits	c. discourage intimidation	c. control drugs and alcohol

Note. From Cornish & Clarke (2003, p. 90)

Wortley (1996) presents four additional strategies—increasing social condemnation, reducing social approval, reducing imitation, and crowd management. The latter is pertinent to this research. Simply put, "crowds can act as situational instigators of behavior" (Wortley, 1996, p. 126). Along with the principles of social identity theory, crowds and de-individualizing the participant can cause violence. Being a part of a crowd, but perhaps more importantly, being *crowded*, can cause increased agitation, and thus, aggressive behavior (Wortley, 1996). Groups of individuals trying to be part of the

greater crowd could lead to more serious incidents. Seating capacity is tested to see if it is a predictor of more serious incidents, while one may be more apt to expect individuals, not in close proximity to one another to engage in less serious incidents such as taunting or even disorderly conduct. Part of crowd management may include the need to train police officers and security personnel on the "culture of fans" (Stott, C.J. & Adang, O.M.J., 2003, p 6). The more we understand the typical behaviors of certain groups of fans and the seriousness of crime committed, the better we can proceed with crowd management.

The techniques listed may be applied to fan behavior and can be especially useful if used in conjunction with one another. For instance, both the sports organization and the security services of the structure should implement techniques to manage crowds and to increase effort and risks (e.g., CCTV). In addition, such techniques will only be useful if applied along with others, such as controlling drugs and alcohol. Various parties (security, the sports organization itself, and the structure personnel) need to work together to ensure that the techniques are applied.

Definitions of Fan Behavior and Aggression

When people refer to fan behavior and incidents, they are often discussing ones involving aggression. Researchers have formulated a variety of definitions of aggression. The following section reviews definitions of specific acts of aggression known to occur at sporting events, which involve fans.

Lewis (1982), through his research, formulated the following definitions of fan behavior and violence:

> Verbal assaults – small groups of fans shouting threatening words or obscenities at players, opposing fans, officials or the police.

> Disrupting plays – small groups of fans running on the pitch, field, or court and halting play.
> Throwing missiles – small groups of fans propelling bricks, beer, coins, pieces of metal or bottles at players, opposing fans, officials, or the police.
> Fighting – small groups of fans throwing punches at players opposing fans, officials, or the police.
> Vandalism – small groups of fans, in concert with each other, destroying property (p. 179).

Wann, D. L., Melnick, M. J., Russell, G.W., & Pease, D. G. & Wann (2001) also attempt to provide a working definition of aggression and of fan aggression, in particular. Surveying the available research, Wann, et al. (2001) collated the following definitions (Table 4):

Table 4

Definitions of Aggression

Definition	Citation
Behavior that results in the personal injury and destruction of property	Bandura (1973, p. 5)
Any form of behavior that is intended to injure someone physically or psychologically	Berkowitz (1993, p. 3)
Any form of behavior directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment	Baron & Richardson, (1994, p. 7)
Behavior that intends to destroy property or injure another person, or is grounded in a total disregard for the well-being of self and others	Coakley (1997 p. 180)

Note. Wann, et al. (2001, p. 94).

Wann, et al. (2001) chose to adopt the latter's definition (Coakley, 1998) as they felt it more closely aligned with sports fans. This dissertation follows a similar guideline and examines seriousness of crime. The crimes being looked at are assaults—harm to another individual—and non-assault crimes, those crimes not involving harm to an individual and considered less serious. The dependent variable is collapsed into a dichotomous variable (assault vs. non-assault - all other crimes).

In this research, it is theorized that most crimes committed in relation to American professional sporting events will be assault crimes, as data is *arrest* data. Siann (1985) notes that violence is an action that involves massive physical force, while aggression is simply having the intention to hurt or to show superiority. Finn (1994) has argued that football (American) is an aggressive sport, and the fans are expecting the players to show their superiority over the other team. When such superiority fails, the fans can often take it "into their own hands," expressing superiority over the opposing team fans. Some research has been conducted on sports viewing and aggression. One study in particular examines whether viewing sports on television increases aggressive behavior and subsequently acts of violence against children (Drake & Pandey, 1996). While no relationship was found between the two variables, the basis of their study was formulated because of other works of research, which examined sports viewing and violence, male on female domestic violence in particular. White, G. F., Katz, J., & Scarborough, K. E. White, et al. (1992) believe that when a home team wins a football game, a male viewer fan of that particular team may feel they have power, and thus, domination over more personal matters.

Who Commits Fan Violence?

While very little research has been done on the seriousness of fan incidents in the U.S., researchers essentially exhausted the issue of the hooligans of the 1980s and 1990s in the U.K. Other works completed (Lewis, 1982) in the U.S. have attempted to provide comparative analyses of those who commit violence by way of sporting events versus those who commit violence by way of other types of riots, such as civil rights. Such research has been able to paint a picture of the typical American 'hooligan' or aggressive fanatic. Lewis (1982) points to one study, where out of close to 500 convicted hooligans, only one was a woman, and in a later study of hooligans kicked out of Manchester United games, zero were women. In terms of race of the "fan," Lewis compared those arrested after a Superbowl victory in Pittsburgh to those arrested due to civil rights protests in a variety of cities in the U.S. The Superbowl arrests were for 1975 and the civil rights protests were for 1967. Not surprising, Lewis found that the Superbowl arrestees were more likely to be White, as well as male and young, when compared with the civil rights arrestees (Lewis, 1982). In addition, the Scarborough Research Data on NFL Fan Demographics (2006) and the Scarborough Research Data on MLB Fan Demographics (2006) found typical fans to be White males (*Sports Business Daily*, September 26, 2006). Based on these research studies, it is theorized that most individuals committing fan incidents are young and White.

Wakefield and Wann (2006) examined what they referred to as the "dysfunctional sports fan." Such a fan is one who takes identifying with a team at a level unlike the average fan and is often abusive, whether physically or verbally. Specifically, the researchers saw the dysfunctional fans as "individuals likely to blast referees, believe

alcohol consumption is a necessary game activity, be critical of stadium services, and be frequent consumers of sports media" (Wakefield & Wann, 2006, p. 179). In their study, they attempted to assess the degree of dysfunctionality, and found that some highly identified fans were indeed dysfunctional. In previous research, it was found that those who identify more highly with a team will be more aggressive (Wann, 1993; Wann, Peterson, Cothran, & Dykes, 1999). Using the *Sporting News (2000-2005)* rankings of sports-minded cities, it is theorized that those cities ranked higher (1 being the most sports-minded) will have more incidents and that the more sports-minded a city, the more likely assaults will occur over less serious crimes.

Fan Behavior Research in the U.S.

Much of the research on fan behavior in the U.S. has a different focus than this dissertation. A great deal of the work on fandom and identity is psychological in nature and examines why one fan is more identified with a team than another and the reasons for such under- or over-identification (Wann, 1996; Arnett & Laverie ,2000; Wann, Royalty, & Roberts, 2000; Bilyeu & Wann, 2002; End, Dietz-Uhler, Demakakos, Grantz, & Biviano, 2003; Wann & Pierce, 2005). However, few models in the literature examine the aggression exhibited by fans and spectators of sports, and even fewer assess the amount and type of spectator violence. Exceptions include Bryan and Horton's (1976) investigation of spectator violence incidents at basketball and football games in the U.S., which found more violent incidents at football matches than at basketball games or any other sport. Bryan and Horton's (1976) study was conducted at a university and examined possible causes of spectator violence. In addition to the type of sport, they found other factors that may lead to collective violence: team sporting events lead to more incidents

than individual sports; more incidents occur when the losing team becomes angry; teams from larger school's are more likely to have incidents; and games among more traditional rivals are more likely to have incidents. Although the data is not available here, much like Bryan and Horton's (1976) findings at the university levels, it is believed that professional sporting events in the U.S., where traditional rivals are playing one another, more incidents would occur. Since the sports examined here are all team sports, this dissertation hypothesizes that the type of sport will not have effect on whether an incident is serious (assault) or less serious.

Other examinations of spectator violence have involved analyses of newspaper and other media. Because no research has been done on the totality of fan violence in the U.S., much information comes from news accounts that are occasionally followed by simple surveys of whether the public perceives such aggression, whether with players or fans, as a problem. For instance, a 1983 Miller Lite survey titled "American Attitudes Towards Sports" found that, "Three out of five Americans believe that violence is a serious problem in sports today, while half say fights between players lessen their enjoyment of the game. Seventy per cent believe that sports violence is harmful to young viewers" (Coakley, 1990, p. 140). However, such surveys are for marketing purposes and question whether the actual sports are perceived as too violent rather than whether the atmosphere in the stands or around the stadium is actually violent. Although these works are not specifically relevant to this dissertation, it is important to mention them to further show what has been done on the subject matter and to emphasize the need for the research.

It is believed that the first recorded account of a fan incident during a professional sporting event in the U.S. was in 1900 when gunfire ensued in Chicago at a Chicago Cubs versus Philadelphia Phillies Major League Baseball game (Nash & Zullo, 1986). Other notable incidents include:

> In 1988, a fan at Yankee stadium threw a hunting knife at Wally Joyner - then with California - after an Angels victory. Fortunately, the knife just grazed Joyner's arm and he escaped serious injury. In 1996, a fan at Wrigley Field rushed Randy Myers on the mound after he had given up a game tying homer. Myers decked him, but he had ample time to prepare as he could see him coming: the fan came from the seats on the first base side behind home plate. Last year, a fan in Milwaukee leaped onto the field and tackled Houston Astros Bill Spiers as he was taking the field. Spiers was shaken but unhurt by the ambush as security guards wrestled the assailant away fairly quickly (Fan Reform, 9/6/2000).

And, of course, in 2004, was the "Basketbrawl." It is speculated that perhaps incidents involving fans attending U.S. professional sports are allowed to continue because the major sports leagues have not created strict policies to punish the culprits. Marc Stein of ESPN.com suggests that the U.S. model policies after those in Europe and European football:

> In soccer-playing countries, the natural response to the deplorable behavior of Detroit's unruliest fans would be to lock out every single fan on March 25, when the Pacers make their next visit to the Palace.
>
> Just last week, selected members of England's national soccer team were racially abused by Spanish fans in what amounted to an exhibition game. FIFA, the sport's international ruling body, is threatening to force Spain to play its next home international match -- a real World Cup qualifier -- behind closed doors, with only members of the media allowed in as witnesses.
>
> It has already happened in this season's Champions League. The opening group match for Italy's AS Roma, against the Ukraine's Dynamo Kiev in September, was abandoned early after Swedish referee Anders Frisk was injured by a coin thrown from the stands. AS Roma's next home match, against Germany's Bayer Leverkusen, was played without fans in the stands.
>
> Such measures have never been taken Stateside, but the Pistons would never forget the message. Not only would its home-court advantage be wiped out in a late-season match up with its fiercest rivals, but Detroit would also lose the six to seven figures of revenue it generates from every home game (Stein, 2004).

Much like Madensen and Eck (2008), Jeff Birren, a New York City attorney who represents the Oakland Raiders and sports teams and venues, noted that "there may be couple lessons from the Pacers-Pistons brawl that teams could embrace: ringing the court with security personnel that face outward toward the stands and getting the players immediately off the court when an incident occurs" (*Sports Litigation Week*, 2004). In addition, it is noted that, "What won't happen are barriers being thrown up between the floor and those sitting courtside. 'With teams charging up to $2,000 a ticket, per game, to sit in the front row, it is hard to imagine that there will be a ground-swell to put barriers in front of those fans,' said Birren, an attorney" (*Sports Litigation Week,* 2004).

In addition, news accounts of fans acting out as a result of a professional sporting event rarely examine the issues at hand. For example, an article in the *Pittsburgh Tribune* covering the property damage of an NFL player's home after a fan thought the player had not performed well, included excerpts from an interview with psychologist Dr. Paul Friday. In response to questions on why such an event might occur, Friday stated, "They don't have a life. Their lives aren't balanced because their brains aren't balanced. They can't see that the role and function of sports is to give balance to life" (as cited in Starkey, 2005). Such reporting does not provide a thorough or scientific examination or explanation. Allyce Najimy of the Center for the Study of Sport at Northeastern University provided a more theoretical explanation for fan behavior and, in an interview, pointed to two theories of why fans act aggressively during sporting events: mob mentality and social identity. As regards to the latter, Najimy explained "people lose their individuality in the crowd and do things as fans they wouldn't normally do themselves" (as cited in Sauer, 2005, p. E-1). Leonard Zaichkowsky, a professor of Sport Psychology

at Boston University stated in a Boston University weekly paper article written by Craig (1999), "The nature of fan misbehavior has clearly gotten worse…At pro events, the ticket prices have a lot to do with it. Fans are paying more and more, the players are getting richer, and the fans think that they're entitled to something" (p.1). It may be possible to link works, such as Craig's, to the theoretical nature of hooliganism in the U.K. and fan behavior, in general. Again, although these works are not specifically relevant to this dissertation, it is important to mention them to show further that little research has been conducted on the subject and to emphasize the need for the research.

Data on alcohol consumption was not available for the individual sporting events or venues examined in this dissertation. However, it is worthwhile to review the research on alcohol and fan aggression. Alcohol, beer in particular, is a regular part of sports watching in the U.S. Beer companies spend millions of dollars on advertising in stadiums and on television during game time. From an observational viewpoint, it appears that most "ugly fans" are usually under the influence of alcohol when they act out. Yet, it should be noted that while this may be how it appears, it is certainly true that there are fans who do exhibit unruly behavior while not consuming alcohol. Wann, et al. (2001) conducted a meta-analysis on the literature available. The researchers examined whether certain drugs, including alcohol, had any effect on aggression.

Table 5 represents their findings:

Table 5

Drugs and Aggression

Drug	Effect on aggression	Sample reference
Alcohol	Increase	Bushman and Cooper (1990)
Barbiturates	Negligible	Chermack and Taylor (1993)
Caffeine	Increase	De Freitas and Schwartz (1979)
Cocaine	Increase	Licata, Taylor, Berman, and Cranston (1993)
Diazepam (valium)	Increase	Gantner and Taylor (1988)
Marijuana	Negligible	Mysercough and Taylor (1985)
Morphine	Increase	Berman, Taylor, and Marged (1993)
Steroids	Increase	Pope and Katz (1990)

Note. From Wann et al. (2001, p. 129).

While the studies found indicate some type of relationship between individual drugs and aggression, research has been unable to establish a relationship between alcohol and sports fanaticism. However, in a *Sports Illustrated* exposé, O'Brien and Hersch (1998) found that 8% of male fans at MLB games left the stadium post play legally drunk. In another *Sports Illustrated* exposé, Sullivan (1986) notes that, when the New England Patriots began selling low-alcohol beer at games, aggressive acts by fans decreased. Bear in mind that these studies by no means pass rigorous scientific scrutiny.

On a strictly fundamental level, researchers have found that sports fans are more likely to consume heavy amounts of alcohol than non-sports fans (Wechsler, 2003). In their dysfunctional fan study, Wakefield and Wann (2006) speculated that the

dysfunctional fan may use alcohol to "reduce their inhibitions and increase their confidence in acting in a dysfunctional (i.e., confrontational and complaining) manner" (p. 171). Research also suggests that the relationship between alcohol consumption and aggression is largely dependent on the situation. Wann, et al. (2001) refer to, as an example, a party where alcohol is flowing freely but merely acts as a social lubricant and results in no acts of aggression. They found that when acts of aggression are introduced into a situation where alcohol is being served, like "taunting" by rival fans, it is "likely to invite hostile outburst from intoxicated viewers" (Wann et al., 2001, p. 131).

It appears that, at least anecdotally, alcohol is believed to play a role in known incidents at stadiums and arenas. As mentioned earlier, concession companies have been sued for over-serving individuals alcohol during events. Two specific suits of note both occurred in 1997. The first (Baker, 1999) involved a New York Jets fan who was stabbed by a drunken teenager during a game at the New Jersey Meadowlands. The stadium and the concession company were sued for not protecting the fan and for serving and over - serving a minor. The second case was a suit brought against the owners of Pro Player Stadium in Miami, Florida when a fan was injured during a Dolphins football game. Incidentally, the man was a season ticket holder and lost the suit on the grounds that ticket holders sign a document waiving liability (Baker, 1999).

Summary of Hypotheses

Based upon the review of the literature, this study examines the following hypotheses. First, an exploratory analysis assesses the amount of fan violence resulting from professional sporting events by examining aggregate crime numbers and type of crime as indicated by degree of seriousness (assault vs. non-assault/all others).

H1: Crime seriousness is independent of city.

H2: City ranking predicts crime seriousness.

H3: In professional sporting events where the opportunity exists for fans to act out – when large numbers of individuals are in close proximity to one another – more serious crime incidents occur.

H4: Structural characteristics of sports arenas predict crime seriousness.

H4a: In facilities that enable less crowd control, more serious crime incidents occur.

H4b: In older facilities, more serious crime incidents occur.

H4c: In facilities with open parking structures, more serious crime incidents occur.

H5: Demographic characteristics predict crime seriousness.

H5a: Race predicts crime seriousness.

H5b: Gender predicts crime seriousness.

H5c: Age predicts crime seriousness.

H6: Type of sport does not predict seriousness of crime.

Based on the review of the literature, the dissertation will focus on what measures should be taken by individual organizations and cities to combat the problem. In addition, it focuses on best practices, and examines how cities and arenas with serious incidents may try and decrease the amount and severity of incidents.

CHAPTER 3:

DATA COLLECTION AND METHODOLOGY

Data Collection

Population and Sample

Data was obtained from local police arrest records in select cities, as well as from additional data provided by open sources. The final database includes data from events at the four major professional sporting events in the U.S: the NFL, MLB, NHL, and NBA. Police departments in cities where NFL, MLB, NHL, and NBA teams are located were contacted to provide data on arrest records at stadiums and arenas during the respective sports seasons. The professional sports organizations/stadiums and arenas were also contacted to provide incident data. Specific city police departments—Boston, Cincinnati, and Orlando—provided the requested data. No stadium or arena provided the requested data. In Boston, data includes information pertaining to the Boston Red Sox (MLB), Boston Bruins (NHL), and Boston Celtics (NBA). The stadiums and arenas for the Boston teams are Fenway Park (MLB) and the TD Banknorth Garden (NBA and NHL). In Cincinnati, data includes information for the Cincinnati Bengals (NFL) and the Cincinnati Reds (MLB). The stadiums and arenas for the Cincinnati teams are Paul Brown Stadium (NFL) and the Great American Ballpark (MLB). In Orlando, data includes information for the Orlando Magic (NBA). The arena for the Orlando team,

during the study years, is TD Waterhouse Arena (NBA). The city of Denver also provided additional data[2]. The breakdown on the sport data is as follows:

MLB: Two teams

NHL: One team

NFL: One team

NBA: Two teams

There are six teams represented in total from four different professional sports leagues and three different cities in the U.S.

Data came in hard copy form or as Excel spreadsheets and was then transferred into an SPSS/PASW file for analysis. The author entered the hard copy form data into the database and double-checked it. A third party, a fellow Ph.D. candidate, was used to triple check the entries. In certain cases, the data included the address at which the incident took place.

Certain analyses could not be conducted uniformly for each city and/or sport. In some cases, the cities did not provide a specific variable for what was asked. Such problematic variables include age of offender (missing from one city—Cincinnati) and attendance rates. In most instances, however, the same statistical measures were conducted in order to make appropriate comparisons.

A number of variables included in the database emerged from open source data from the specific sports teams and from the World Wide Web. Those variables and location of information are:

City – the city the team is located in, gathered from individual team website.

[2] Data from the Denver Police Department contains only aggregate numbers for incidents that involve the stadium and arena, and surrounding area. The data is merely used for supporting the other data and is not included in the main database. See Appendix B.

City Ranking – from the *Sporting News* magazine website, back issue pages to gather data for all years (2000-2005). See the section on *Sporting News Methodology* (Appendix A).

Type of Sport – from open source data on the webpage.

Attendance – from team webpage and contacts at individual teams. Since attendance was not available for most incidents, seating capacity was used as a proxy for attendance.

Stadium (indoor or outdoor) – from team webpage.

Age of Structure – from team webpage, most often under the history section.

Parking (was there an outdoor lot) – from team webpage.

The data was contextualized using field observations at various professional sporting events. Such observations helped to paint a picture of the climate of professional sporting events in the U.S. Field observations were gathered by attending a variety of professional sporting events. This involved viewing sporting events from the stands, and walking the stadium and parking lots, if applicable, and posed no human subject risk. The observational data was to provide a viewpoint of behaviors occurring at professional sporting events.

Variables

The descriptive variables include demographic information such as *age, sex*, and *race* of offender. Specifically, the variables are as follows:

Dependent Variable

The dependent variable is *type of crime/seriousness of crime*. Arrest data was obtained for Boston, Cincinnati and Orlando. Each city supplied the arrest data with their

own classifications of crime type. It was determined, due to the nature of the arrests – stadium/arena incidents – some of the crime types had very small samples; thus it was beneficial to collapse the variable to determine what attributes affect the seriousness of fan incidents that led to an arrest. Specifically, the incidents include assault and other crimes considered less serious crimes. The dependent variable is a dichotomous categorical variable. Type of crime is defined as incidents occurring at the stadium and/or arena address. The variable measures assault crime and also less serious crimes including, city ordinance, court/warrant, disorderly conduct, drugs/alcohol, fraud, robbery, and misdemeanors. The dependent variable is coded as *assault* (serious crime) and *non-assault* (less serious crime). Some cities also provided data for the areas surrounding the stadium but; being unable to attribute such crimes to the sporting event; those arrests were not used in the analysis. Crime types are adapted from the Federal Bureau of Investigation's *Uniform Crime Reporting Handbook* (2004) and are defined in Table 6:

Table 6

Crime Type Definitions

Crime type	Definition
Assault	An unlawful attack by one person upon another
Non-assault/less serious:	
City ordinance	Violation of local laws
Court/warrant	Violation of court orders
Disorderly conduct	Any behavior that tends to disturb the public peace or decorum, scandalize the community, or shock the public sense of morality
Drugs/alcohol	The violation of laws prohibiting the production, distribution, and/or use of certain controlled substances and the equipment or devices utilized in their preparation and/or use/Alcohol based offenses, including, liquor law violations, underage drinking, public intoxication
Fraud	The intentional perversion of the truth for the purpose of inducing another person or entity in reliance upon it to part with something of value or to surrender a legal right. Fraudulent conversion and obtaining of money or property by false pretenses.

Crime type	Definition
Robbery/burglary/theft	The taking or attempted taking of anything of value from the care, custody, or control of a person or persons by force or threat of force or violence and/or by putting the victim in fear/The unlawful entry of a structure to commit a felony or a theft/The unlawful taking, carrying, leading or riding away of property from the possession or constructive possession of another
Sexual offenses	Offenses against chastity, common decency, morals, and the like
Misdemeanor	Other misdemeanor offenses that did not fit in with any of the other crime type categories
Other	Other crimes types that did not fit in with any of the other crime type categories but not misdemeanor offenses

Note. From Federal Bureau of Investigation (2004).

Independent Variables

The independent variables include *city*, *city* (*Sporting News) ranking*, *type of sport, attendance, type of stadium, age of the stadium or arena, parking structure present*, *sex* of offender, *race* of offender, and *age* of offender.

Definitions of Independent Variables

The definitions of the independent variable are as follows (see Table 7 for coding): demographic variables include *sex*, *age* and *race*, where *sex* is the sex of offender, male or female, *age* is age in years, and *race* is race of offender: White, Black, Hispanic, or other. Other variables include *City* of team—the metropolitan area where stadium or arena is located; *city (Sporting News) ranking*—the ranking for the city according to the appropriate year (see Appendix A for a discussion of the *Sporting News* methodology); *Sport*—type of sport: hockey, basketball, baseball, or football; *Attendance*—seating capacity; *Stadium*—the type of arena or stadium where the sporting event took place (indoor or outdoor); *Age of structure*—the age of the stadium/arena at the time of the incident; *Parking lot* present or absent—whether or not a parking lot surrounds the structure (A parking lot, for the purposes of this dissertation, is defined as a vast outdoor area of concrete where vehicles can park (not a covered vertical structure)).[3]

[3] *Parking lot* is an area used for the parking of motor vehicles (Merriam-Webster Dictionary, n.d.).

Table 7

Variable Coding: Variable Codes in the SPSS/PASW Database

Variable	Coding
Sex of offender	Male = 0
	Female = 1
Age of offender	
Race of offender	White = 1
	Black = 2
	Hispanic = 3
	Other = 4
City/ location of team	Boston = 0
	Orlando = 1
	Cincinnati = 2
Sporting news ranking	
Sport	Football (American) = 1
	Baseball = 2
	Basketball = 3
	Hockey = 4
Type of Stadium	Indoor = 1
	Outdoor = 2
Age of Stadium/Arena	
Parking Lot Present or Absent	Yes = 0,
	No = 1

Sampling/Subject Selection Criteria

Data was examined for the years 2000-2005. Certain cities include additional years but the data was not analyzed here. As will be mentioned later, the additional data, along with other data collected in the future, can be used to further examine the issue of fan incidents at professional sporting events in the U.S. *Fan*, for the purposes of this dissertation, is operationalized as an individual who attends a professional sporting event at one of the reporting cities' stadiums or arenas. *Fan* is also an individual who has committed a type of crime (collapsed *assault, non-assault*) and has been arrested while attending the sporting event.

Table 8 operationalizes the other concepts. This table shows the variables, where the data came from, what findings are expected and why.

Table 8

Concepts Operationalized

Concept	Independent variable	Source of data	Expected finding	Reasoning behind expected finding
Crime Seriousness	DV – Assault (Serious) versus non-assault (Less Serious)	Police department data		
City	Metro Area of Team/City	Open source	Location will not be a predictor of crime seriousness	Regardless of where the team is located, crime seriousness will be more dependent on whether or not fans feel they have something at stake as evidenced by City Ranking (Social Identity Theory)
City Ranking	Ranking of Sports Fanaticism for City	Sporting News Magazine	The higher the ranking, the more serious incidents	Higher ranked cities' citizens will believe they have more at stake to keep up their "reputation" (Social Identity Theory)

Concept	Independent variable	Source of data	Expected finding	Reasoning behind expected finding
Sport	Football, Baseball, Hockey, Basketball	Open source	Type of sport will have no effect on crime seriousness	All sports examined allow for fans to identify with their team (Social Identity Theory)
Attendance	Stadium Capacity	Stadium Records	Higher capacity levels will lead to more serious incidents	The more people in close proximity of one other, the more chances of altercations (Routine Activities Theory)
Stadium	Type of Arena/ Stadium (indoor/ outdoor)	Open source	Type of stadium or arena will not be a predictor of crime seriousness	Whether an indoor or outdoor stadium, large groups of people in close proximity to one another will allow for similar results (Situational Crime Prevention)

Concept	Independent variable	Source of data	Expected finding	Reasoning behind expected finding
Age of Structure	Age Stadium/ Arena at the time of the incident	Stadium Records	Older stadiums or arenas will have more seriousness incidents due to outdated facilities and security	More modern facilities with state of the art security systems will be able to curb incidents at a higher rate than older stadiums (Situational Crime Prevention)
Parking	Outdoor Lot or Structure	Stadium Records	Structures with outdoor lots will have more serious incidents	Outdoor lots allow for more pre-game tailgating, enabling individuals to become more "fired up" about their team and more intoxicated (Situational Crime Prevention)
Sex of Offender	Male/ Female	Police Department Data	Males, compared to females, will be a predictor of crime seriousness	Males, in general, commit more crime and attend more sporting events

Concept	Independent variable	Source of data	Expected finding	Reasoning behind expected finding
Race of Offender	White, Black, Hispanic, Other	Police Department Data	Whites will commit more serious incidents than any other race	White males attend more professional sporting events in the United States
Age of Offender		Police Department Data	Offender age will be significant predicator crime seriousness	Younger individuals who believe they have a stake in the game may act out

Methodology

Data Analysis Techniques

A database was created with all relevant data and variables from each participant city.

Descriptive analyses using the statistical software SPSS/PASW assess the frequencies of fan behavior/type of crime, and these were cross-tabulated with the structural and demographic variables. The purpose of the cross-tabulation was to examine just who is committing acts of "aggressive" fan behavior at sporting events in the U.S. Cross-tabulations also show seriousness of crime by sport and city. The limitation of this analysis is that the data varies from city to city, and therefore, some variables have a significant amount of missing data (e.g., *age* of offender).

A binary logistic regression model ascertains whether any independent variables can be seen as predictors of such incidents in professional sports in the U.S. This form of regression is most appropriate here because it allows one to predict the relationship of a dichotomous categorical variable, crime—*assault/non-assault*, to other structural and demographic variables. Two binary logistic regression models were run in SPSS/PASW: one with age of offender and one without age of offender. The first step includes offender demographic variables to account variability of the dependent variable, crime. The second step adds the attributes of the stadium or arena and the sport, and the final step includes the *Sporting News* ranking.

In terms of data analyses, the most important component looks at the seriousness of the crime/incident. This was broken down by *assault* and *non-assault* crimes. The

binary logistic regression analysis and other forms of statistical support are most important for assessing what may be needed from a policy standpoint and to assist in formulating policies involving the techniques of Situational Crime Prevention and Crime Prevention Through Environmental Design (CPTED).

CHAPTER 4:

FINDINGS

Reliability and Validity

Reliability

As mentioned previously, data was from either open source information or from hard copy form provided by city police departments. The author entered the data into Excel spreadsheets (as this is how some data arrived originally), and then it was transferred into an SPSS/PASW database to enable the binary logistic regression analyses. The author double-checked the data to examine and ensure no missing information and that everything was entered as received. A third-party, a fellow Ph.D. candidate, was used to triple-check the data entry to ensure consistency and reliability.

Validity

The greatest threat to internal validity in this dissertation is that of the single group. The research does not include those people who did not commit fan incidents nor does it include crime in locations other than the stadium or arena, except in the general scheme where attendance (seating capacity) at the event is noted. In addition, the study does not consider any control variables that may affect certain behaviors in individuals.

In addition, one threat is the fact the entire universe of cases is not included in the study. While it was not possible to collect all data, arrest data was provided. It may be assumed that such cases were deemed the most serious in their respective crime

categories, and therefore, would have the greatest threat to fan safety and security. Assuming this, this set of cases seems to be an appropriate starting point for research on this topic. However, many more incidents occur at stadiums and arenas where individuals are simply asked to leave the stadium and the incidents do not lead to arrests.

Using the same requested information, there are few threats to external validity. The data utilizes general police data and other open source data available. However, it is unknown if the same information and type of data will be given for every city when further research is conducted.

Data and Findings

Introduction

The purpose of this study was to examine amount of crime seriousness across sport and city, using descriptive statistics and to begin to predict *crime type/seriousness of crime* at four major professional sporting events, the NFL, MLB, NHL, and NBA, using data from local police arrest records and open sources in selected cities in the U.S. The cities that provided data were Boston, Cincinnati, and Orlando. Six teams were represented and included the four different professional sports leagues (data from Denver is included in Appendix B).

The data collected include *type of crime/crime seriousness*, *city (Sporting News) ranking*, *type of sport*, *attendance (seating capacity)*, *type of stadium* (indoor arena/outdoor stadium), *age of the stadium*, presence of *parking* structure around the stadium, *sex* of offender, *race* of offender, and *age* of offender. There were 894 cases but the values for some of the variables were missing. Therefore, in one model, only cases

with reliable values of the respective variables were used for the analysis, thus yielding 563 cases.

Hypotheses explaining crime/fan incidents and their seriousness at professional sporting events were based on the following theories: Social Identity Theory, Routine Activities Theory, and the techniques of Situational Crime Prevention. The following hypotheses about criminal behavior in sporting events were proposed:

H1: Crime seriousness is independent of city.

H2: City ranking predicts crime seriousness.

H3: In professional sporting events where the opportunity exists for fans to act out – when large numbers of individuals are in close proximity to one another – more serious crime incidents occur.

H4: Structural characteristics of sports arenas predict crime seriousness.

H4a: In facilities that enable less crowd control, more serious crime incidents occur.

H4b: In older facilities, more serious crime incidents occur.

H4c: In facilities with open parking structures, more serious crime incidents occur.

H5: Demographic characteristics predict crime seriousness.

H5a: Race predicts crime seriousness.

H5b: Gender predicts crime seriousness.

H5c: Age predicts crime seriousness.

H6: Type of sport does not predict seriousness of crime.

Descriptive and inferential procedures were conducted. Cross-tabulations were used to summarize the data. Logistic regression procedures were conducted to determine whether the demographic and structural variables predicted crime seriousness, a dichotomous variable.

Descriptive Statistics

The frequencies and percentages for the type of crimes committed in sporting events in the U.S. are shown in Table 10. The findings in Table 10 reveal that at professional sporting events in the three cities assault is committed by offenders 40% of the time. Other less serious crimes make up 60% of the incidents at sporting events in the three cities.

Table 10

Frequencies and Percentages for Type of Crimes Committed in Sporting Events

Crime type	Frequency	Percent
Assault	357	39.9
Non-assault	537	60.1

A cross-tabulation of the categorical structural and demographic variables by crime type is displayed in Table 11. The offenders were from Boston (44%), Orlando (22%), and Cincinnati (34%). Most of the crimes committed by Boston offenders were assault (79%). The crimes committed in Orlando were the less serious crimes (86.7%). In Cincinnati, less serious crimes (93.2%) were committed the most.

The most likely type of crime recorded in baseball and hockey was assault (62% and 67%, respectively). In football games, less serious crimes were more likely (95.9%); less serious crimes were also committed in basketball events (81.3%).

Assault was the most likely crime in structures without outdoor parking (38.3%) while less serious crimes occurred more frequently in stadiums or arenas with outdoor parking (61.7%).

Less serious crimes (74.1%) were the crimes most likely to occur in indoor stadiums. Assault and non-assault/less serious crimes occurred almost equally in outdoor stadiums (46.1% and 53.9%, respectively).

Male and female offenders committed assault crimes about equally (40% and 39% respectively). Correspondingly, males and females committed less serious crimes about equally (60% and 61%, respectively).

Assault was the most likely crime committed by Hispanics (82%) and other racial group offenders (80%). On the other hand, Whites and Blacks were more likely to commit less serious crimes (71.5% and 73.3%, respectively).

Overwhelmingly, as Table 12 shows, males commit more incidents of fan behavior, leading to an arrest, than females (>80% in each city and > 66% in each sport). The same is true of Whites; with Whites committing more crime than any other race in Orlando and Cincinnati, 64.1% and 67%, respectively. In Boston, Whites commit fan incidents equally as Hispanics (38.4% and 38.9%, respectively). Whites also commit the most incidents in each of the four sports. Figure 1 illustrates these findings.

Table 11

Crosstabulation of Categorical Independent Variables by Crime Type

Independent variable	Type of crime	
	Assault	Non-assault
City of team		
Boston	79.3	20.7
Orlando	13.3	86.7
Cincinnati	6.8	93.2
Type of sport		
Football	4.1	95.9
Baseball	62.1	37.9
Basketball	18.7	81.3
Hockey	66.7	33.3
Outdoor parking		
Yes	38.3	61.7
No	52.5	47.5
Type of stadium		
Indoor	25.9	74.1
Outdoor	46.1	53.9
Gender		
Male	40.2	59.8

Female	39.2	60.8

Independent variable	Type of crime	
	Assault	Non-assault
Race		
White	28.5	71.5
Black	26.7	73.3
Hispanic	82.2	17.8
Other	79.6	20.4

Table 12

Characteristics by City

			City		
			Boston	Orlando	Cincinnati
Race	White	% within race	31.4	25.7	42.9
		% within city of team	38.4	64.1	67
	Black	% within race	21.4	32.9	45.7
		% within city of team	11.5	35.9	31.4
	Hispanic	% within race	100	0	0
		% within city of team	38.9	0	0
	Other	% within race	89.9	0	5
		% within city of team	11.3	0	1.6
Type of sport	Football	% within type of sport	0	0	100
		% within city of team	0	0	55.5
	Baseball	% within type of sport	69.5	0	30.5
		% within city of team	83.6	0	44.5
	Basketball	% within type of sport	17	83	0
		% within city of team	10.7	100	0
	Hockey	% within type of sport	100	0	0
		% within city of team	5.6	0	0
Outdoor parking	Yes	% within outdoor parking	38.3	23.9	37.8

		% within city of team	83.6	100	100
			City		
			Boston	Orlando	Cincinnati
	No	% within outdoor parking	100	0	0
		% within city of team	16.4	0	0
Type of stadium	Indoor	% within type of stadium	28.8	71.2	0
		% within city of team	20.2	100	0
	Outdoor	% within type of stadium	50.3	0	49.7
		% within city of team	79.8	0	100
Sex	Male	% within sex	43.6	22.5	34
		% within city of team	82.4	86	81.5
	Female	% within sex	45.1	17.6	37.3
		% within city of team	17.6	14	18.5

Table 13

Characteristics by Sport

			Type of sport			
			Football	Baseball	Basketball	Hockey
Race	White	% within race	22.1	40.8	33.5	3.6
		% within type of sport	60.6	42.4	67.2	81
	Black	% within race	30.3	35.6	34.1	0
		% within type of sport	37.1	16.5	30.6	0
	Hispanic	% within race	0	95.3	2	2.7
		% within type of sport	0	31.5	1.3	19
	Other	% within race	8.2	87.8	4.1	0
		% within type of sport	2.4	9.6	0.9	0
City of team	Boston	% within city of team	0	83.6	10.7	5.6
		% within type of sport	0	69.5	17	100

			Type of sport			
			Football	Baseball	Basketball	Hockey
	Orlando	% within city of team	0	0	100	0
		% within type of sport	0	0	83	0
	Cincinnati	% within city of team	55.5	44.5	0	0
		% within type of sport	100	30.5	0	0
Outdoor parking	Yes	% within outdoor parking	21	55.1	23.9	0
		% within type of sport	100	100	83	0
	No	% within outdoor parking	0	0	65.6	34.4
		% within type of sport	0	0	17	100
Type of stadium	Indoor	% within type of stadium	0	0	91.8	8.2
		% within type of	0	0	100	100

sport

			Type of sport			
			Football	Baseball	Basketball	Hockey
	Outdoor	% within type of stadium	27.6	72.4	0	0
		% within type of sport	100	100	0	0
Sex	Male	% within sex	18.7	51.8	27.5	1.9
		% within type of sport	79.5	83.7	85.8	66.7
	Female	% within sex	23.6	49.3	22.3	4.7
		% within type of sport	20.5	16.3	14.2	33.3

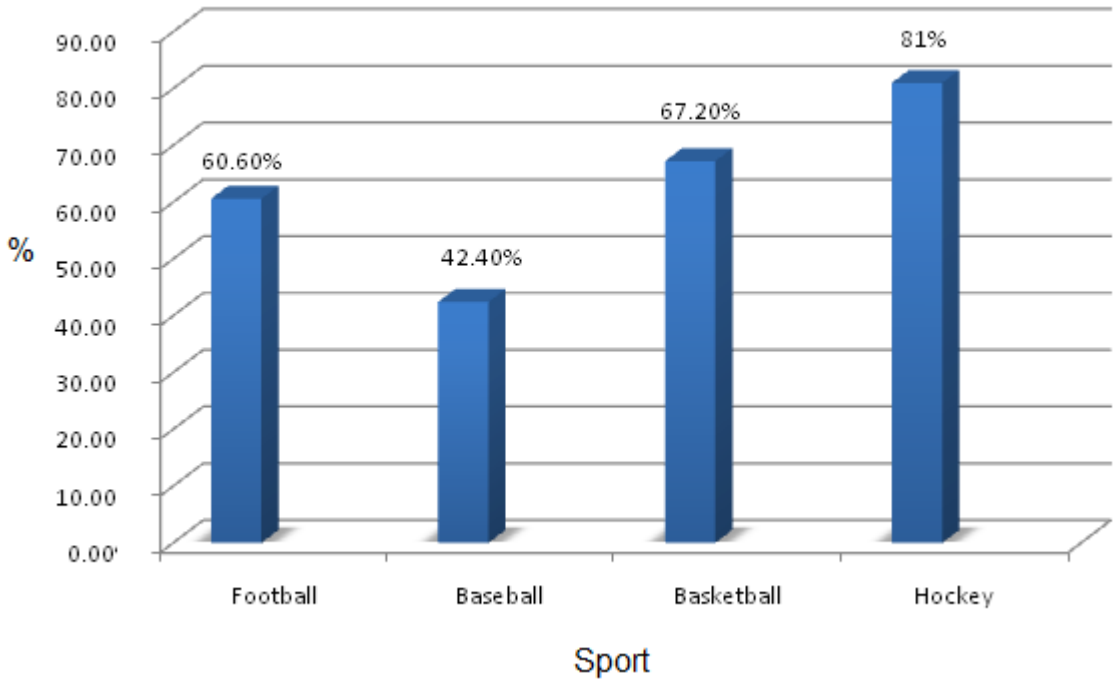

Figure 1. Percentage of Incidents Committed by Whites in Each Sport

The means and standard deviations for the continuous independent variables within each crime type are shown in Table 14. Assault crimes were committed in cities with higher ranking (M = 9.31), older stadiums (M = 70.39), and at least 60,000 attendees. The mean age of offenders who committed assault crimes was 30.51. Non-assault crimes were committed in cities with average ranking (M = 26.51), newer stadiums (M = 16.47), and at least 60,000 attendees. The mean age of offenders who committed non-assault crimes was 31.98.

Table 14

Mean and Standard Deviation of Continuous Structural and Demographic Variables by Crime Type

Independent variable	Type of crime			
	Assault		Non-assault	
	Mean	*SD*	Mean	*SD*
Ranking	9.31	10.20	26.51	10.69
Age of structure	70.39	35.59	16.47	25.39
Number of attendees	61533.00	3938.03	62977.87	6249.18
Age of offender	30.51	11.59	31.98	10.58

Below describes the means of the continuous variables by city and sport. The means for Boston were; city ranking (5.95), age of offender (30.4), and age of structure (75.89. The means for Orlando were; city ranking (34.63), age of offender (32.63), and age of structure (12.64). The means for Cincinnati were; city ranking (27.54) and age of structure (5.99).

The means of the continuous variables for baseball were; city ranking (12.92), age of offender (31.04), and age of structure (65.8). The means for basketball were; city ranking (29.35), age of offender (31.99), and age of structure (12.82). The means for football were; city ranking (26.89) and age of structure (2.98). Finally, the means for hockey were; city ranking (4.57), age of offender (27.24), and age of structure (12).

Logistic Regression Results

Since age of offender was not provided by one of the cities, two logistic regression models were tested: one where age was included and another where age was not included. For each regression model, the demographic variables were entered in the first step, the structural variables were entered in the second step, and the city ranking was entered in the third and last step.

Model with Age

The logistic regression findings for the model including age are shown in Table 15. The findings indicate that, when the structural variables and city ranking variable were not included in the model, age and race significantly predicted crime seriousness. Age negatively predicted crime seriousness (*Wald* = 5.70, *p* = .017). For every unit increase in age, the likelihood that a serious crime would be committed decreased by .98. Race also predicted crime seriousness (*Wald* = 74.42, *p* = .000). Specifically, in comparison to White offenders, the likelihood that Hispanic offenders would commit a serious crime increased by 6.48 (*Wald* = 53.83, *p* = .000). Further, in comparison to White offenders, the likelihood that offenders from other racial groups would commit a serious crime increased by 10.28 (*Wald* = 22.25, *p* = .000).

When the structural variables were included in the model, however, neither age nor race significantly predicted crime seriousness. Location of team (i.e., city), however, significantly predicted crime seriousness (*Wald* = 16.69, *p* = .000). In comparison to offenders from Boston, the likelihood that offenders from Orlando would commit a serious crime decreased by .19.

When city ranking was entered into the model, none of the demographic and structural variables significantly predicted crime seriousness. City ranking, moreover, did not significantly predict crime seriousness.

Table 15

Logistic Regression Results for the Model including Age (N = 563)

Variable	B	*SE*	Wald	*df*	Sig.	OR
Step 1						
Age	-.02	.01	5.70	1	.017	.98
Males vs. females	-.12	.26	.22	1	.638	.89
Race			74.42	3	.000	
Whites vs. Blacks	.03	.23	.01	1	.916	1.03
Whites vs. Hispanics	1.87	.26	53.83	1	.000	6.48
Whites vs. other groups	2.33	.49	22.25	1	.000	10.28
Step 2						
Age	-.01	.01	.36	1	.548	.99
Males vs. females	-.15	.31	.24	1	.626	.86
Race			2.15	3	.542	
Whites vs. Blacks	.32	.33	.95	1	.330	1.38
Whites vs. Hispanics	-.01	.33	.00	1	.971	.99
Whites vs. other groups	.57	.54	1.12	1	.289	1.78
Boston vs. Orlando	-1.66	.41	16.69	1	.000	.19
Indoor vs. outdoor	1.09	1.12	.94	1	.333	2.96
Baseball vs. basketball	-.94	.58	2.69	1	.101	.39
Age of structure	.00	.01	.01	1	.939	1.00

Variable	B	*SE*	Wald	*df*	Sig.	OR
Step 3						
Age	-.01	.01	.36	1	.550	.99
Males vs. females	-.15	.31	.24	1	.624	.86
Race			2.14	3	.544	
Whites vs. Blacks	.32	.33	.94	1	.333	1.38
Whites vs. Hispanics	-.01	.33	.00	1	.971	.99
Whites vs. other groups	.58	.54	1.13	1	.289	1.78
Boston vs. Orlando	-1.5	.85	3.48	1	.062	.20
Indoor vs. outdoor	1.07	1.13	.90	1	.344	2.92
Baseball vs. basketball	-.95	.58	2.69	1	.101	.39
Age of structure	.00	.01	.00	1	.953	1.00
City ranking	-.00	.02	.01	1	.932	1.00

Note. Step 1 $\chi^2(5) = 95.93$, $p = .000$; *Step 2* $\chi^2(9) = 276.36$, $p = .000$; *Step 3* $\chi^2(10) = 276.36$, $p = .000$.

Model Without Age

The logistic regression findings for the model without age are presented in Table 16. The findings indicate that, when the structural variables and city ranking variable were not included in the model, sex significantly predicted crime seriousness (*Wald* = 149.00, *p* = .000) as did race. Specifically, in comparison to White offenders, the likelihood that Black offenders would commit a serious crime decreased by 12.35 (*Wald* = 110.87, *p* = .000). Further, in comparison to White offenders, the likelihood that Hispanic offenders would commit a serious crime increased by 10.52 (*Wald* = 40.45, *p* = .000).

When the structural variables were included in the model, however, race did not significantly predict crime seriousness. Location of team (i.e., city), however, significantly predicted crime seriousness (*Wald* = 30.78, *p* = .000). In comparison to offenders from Boston, the likelihood that offenders from Orlando would commit a serious crime decreased by .15 (*Wald* = 19.27, *p* = .000). Further, in comparison to offenders from Boston, the chances that offenders from Cincinnati would commit a serious crime decreased by .04 (*Wald* = 4.39, *p* = .036).

When city ranking was entered into the model, location of team (i.e., city) still significantly predicted crime seriousness (*Wald* = 6.03, *p* = .049). In comparison to offenders from Boston, the likelihood that offenders from Orlando would commit a serious crime decreased by .21 (*Wald* = 3.89, *p* = .048).

Table 16

Logistic Regression Results for the Model Without Age (N = 869)

Variable	B	*SE*	Wald	*df*	Sig.	OR
Step 1			1.87	1	.172	.74
Males vs. females	-.30	.22	149.00	3	.000	
Race			.06	1	.811	.96
Whites vs. Blacks	-.05	.19	110.87	1	.000	12.35
Whites vs. Hispanics	2.51	.24	40.45	1	.000	10.52
Whites vs. other groups	2.35	.37	74.08	1	.000	.39
Step 2						
Males vs. females	-.08	.28	.08	1	.777	.92
Race			2.45	3	.484	
Whites vs. Blacks	.33	.28	1.38	1	.241	1.38
Whites vs. Hispanics	-.06	.32	.03	1	.856	.94
Whites vs. other groups	.47	.51	.87	1	.351	1.61
Location of team			30.78	2	.000	
Boston vs. Orlando	-1.88	.43	19.27	1	.000	.15
Boston vs. Cincinnati	-3.35	1.60	4.39	1	.036	.04
Indoor vs. outdoor	3.08	1.93	2.56	1	.109	21.82
Type of sport			1.70	2	.428	
Football vs. baseball	.13	.78	.03	1	.871	1.14

Football vs. basketball	-.77	.59	1.69	1	.193	.46

Variable	B	*SE*	Wald	*df*	Sig.	OR
Age of structure	-.01	.01	.92	1	.338	.99
Attendance	.00	.00	1.78	1	.182	1.00
Step 3						
Males vs. females	-.09	.28	.10	1	.757	.92
Race			2.39	3	.496	
Whites vs. Blacks	.32	.28	1.30	1	.255	1.37
Whites vs. Hispanics	-.06	.32	.03	1	.860	.95
Whites vs. other groups	.48	.51	.89	1	.346	1.62
Location of team		.79	6.03	2	.049	
Boston vs. Orlando	-1.55	1.72	3.89	1	.048	.21
Boston vs. Cincinnati	-3.03	1.94	3.12	1	.077	.05
Indoor vs. outdoor	2.99		2.38	1	.123	19.80
Type of sport		.78	1.76	2	.414	
Football vs. baseball	.14	.59	.03	1	.861	1.15
Football vs. basketball	-.79	.01	1.76	1	.185	.46
Age of structure	-.01	.00	.70	1	.401	.99
Attendance	.00	.02	1.76	1	.185	1.00
City ranking	-.01		.25	1	.616	.99

Note. Step 1 $\chi^2(4) = 192.85$, $p = .000$; Step 2 $\chi^2(11) = 528.90$, $p = .000$; Step 3 $\chi^2(12) = 529.15$, $p = .000$.

Hypotheses Tests

Hypothesis 1. It was hypothesized that city would not predict crime seriousness. The findings did not support this hypothesis as location of team (i.e., city) did significantly predict crime.

Hypothesis 2. It was hypothesized that city ranking would predict crime seriousness. The findings did not support this hypothesis; city ranking did not significantly predict crime seriousness.

Hypothesis 3. It was hypothesized that when large numbers of individuals are in close proximity to one another, more serious crime incidents would occur. The findings did not support this hypothesis; attendance did not significantly predict crime seriousness.

Hypothesis 4. It was hypothesized that structural characteristics of sports arenas would predict crime seriousness. Again, the findings did not support this hypothesis; none of the structural variables significantly predicted crime seriousness.

Hypothesis 5. It was hypothesized that demographic characteristics would predict crime seriousness. This hypothesis was partially supported. Without controlling for structural characteristics, race and age did significantly predict crime seriousness. In contrast to White offenders, offenders who were Black or Hispanic were more likely to commit serious crimes. Older offenders were less likely to commit serious crimes.

Hypothesis 6. It was hypothesized that type of sport would not predict seriousness of crime. This hypothesis was supported as type of sport did not significantly predict crime seriousness.

Observational Data

While not the thrust of this dissertation, the author attended professional sporting events in the U.S. in order to contextualize the subject matter. This section will discuss what was observed to provide anecdotal information. More events were attended than will be discussed. The discussion includes remarks on the most notable incidents. In one instance, a National Football League (NFL) game was attended in Miami, Florida. The game was the Miami Dolphins versus New England Patriots. The game began at 1 p.m. on a bright sunny day in November (2005). The two teams are divisional rivals. At one point in the game, a fan fight ensued. What began as a verbal argument quickly became physical with both the Sheriff's Department and stadium security becoming involved. One of the fans ended up hitting a member of the Sheriff's Department. A group of five men were removed from the seating area, and brought into the guts of the stadium, near the concession stands. It was at this time that the Sheriff Deputies and security ejected them from the stadium. The researcher asked one deputy why the fans were simply ejected and not arrested, since one hit another deputy. He merely replied, "I guess he didn't care."

During a Major League Baseball (MLB) game with one of the greatest rivalries in the league, the Boston Red Sox versus the New York Yankees, a Boston fan was ejected. The circumstances of the ejection are interesting. The game was a Yankee Stadium evening game during the week and at the beginning of the season (May 2006). A Boston Red Sox fan was walking up the stadium steps with two beers, one in each hand. He was wearing a Boston Red Sox t-shirt and hat. The fan was not speaking or yelling. While walking up the steps, New York Yankee fans began throwing peanuts and popcorn at

him, yelling, “You suck,” and taunting him with other verbal attacks. At this time, security intervened and removed the Boston Red Sox fan from the section and subsequently, the stadium and game. Perhaps this was because, by simply being there and wearing a rival’s apparel, the fan was inciting a riot. However, why did security not eject other fans? It proves the arbitrariness of the security procedures. It is for reasons such as discretion on the part of security personnel that strict policies and procedures need to be implemented.

CHAPTER 5:

DISCUSSION

This research study sought to examine the amount and seriousness of incidents of fan behavior at professional sporting events in the U.S. In addition, the study looked at whether attributes of the stadiums or arenas contribute to the seriousness of incidents individuals commit. While much research has been conducted on international fan behavior or "hooliganism," and fan identification, little research has looked at the combination of the amount of crime committed, the seriousness of crime, and the attributes of the stadium or arena. As little research has been conducted on fan behavior in the U.S., this dissertation considered the importance of fan violence in American professional sports by bringing together heretofore-unexplored material. Moreover, developments in the post 9-11 world have changed the priority of security in the U.S., and the issue of incidents at professional sporting events is included in these priorities.

Even though such a study has its limitations, the research serves as a starting point for further study through which scholars can begin looking at the issue using hard data and statistics. For example, this initial work could be replicated in additional cities. When the total amount of fan incidents in the U.S. is uncovered (both arrest data and stadium detainee data), further research could ascertain precisely how organizations can combat the problem, and what measures and policies they should implement to do so. In addition, policymakers and sporting organizations will be able to use the data and policy

suggestions to begin to formulate and implement guiding principles and procedures to curtail such acts. This dissertation is merely a starting point to begin looking at an issue that affects so many citizens of the U.S.

The first part of the dissertation introduced the research topic and the general themes to be examined. A thorough literature review of previous studies and applicable theories followed. The third and fourth chapters of the dissertation focused on the methodology, results, and analysis. This chapter will review the findings; discuss the hypotheses, and review methodological, theoretical, and policy implications. Finally, this chapter will discuss future research.

Discussion of the Findings

This study gives a first look at crime seriousness and attributes of the stadium or arena at American professional sporting events. The data is limited in that it is compiled from arrest data from three cities, along with open source data regarding the particular stadiums or arenas where the sports teams play. Nevertheless, the study paints a picture of who commits fan incidents, the seriousness of crime committed, and how the structures may or may not play into said crimes.

The crime variable was collapsed into *assault* and *non-assault*. From the findings, before collapsing the dependent variable, most fan incidents occurring in the participating three cities, Boston, Cincinnati, and Orlando, were *assaults*, committed by white males. In terms of the *Sporting News* rankings, Cincinnati ranked the lowest overall and had the newest stadium. While Cincinnati did not report age, the average *age of offender* for Boston and Orlando was 30 and 33, respectively. Males committed more incidents in all crime type categories. When strictly looking at the collapsed crime variable, *non-assault*

(less serious) crimes were more common, overall, than *assault* crimes. This follows Lewis' (1982) research examining what type of incidents occurring at sporting events (see Chapter 2, Literature Review). In addition, *assaults* were committed more frequently in cities with outdoor stadiums/arenas.

The binary logistic regression model, for the most part, did not behave as expected. Diagnostics were run to assess whether collinearity exists among the independent variables, thus explaining the models not behaving as expected. However, no collinearity exists. The models do, however, show us a variety of things in regards to the hypotheses. City/location did predict crime seriousness. This finding did not support the hypothesis. It was hypothesized that city would not predict crime seriousness because, unlike football in the United Kingdom, fans are not members of organized crews often traveling shorter distances to and from matches to see their team and ultimately, cause friction with the opposing team's fans (Sir Norman Chester Centre for Football Research, 2001a).

Of greatest interest is that variables representing some characteristics of the stadium or arena examined did not affect the dependent variable, seriousness of crime/fan incident. When looking at indoor or outdoor stadium or outside parking lot, neither variable affected crime seriousness. Attendance (seating capacity as a proxy) did not affect crime seriousness and neither did city ranking. This suggests that situational crime prevention techniques may not be of use when examining these particular attributes.

The variables having the most effect on crime seriousness were offender characteristics, following the general theories on fan behavior. However, while White offenders committed more fan incidents, Hispanic offenders were more likely to commit

serious offenses (assaults) over less serious (non-assaults). As predicted, younger offenders were more likely to commit offenses over older individuals.

Also supported was the hypothesis that type of sport would not have an effect on crime seriousness. Research has shown that type of sport does influence fan behavior; however, such research compares individual sports versus team sports or "aggressive" sports such as football versus less aggressive sports such as billiards. This is evidenced in research by Wann & Branscombe (1989), which labeled individual sports as the less aggressive sports. Only aggressive team sports, as defined by previous research (Wann & Branscombe (1989) were used in this analysis, thus type of sport was predicted to have no affect on crime seriousness.

Methodological Implications and Limitations

This study sought to examine the amount and seriousness of criminal activity occurring at professional sporting events in the U.S. In addition, using open source data, certain attributes of the stadiums and arenas were combined with the arrest data. While this type of combined research has not previously been examined, it has provided some groundwork for further studies. In the future, it would be helpful for professional sports organizations to collect, compile, and release thorough data, perhaps through law enforcement agencies, so one can continue to look at the issue of fan behavior. It is clear that looking solely at arrest data neglects to examine the whole universe of cases involved in sporting events.

The city of Boston had 79% of their arrest for assault crimes while the city of Orlando had only 13%. This could be for a variety of reasons. One is a methodological issue in terms of how individual cities classify and code arrests. In addition, Boston was

always rated higher in City Ranking; thus Boston fans could be more invested in their teams outcomes and fans may become aggressive, resulting in more assault incidents rather than less serious incidents.

In addition, it would be advantageous for local law enforcement agencies to cooperate with sports organizations to ensure that the data gathered on fan incidents is as complete as possible. This will allow for a streamlined process in terms of merging data, and having accurate and complete information from both cities and sports arenas/stadiums and their respective teams. The following sections will examine both theoretical and policy implications for the tested hypotheses.

Theoretical Implications

A variety of theories have explained fan behavior in sports. As hooliganism in the U.K. has been the focus of much of the research, not all of the research or theories apply to fan behavior in the U.S. Routine activities theory weighs heavily in this research, as it combines the decisions of the offender to commit a criminal act during a sporting event and also examines how certain attributes of the stadium effect the crime occurring.

The research hypothesized (H3) that, due to the components of routine activities theory and social identity theory, events where attendance was higher would have more incidents. Additionally, due to the principles of social identity theory, it was believed that when like-minded fans gather near one another with the same goals (cheering on their team), more incidents would result. Seating capacity was utilized as a proxy for attendance levels and even still, it did not support the hypothesis. As reviewed in chapter two, the United Kingdom has taken great measures to replace standing terraces with all-seat stadia. This measure, coupled with banning orders, has led to a decrease in

hooliganism. The United States has had all seat stadiums and arenas for decades and recently teams have implemented stricter security policies such as revoking season tickets from unruly fans. It appears, based on this and the research findings, that higher attendance numbers (seating capacity) did not impact crime seriousness in the U.S., perhaps because, by-in-large, the all seat crowds have been well maintained. Additional variables should be tested to assess how routine activities and social identity theories may better explain the seriousness of fan incidents in U.S. professional sports. Looking more specifically at team rivalries for specific sporting events would be useful.

Situation Crime Prevention was used to examine how certain attributes of the stadium may account for the amount and seriousness of crime. Situational Crime Prevention is strongly applicable to this research, as certain variables can have an impact on the crime committed during sporting events. However, the variables tested here did not show to be predictors of serious fan incidents leading to an arrest. Further research could explore other attributes of the stadium to see what impact they may have on crime seriousness.

In this case, it was hypothesized that more incidents of assault would occur. This was tested by looking at features of the stadium or arena, which may enable less crowd control—*age* of structure, indoor/outdoor stadium, and whether the *parking lot*/structure was indoor or outdoor. Before collapsing the dependent variable, *assault* was the most common crime type. However, the binary logistic regression shows that these variables do not have an effect on seriousness of crime (H4). For policy purposes, this is a starting point for the professional organizations and it may be useful to examine attributes such as lighting, stairways, and restrooms.

Building on the theories and situational crime prevention techniques, together with the cooperation of sports organizations, future research should examine the attributes of the individual stadiums or arenas in more detail. Added variables could include more thorough attendance records and type of seating, among others. Perhaps taking closer look at the specific behaviors of the offender and how identity theories may be more applicable to research involving situational crime prevention. The cooperation of the organizations and law enforcement agencies, something that was not available for this study, is crucial to future research on the topic of fan behavior at U.S. professional sporting events.

Policy Implications

One of the main points of this dissertation is to examine how teams and sports organizations can use what they already have, with slight modifications, to ensure the safety and security of their fans. Wann's (1993) theories on fan identity and aggression are supported by the data showing that young, White males, look to their team for success. Knowing who commits incidents at sporting events is a starting point but the stadium and policies are also important. Tearing down stadiums and arenas is rarely, if ever, an option for organizations. Therefore, it is still maintained that organizations need to look at security from a situational crime prevention point of view, despite the models not showing those attributes as being predictors of crime seriousness. We now know that large outdoor parking lots, whether the stadium is indoor outdoor, and seating capacity (used as an attendance proxy) do not predict the seriousness of fan incidents. However, other attributes should be examined to guide policy. For evening events, lighting is an enormous factor. Most security organizations do not have the manpower to monitor

efficiently such large spaces being occupied by thousands of people. Madensen and Eck (2008) suggest proper amounts of training of security personnel in stadiums as paramount to the safety and security of the fans and the space. It is believed that if looking at the totality of incidents, coupled with more specific attributes of the stadium, findings may show that structural characteristics will show to have an impact on the seriousness of incidents.

Table 19 lists some basic and somewhat transparent remedies for sports teams to implement to curtail fans from committing violent acts or acting out in an unruly manner. Now that we know who commits fan incidents, the seriousness of incidents committed at U.S. professional sporting events and what the attributes of the stadium or arena may do not contribute to those incidents, policy makers and league officials can begin to think about implementing new measures to help combat the problem and to conduct further research exploring other areas which may contribute to fan incidents. Certain cities and teams have already implemented some mentioned procedures. For instance, much like the Boston Red Sox, the Cincinnati Bengals, beginning in 2006, created the "jerk hotline," where fans could call to report unwanted fan behavior. The Bengals hotline enables a fan to call and let security know exactly where the unruly fan is seated ("Bengals Fans Can Call 'Jerk' Hotline", 2006). At that time, security maneuvers cameras to assess the situation from the field box. They then decide whether to move in and reprimand the fan. Other cities and stadiums have adopted similar policies. Where this particular measure fails is in the immediacy needed to capture an individual acting out. If a system is in place, such as the one in Cincinnati, all may seem quiet by the time the cameras focus on the particular section. In reality, security needs to rely on the verbal testimony of

surrounding fans (capable guardians). If a fan is simply being verbally abusive to another fan, there is usually not enough evidence to throw someone out of the game. However, if teams print security policies regarding behavior on the back of tickets, certain actions can be taken against abusive fans for violating such policies—even those regarding verbal rants and physical gestures, not just physically aggressive acts. It is certainly just the beginning.

Table 19

Managerial Remedies to Control Fan Behavior

Game Day Procedures
Strict scrutiny at gates for alcohol or other potentially harmful items (e.g., Colorado's "Competing with Class" campaign.
Award points or match points to opposing teams when unruly fans disrupt play (e.g., European soccer).
Ban or suspend guilty of disruptive or violent behavior (i.e., identify and track disruptive fans and don't allow them to return).
Limit alcohol distribution or consumption (e.g. allow sales only during early part of event).
Enlist fans help in identifying abusive fans (e.g., Red Sox posting of # to call via cell phone).
Prohibit signs, clothing or verbal assaults that denigrate rivals and ban such offenders from games.
Hire undercover officers and increase game day security and training at high-risk events.
Move (unruly) fans further from the action so as to not disrupt play (e.g., PGA) or to abuse players.
Issue and require wristbands for legal age drinkers to purchase or consume alcohol.
Pre/Postgame Procedures
Limit attendance in terms of total or by segments (adults, parents, students) likely to cause disruption (e.g., youth or high school games)
Fine for home club and limitations on use of home venue for future matches/games (e.g., World Cup Soccer matches).
Avoid scheduling rivalry games late in the day or evening (e.g., Ohio State and Michigan on Saturday night).
Install and employ the use of closed circuit televisions to monitor high-risk fan areas.

Note. From Wakefield and Wann (2006, p. 181).

Colleges have been paying attention to the issue of fan behavior for quite some time. In 2002, the NCAA held the first Sportsmanship and Fan Behavior Summit to address these very issues with three main issues on the agenda:

> "1) examine issues related to fan violence at or in conjunction with collegiate sporting events; 2) raise awareness and initiate national communication among key stakeholders; and 3) identify possible best practices that can be compiled into a report for local application (http://www.ncaa.org/releases/miscellaneous/2003091601ms.htm, Retrieved on December 15, 2006).

Perhaps the professional sports leagues discussed here—NFL, NBA, MLB, and NHL—should hold similar conferences. Having such an event could ensure that all teams are aware of recommended guidelines and how to implement them.

Some suggested measures in Table 19 are more appropriate for high school or college sporting events. It is easier to limit access to such events. With the Internet controlling most ticket sales to professional sporting events, little can be done in that regard. However, to curb the effects of an intense rivalry, the San Diego Chargers have implemented a ticketing policy that seems to have had a positive effect. A major rivalry in the NFL is the San Diego Chargers and the Oakland Raiders. By either driving five or so hours or taking a quick 40-minute flight, fans from either side can easily attend the games. The fans of the Oakland Raiders have always had a reputation for being particularly aggressive supporters. The violence at the games would often become intense. In order to attempt to alleviate that the Chargers' organization required those buying tickets to any Chargers versus Raiders game being played at San Diego to purchase those tickets as part of a three-game ticket package (McDonald, 2004). The rationale behind this was that fans who would agree to such a measure would be serious

fans, willing to spend the money, and would have more at stake. Therefore, the likelihood of acting out would decline.

In addition, most teams have strict rules for season ticket holders. Contracts are signed stating that if they are thrown out or arrested; their season tickets can automatically be revoked. For instance, the Denver Broncos have the following warning regarding the code of conduct and season tickets written on their webpage:

> We value your enthusiasm, but ask that all fans exercise good judgment and observe the "Code of Conduct" listed herein. Please observe the rights of others by displaying proper decorum. Violators will be ejected from the stadium premises. All Account Holders are responsible for their conduct as well as the conduct of their guests and persons occupying their seats. Violations, by either an Account Holder or anyone occupying their seats, may result in having account privileges revoked without reimbursement to the Account Holder and/or the holder of the ticket license at the discretion of the Broncos (from http://to.denverbroncos.com/season_tickets_policies, Retrieved on December 29, 2006).

The Orlando Magic, in cooperation with the NBA, recently revoked a fan's season tickets and instituted an NBA—wide ban for the entire 2006-2007 season. The fan had taunted a Houston Rocket's player during a game in Orlando with racial slurs (Denton, 2006). In addition, most teams have policies revolving around the revocation of season tickets if the owner of those tickets is found to be reselling, or scalping them. Those policies usually also fall under individual states' anti-scalping laws and have more to do with money and profits rather than trying to curtail bad behavior amongst fans.

Table 20 contains the security guidelines listed for two of the cities teams from which data was collected (Boston and Cincinnati). The individual teams under the direction of the leagues (MLB, NHL, NBA, and NFL) produce most security guidelines. Some are more extensive and specific than others. It is suggested that teams be as specific

as possible to avoid further disputes after action has been taken regarding inappropriate fan behavior.

Table 20

Security Guidelines for Boston Red Sox and Cincinnati Bengals

Security guidelines at Fenway Park (MLB - Boston Red Sox)	Fan conduct (NFL – Cincinnati Bengals)
In a continuing effort to provide comprehensive and thorough security and in accordance with Major League Baseball directives, the Boston Red Sox have instituted the following procedures for the 2005 season: All persons, bags, and personal items are subject to inspection before entering Fenway Park. No bag or item larger than 16"x16"x8" will be permitted inside the Park. In addition to items larger than 16"x16"x8", the following items are prohibited: Umbrellas, hard-sided coolers, cans, bottles, glass containers of any kind, alcoholic beverages, illegal substances, firearms, noise-making devices, and commercial audio/visual equipment. Fans will NOT be able to store any prohibited items at Fenway Park. Cameras and video cameras are permitted but cannot be used to reproduce the game and must not interfere with other fans' enjoyment of the game. Exiting and re-entering the Park is not permitted at any gate. Smoking is prohibited inside Fenway Park. Any fan that directly or indirectly interferes with the enjoyment of the game will be promptly ejected from Fenway Park and may be subject to arrest and prosecution by the Boston Police. The Boston Red Sox do not condone misbehavior of any kind. Fans are also reminded that anyone observed with offensive articles included signs, shirts, hats, etc. may be asked to remove/discard them. Failure to comply with such a request will result in immediate ejection from the park. The Red Sox will continue to make every effort to ensure socially acceptable behavior in order to allow fans to enjoy the game in comfort (retrieved on January 10, 2007 from http://boston.redsox.mlb.com/NASApp/mlb/bos/ballpark/security.jsp)	The Cincinnati Bengals are proud of our great fans and the club will accept nothing but the best conduct from all of its guests. Inappropriate, rowdy or inconsiderate behavior is cause for ejection from the game with no refund. Repeated offenses can result in the loss of COA and ticket privileges (retrieved on January 10, 2007 from http://www.bengals.com/tickets/FanGuide.html).

In addition, while city ranking did not predict crime seriousness in the regression model, the descriptive statistics show that there were more serious incidents in the city of Boston – the city that had the highest city ranking numbers. This follows social identity theory in that the individuals may have a greater stake in their team and the event, thus being more aggressive and leading to more assault incidents. Professional sports organizations can look at how sports-minded cities are and adopt policies tailored to those cities arenas and teams.

While professional sports organizations should create universal security policies for teams to follow, certainly, some places will have security and/or structural issues unique to them. However, creating universal policies would be beneficial for the teams and stadiums and could assist researchers in the future to assess what is working or not.

Ethical Issues

Because the data provided by the cities and organizations have no identifying variables attached, the study involved no serious human subjects issues. Anecdotal information from field observations at sporting events also omitted names and other identifying information. In addition, the dissertation has been approved by the Institutional Review Board at John Jay College of Criminal Justice and conforms to all IRB guidelines. In addition, the Human Subjects test has been taken and passed.

Limitations

It should be noted that the research does have its limitations. In an ideal situation, access would have been granted to the entire universe of cases of fan incidents at U.S. sporting events. The research involves arrest data and fails to document incidents that occur at stadiums and arenas that do not lead to an arrest. No professional team's security

department was willing to allow access to their data. This is not surprising in that it is believed that it would not be in their best interest to disperse just how many incidents occur during an event. In addition, not every police department in cities with professional sports teams was willing to participate and allow access to data.

Police departments may not have a uniform way of defining crimes and the seriousness of crimes. This leads to discrepancies in the data. Police departments also have different ways of disseminating arrest data, such as is the case in this research. Therefore, not all variables are represented for each city, and thus, there is missing data. These two points direct one to the issue of generalizability. While this is a starting point in the research on fan behavior/crime seriousness in professional sports, it is probable that not all cities, which have professional sports organizations, will report information and data in the same manner. In addition, the same findings may not mirror other professional sports as become more popular with the public, such as Major League Soccer. This research pertains to American professional *team* sports. It may be beneficial for one implement similar research directed at individual team sports, such as tennis or boxing, as they have strong fan bases.

An additional limitation is the use of open source data. Much of the open source data was gathered from the professional sports organizations websites. Those organizations own the information and have policies on their pages regarding copyright infringement. However, some information, such as attendance numbers—of which little was obtained— did derive from World Wide Web open source data, which does not have such policies and would be considered less reliable.

Future Research

It is evident from previous research on fan behavior in the U.S. (mainly fan identification) and in the U.K.; the issue continues to be pertinent. General media reports continue to follow incidents that occur at events in the U.S. In the past year and a half, the NFL hired a former Chief of the Pennsylvania State Police to run the league's security. One of his mandates has been to address the issue of fan incidents at stadiums throughout the league. Although, the league has issued a code of conduct for the league (similar to codes individual teams already have), it remains to be seen how the league will be addressing incidents (McCarthy, 2008). However, if it chooses to make the issue the highest priority, more coherent and thorough data may be made available for further research studies. Future research should also include a comparison of stadiums newly built with more state of the art surveillance systems and policies in place to older stadiums without such systems. This will enable research to ascertain what differences there are, what works and how to address any problems and outdated issues.

In addition to this research, focusing on post-event riots and/or celebrations may be beneficial for cities and other jurisdictions. Such events affect not just those in the stadium or arena but also outsiders.

APPENDIX A:

RANKING METHODOLOGY

Ranking Methodology*

[1] The ranking criteria used by *Sporting News* are as follows:

- The rankings are based on the present sports climate, with the criteria including championships, playoff berths, regular-season won-lost records and applicable power ratings, overall fan fervor, sports atmosphere and knowledgeability, abundance of teams, stadium quality, accessibility and ambience, ticket availability, franchise ownership, marquee appeal of athletes, and quality of competition.
- To be rated at all, a city must have at least a Division I basketball team or be home to a minor league baseball or hockey team or an NFL or major league training camp.
- *Sporting News* has made subjective calls on whether a nearby college town actually is in a city's ranking (Ann Arbor, for example, is included in Detroit's overall ranking; Stanford and Cal with the Bay Area).
- Tradition plays only a minimal role; this is a year-to-year ranking.

With these criteria as the framework, it is clear that our top sports cities have some things in common:

- Each has a sizable knot of fans who, like we do, disdain the corporate suits who glom onto the best seats and then beat feet after the seventh inning/second period/third quarter. We give a deferential-and knowing-nod to "“macrofans," who attend games (win or lose) and read, watch, cybersurf, listen to and talk sports most every waking hour. You want to know where your city ranks, and, undoubtedly, you think it is ranked too low.
- In our dream cities, there are plenty of teams to root for in plenty of sports, and in a couple of cases you can take your pick from a couple of teams in the same sport (although our rankings reward quality over quantity).
- Finally, much as it's hard to admit, there is, in our top cities, life away from team sports. There's fishing and boating, golfing and hiking. There are even, we are told, museums and art galleries.

*Adapted from "Sports Cities," (2003), Sporting *News*.

APPENDIX B:

DENVER DATA

Table B1

Total Number Of Arrests at Sports Arenas/Stadiums

OFFENSE TYPE	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**TOTAL**
Homicide	0	0	0	1	0	0	1
Robbery	1	1	0	0	0	0	2
Aggravated Assault	2	0	1	2	1	0	6
Aggravated Battery	0	5	2	1	4	1	13
Burglary	2	0	0	0	1	0	3
Larceny	9	7	5	10	9	15	55
Motor Vehicle Theft	1	0	0	1	0	1	3
Simple Assault	4	9	4	11	6	11	45
Simple Battery	41	59	40	50	47	61	298
Fraud	2	1	1	4	2	3	13
Vandalism	5	5	3	6	1	3	23
Weapons	2	2	0	1	1	2	8
Prostitution	0	0	1	1	1	1	4
Sex Offense	3	2	1	0	1	2	9
Drug Abuse Violation	17	12	4	7	8	4	52
Offenses Against Family & Children	0	0	0	0	1	0	1
DUI	3	4	0	0	1	0	8
Liquor Laws	0	0	0	1	1	0	2
Disorderly Conduct	49	23	39	32	14	31	188
Misc. Non-Index	42	61	55	75	61	86	380
Misc. Municipal Code Violations	3	2	4	2	0	1	12
Traffic Violations	4	1	0	0	1	0	6
Warrant Arrests	0	0	4	7	6	3	20
TOTAL	**190**	**194**	**164**	**212**	**167**	**225**	**1152**

*Chicago Police Department, Research and Development Division (March, 2006)

APPENDIX C:

CURRENT STADIUM/ARENA SEATING AND TICKET PRICES

BOSTON

Fenway Park Range:
DUGOUT BOX – UPPER BLEACHERS: $325/ticket - $12/ticket.

CINCINNATI

Paul Brown Stadium Range:
GREEN ZONE – PURPLE ZONE: $82/ticket - $64/ticket

Great American Ball Park Range:
DIAMOND SEATS – OUTER VIEW LEVEL: $67/ticket - $5/ticket

ORLANDO

Amway Arena Range:
'E' – 'P': $99/ticket - $10/ticket

(redsox.com, orlandomagic.com, bengals.com, Cincinnati.reds.mlb.com, retrieved on May 26, 2009)

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