Chapter 26
Performance-Enhancing Media: Virtual Advertising in Sports

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ABSTRACT

With the billions of dollars at stake in sport enterprises, it is not surprising that advertising permeates every facet of athletic competition as companies attempt to increase awareness of their products to the millions of sports fans around the world who continue to make it a multi-billion dollar industry. Today in sports, it seems that everything can be purchased, even "virtual space." For advertisers, however, the proliferation of exposure is not indicative of over-saturation, but rather presents a need for innovative ways to reach their target audiences. Like athletes who use intensive workouts and nutritional supplements, advertisers are looking for performance-enhancing broadcast options. Virtual advertising is a relatively new, performance-enhancing technique that can improve a company's competitive edge. Following an examination of mere exposure theory, this chapter will turn to a discussion of the benefits and opportunities of virtual advertising in sports events, and finally will explore the potential controversies and drawbacks surrounding virtual advertising technology.

INTRODUCTION

In the not too distant past, most fans viewed sports as pure and innocent entertainment. Though it was business, fans only briefly needed to contemplate the enterprising or financial side of sports when controversies arose, such as the Black Sox scandal, Robert Irsay's unexpected move of the Baltimore Colts to Indianapolis, and of course, Pete Rose's alleged sports gambling. Children collected baseball cards and autographs for their own pleasure, Babe Ruth promised to hit a home run for a sick child, and Lou Gehrig was the "luckiest man on earth." But today, sports generate billions of dollars and even the average fan is aware of the ramifications of finance and sports, from contract negotiations for players and coaches, to the cost for Super Bowl ads, and funding for new stadiums and bidding wars over naming rights.

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With the billions of dollars at stake in sport enterprises, it is not surprising that advertising permeates every facet of athletic competition as companies attempt to increase awareness of their products to the millions of sports fans around the world who continue to make it a multi-billion dollar industry. For instance, NBC paid $3.5 billion to hold broadcast rights for the Olympics from years 2000-2008, and paid another $2.2 billion for the broadcast rights from years 2010-2012. Furthermore, scoreboards, ticket stubs, cup holders, and victory parades are also utilized by advertisers to make their company or product name visible. On the field, Reebok paid the NFL millions of dollars for exclusive uniform rights for all NFL teams. High profile athletes, from Derek Jeter, Peyton Manning, and Tiger Woods are paid millions of dollars to wear certain clothing brands, use particular equipment, and be seen drinking specific beverages. In some ways, it appears that anything and everything is for sale. Bryant and Raney (2000) took note of this corporate-first identity that permeates today's sports broadcasts. Though they recognize the history and necessity of commerce in sports, they claim, "of late, however, the commercial skeleton has become the all-too-obtrusive epidermis of sports on the screen" (p. 159). Today in sports, it seems that everything can be purchased, even "virtual space."

For advertisers, however, the proliferation of ads is not indicative of over-saturation, but rather presents a need for innovative ways to reach their target audiences with their products better than their competition in order to break through the clutter. In fact, during the 2003 Marketing Forum, keynote speaker Philip Kotler, a professor of international marketing at Northwestern's Kellogg School of Management, claimed that television advertising no longer works (Abrahams, 2003). His indictment focused on television's antiquated traditional uses. One answer to this and other critiques is virtual advertising. Like athletes who use intensive workouts and nutritional supplements, advertisers are looking for performance-enhancing broadcast options.

Virtual advertising is a relatively new, performance-enhancing technique that can improve a company's competitive edge. Burgi (1997) defines virtual advertising as "real time video insertions into television broadcast" (p. 13). The ads appear to viewers at home as if they are part of the actual, physical event, yet they are only superimposed by computer imaging technology and not visible to event participants, and without disruption of the sports event (Deutsch, 2000). For instance, in Major League Baseball broadcasts, if a camera zooms in on a batter, it may look as if the wall behind him has a sign for a particular phone company on it, when in actuality, it is a blank green screen with digital images visible only to television viewers. The ads truly seem to appear naturally in the setting. When the player moves in front of the sign, the ad never loses its appearance or qualities that would lead the viewer to believe the sign is fabricated. However, a person actually attending the game will see just a blank wall behind home plate. In fact, the technology can be used on blank walls, as well as to cover existing advertisements, create the illusion of freestanding billboards, painted playing surfaces, and even pennants and flags that blow in the wind.

The technology, though now being used by prominent national networks, actually debuted in 1995. During a June 1995 Trenton Thunder minor league baseball game, Comcast Cablevision of New Jersey used the technology to display their logo on the wall behind home plate (Rubel, 1996). During the 1996 and 1997 seasons, both the San Diego Padres and the San Francisco Giants were the first major league teams to incorporate virtual advertising on a regional basis, and ESPN used the technology during its broadcast of their 1997 nationally televised baseball game between the New York Mets and the New York Yankees (Dickson, 1998). Sponsors included well-known companies like MasterCard and Pepsi, as well as an ad for the film *Armageddon*. Following the game and its showcase of this new technology, Bob Jeremiah, ESPN's Vice President of Special

Sales, claimed that sponsors were pleased with the advertisements, and that ESPN would continue to look for ways to use the technology, which they did. By the year 2000, Major League Baseball had committed to using virtual advertisements in at least twenty Sunday night games (Deutsch, 2000). By 2008, nearly all televised MLB games contain virtual advertisements.

These ads are now used in nearly every sport broadcast from baseball and football, to soccer and tennis, and its technology has been widely used during 2008 Summer Olympic Games in Beijing. What becomes part of sport consumers' consciousness as a virtual line in a football broadcast that allowed viewers at home to see the first down marker span the width of the field, has turned into a ubiquitous part of nearly every sports broadcast, from football markers and swimmers' names imposed on their lanes, to sponsored billboards and product placements that change throughout the event. Given the increasing use and acceptance of virtual technology, this chapter will identify key issues that have led to both the need for and adoption of virtual advertising in sports. To do so, Zajonc's (1968; 2001) mere exposure theory will be applied to this context and used to analyze the potential effectiveness of this new advertising technique. Following an examination of mere exposure, this chapter will turn to a discussion of the benefits and opportunities of virtual advertising in sports events, and finally will explore the potential controversies and drawbacks surrounding virtual advertising technology.

MERE EXPOSURE

Building upon a long line of research that demonstrates exposure to a stimulus increases positive feelings toward that stimulus, Zajonc (1968) presented his theory, now known as mere exposure or mere-repeated-exposure (see Bornstein, 1989). Zajonc explains the premise of the mere exposure by claiming that "repeated exposure of the individual to a stimulus is a sufficient condition for the enhancement of his attitude toward it" (p.1). In other words, if the simple and unimposing exposure of a stimulus is repeated, a familiarity is created with the stimulus; that familiarity is transferred to increased positive feelings. Interestingly, Zajonc argues that all that is needed to increase liking is familiarity; there is no need for positive reinforcement or an unconditioned stimulus.

Though the premise is simple, the implications are profound. In contrast to cognitive processing models of persuasion, such as the Elaboration Likelihood Model (Petty & Cacioppo, 1986, 1990), with mere exposure, there is no cognitive "skill" or process undertaken by the subject, nor is there an associated "message" attached to the simple exposure (Bargh, 2001). Further, for mere exposures to affect overall evaluation there is no motivation or purposive effort by the receiver of the repeated message, merely repeated exposure. This almost subliminal form of conditioning is accomplished without the subject's conscious effort of processing, while still generating potentially positive affects. Bornstein (1989) states that there have been numerous studies that show the effects of mere exposure are attained with the subjects being unaware of the stimuli. So, not only does exposure that is unaware to the subjects create the predicted results, more complex and detailed exposures may be less effective. Similarly, the effects from stimuli that are not clearly recognized by the subjects are substantially larger than those that are recognized by the subjects (Bornstein & D'Agostino, 1992; R.B. Zajonc, 2000). When trying to create positive attitudes toward stimuli via mere exposures, the more simple the exposure the more effective.

Bornstein and D'Agostino (1992) illustrated this effect of simple, unnoticed stimuli by examining subliminal stimuli as measured against more blatant stimuli. They showed that the subliminal stimuli fostered higher rankings of "liking" as opposed to the stimuli that was easily recognizable to the subjects. Here, the more obvious the stimulus, the resulting exposure effects were weaker than the less obvious stimulus. Within the relationship between exposure and potential positive attitudes toward the stimuli, mere exposure has a diverse and far reaching application to many contexts, including virtual advertising.

VIRTUAL ADVERTISING AND EXPOSURE

The implications for mere exposure is that advertisers are now choosing to promote their companies and products to the vast audiences attending to sports, who are spending billions of their dollars. When advertisers need to maximize their exposure to their audiences – quantity does matter. As Baker and his colleagues have argued, the amount of attention advertisers' brands get through being shown on television, mentioned as sponsors, advertisers, seen on banners, etc. will affect mere exposure's power through familiarity (Baker, 1999; Baker & Lutz, 1999). Virtual advertising that appears to exist as part of the program itself is one viable option. Applying Zajonc's (1968) work on mere exposure helps explain why this technology might be a powerful new force in advertising. Zajonc demonstrated that the more times a person was exposed to a stimulus, the higher the probability that the person gained a favorable attitude toward the stimulus. As Bornstein (1989) explains, "in short, familiarity leads to liking" (p. 265). Here, this familiarity results from repeated exposure.

Applying the idea of mere exposure within a sports context, one scholar looked at how mere exposure, through sponsorships rather than virtual advertisements, might affect sports fans' perceptions of a company. Bennett (1999) used Zajonc's work on mere exposure as a template to evaluate the effectiveness of particular soccer sponsorships in the U.K. He concluded that the mere exposure of sponsorship not only delivers when it comes to boosting brand awareness, it also gives consumers a sense, true or not, that the sponsor's products/services are used extensively, making them even more desirable. In the case of sponsorships, mere exposure worked. That the same positive relationship should hold true for mere exposure through virtual ads. If consumers consistently see virtual ads, particularly as part of the "scenery" of sports through placements on venue walls and playing surfaces, the exposure is operating to provide a sense of the product as an integral part of the sport itself.

This strategy has high potency potential in light of Bornstein and D'Agostino's (1992) findings discussed above which hold that simple messages can be the most effective means of achieving mere exposure. In virtual ads, the ad itself must stay simple and clean to keep from distracting from the event itself. Thus, the logo or simple visual image can be processed quite subliminally, an important aspect of mere exposure. If done well, then, virtual ads should be frequently shown, and be unobtrusive. In many ways, this defies long-time advertising strategies of becoming the most noticed ad in attempts to break through to the consumer. This technology clearly offers "quantity" as an alternative to "quality" if quality is defined as consciously attended to advertisements.

There is a significant body of evidence that supports the effects of mere exposure, yet for advertisers, the goal is not just to attain familiarity and positive affect, but also to influence buyer behavior. According to Baker (1999) positive affect in absence of buyer behavior is fairly useless in meeting advertisers' goals. Just because a marketing campaign may be memorable or have widespread appeal, if it does not drive sales, it should be rendered useless. Clearly, the goal of companies advertising their products is to obtain a positive change in attitude toward their product or service, ideally with the least amount of effort and financial cost. Baker (1999) asserts that though there are few studies that test mere exposure in advertising research (e.g. Janiszewski, 1993; Obermiller, 1985), that research does support the use of mere exposure in advertising. Importantly, existing studies support mere exposure's central claim that, "unconscious automatic effects of mere exposure are distinct from the deliberate inferences that individuals may make about the conscious familiarity created by advertising exposure" (Baker, 1999).

Extending the discussion of mere exposure in advertising, Baker (1999) posits three ways that mere exposure can affect buyer behavior. The first, brand familiarity, implies that mere exposure can help "relatively unknown brands" compete against one another or well-known brands to compete against one another. Then, if buyers' knowledge or familiarity of brand choices is equivalent, mere exposure can increase familiarity for the well-advertised product and ultimately make them the more familiar, ultimately purchased product.

Quality differentiation and the motivation to deliberate at the purchase point are the other two factors known to affect the effectiveness of mere exposure in advertising contexts (Greenwald & Clark, 1984). Quality differentiation is a factor that operates when competing brands are perceived to be equal in "objective characteristics." In other words, if two toothpastes have equal cavity-fighting protection and whitening ability, the brand the consumer is most familiar with, through mere exposure, will likely be purchased (Baker, 1999). Similarly, if motivation is low to deliberate between brands, familiarity through mere exposure can act as a "tie-breaker" (Baker, 1999; Baker & Lutz, 1999). And, while customers may find traditional advertisements distracting, Bennett and his colleagues (Bennett et al., 2006) found that viewers are not aversive to virtual ads. Specifically, they investigated attitudes toward virtual advertising versus commercial advertising during a sports broadcast. For example, when almost 200 participants watched a segment of a football game, they found that the virtual ads were less irritating and more credible than the traditional commercials. In sum, with all factors being equal, becoming part of the sport landscape through virtual advertising provides the exposure that companies and products need to give them a competitive edge of their own.

BENEFITS AND OPPORTUNITIES OF VIRTUAL ADVERTISING

Non-Broadcast Conducive Sports

First, historically, many sports have conformed to a television-friendly format. As Maidment (2006) notes, Olympic events, Wimbledon tennis championships, and other world class sporting events have tried to adjust their schedules to adapt to American television schedules, despite the difficulties the event timing may present for local audiences. Even baseball's night games have been indicted as pandering to television viewers rather than ticket holders (King, 2008). The adaptations are not actually for American television audiences, but for the advertisers who are targeting those audiences. It only makes sense that a larger audience is available to watch televised sporting events during prime time hours and on weekends, and therefore, those audiences can receive the messages and promotions of the advertisers.

In fact, as several scholars and reporters have noted, sports themselves have adapted rules of play for the benefit of broadcasting (Bennett et al., 2006, Levine, 2008, Maidment, 2006, Zhou, 2004). The National Football League plays four quarters with a halftime, including multiple time-outs allowed for each half. The National Basketball Association follows the same four-quarter, multiple time-out set-up. Many time-outs or time stoppages have even been built into the rules to allow for networks to air television commercials. Yes, television commercials have dictated rule changes for popular sports, which may even alter game strategy. Even the National Collegiate Athletic Association (NCAA) has altered when the clock stops during college football games to allow for maximum commercial opportunities, as requested by the media that air the games. As a result, the NCAA is now battling excessively lengthy games that are difficult for viewers who may not be able to commit three to four hours of viewing time. They are examining ways to shorten the game span. To do so, the number of commercial opportunities will not likely diminish, but new rule changes will limit the number of minutes, and thus plays, during each game. As noted by Levine (2008) "And since the real culprit – television stoppages – is unlike to ever fall in the NCAA's crosshairs, it is once again being suggested that the timing rules be altered." Thus, rather than challenge the authority of broadcasters and advertisers, the NCAA is likely to find other ways, such as rule changes, to shorten games. Television stoppages are not new, and the commercials generate revenue for the networks, and ultimately the universities, conferences, and the NCAA itself. This not only perpetuates colleges' and universities' dependence on this revenue and their desire to be televised, but commercial television's integral role in the success of these relationships.

Given this dependence, some sports have historically been shunned by network broadcasting, thus hurting the potential for those sports gaining exposure to wider audiences, and ultimately popularity. As noted by Bennett, Ferreira, Tsuji, Siders and Cianfrone (2006), without continuous and regimented breaks in action, sports like soccer and hockey have struggled to fit within the modern mold of advertising breaks. Thus, though many televised sports have even changed rules to allow for "television time-outs" that build-in stoppages for commercials, some sports do not allow for such advertising-friendly opportunities. In turn, this lack of coverage weakens advertisers' ability to tap those sports' fan base.

One important benefit of virtual advertising is that it has allowed sports to become more advertising-friendly, which will ultimately allow them to generate more television revenue for sponsors and organizers. With virtual advertising, these sports may get a new lease on life when it comes to the ability to be televised by major networks, and advertisers will have more ways of reaching fans of such sports. Maidment (2006) notes "the money television brings into professional sports transforms them from a one-off spectacle before paying customers at a specific place and time into a global business." Turner and Cusumano (2000) claim that there should be a great deal of interest in a technology that "can enhance the message to consumers, improve the targeting of messages, or slice through the advertising clutter" (p. 51). They assert that virtual technology guides ads to places they weren't before, like potato chip companies being able to advertise on the field during soccer matches, and beef companies can place their logos into bicycle races, like the Tour of Spain on the pavement, on the screens etc.

For instance, the Federation Internationale de Football Association (FIFA), international soccer's chief governing body, calls for two forty-five minute halves to be played during a match, where stoppages and interference are kept to a minimum. Here, virtual billboards can be part of the broadcast, and sponsor's logos can digitally become part of the playing field during the much-uninterrupted broadcast, allowing advertisers to become not merely part of a rare commercial break, but part of the event itself. In fact, according to Turner and Cusumano (2000), one of the advantages of virtual advertising is that advertisers "can have their logo or advertisement 'in camera' at all times, creating what they call "no wastage" (p. 52).

With this application, sports that are not strictly regimented and commercial-friendly become viable and welcomed options for commercial broadcasts. What many see as "niche" sports due to their lack of television success can potentially become as mainstream as professional football and baseball. Chowdhury, Finn, and Olsen (2007) assert that virtual advertising "is also suitable for particular types of programming, such as live sports programs that do not have natural breaks to accommodate advertising inserts" (p. 86). Though one of the United States' most triumphant moments in sports was the 1980 "Miracle on Ice" Olympic hockey team that won the gold medal, professional hockey has not enjoyed the same reverence. There seems to be a "seamless" border between the United States and Canada, where hockey is immensely popular, yet there is an world of difference between the commercial success of the National Hockey League and others major sports leagues. While professional baseball and football, as well as collegiate sports in the U.S. can be seen on every major broadcast network, including many cable networks, professional hockey has a broadcast contract with the Versus cable network, which was previously known as the Outdoor Life Network, with just a fraction of the commercial reach compared with the mammoths carrying the advertising-friendly sports. With virtual advertising, companies can place their ads on the glass, the backboards, the nets, or even on the ice. By doing so, hockey can become a "mainstream sport" for the media, despite the lack of regular commercial stoppages. And, interestingly, the virtual advertising technology itself is well-known to hockey viewers as the "glowing blue puck" that allowed viewers at home to better track the action on the ice (Sweet, 2003).

Unavoidable Advertisements

Second, as consumers are empowered with the ability to control their media consumption, specifically advertising, with the advent of TiVo and similar digital recording devices, advertisers need to examine ways of marketing themselves without being skipped or deleted. Consumers are in more control of their viewing preferences as ever before, with many outlets, including television, Internet and mobile, from which to view content. Many live sporting events are now available online, with limited or no advertisements. Paying for traditional and often expensive commercial spots can be wasteful if those commercials are ignored, deleted or not included in particular outlets. Virtual ads are part of the "actual" event, becoming part of the game, match or field itself.

Obviously the sporting event is the primary reason for the broadcast, where virtual ads are able to tap into the already-present viewers, utilizing a built-in audience. Therefore, while fans may choose to skip or delete ads, viewing the broadcast of the event requires exposure to the virtual advertisements. Chowdhury and colleagues (2007) examined viewers' ability to avoid exposure to advertisements. They claim that as consumer digital recording devices becomes more standard in households, the "technology threatens the business model of current television advertising, which is based on revenue generated from ad placements during breaks in programming " (p. 85). Here, virtual advertising combats any current digital fast-forwarding or deletion. In theory, with the diffusion of home digital recording, commercial breaks might become obsolete. Avoiding advertisements is "a robust behavioral phenomenon demonstrated by television viewers " (p. 85). One of the chief benefits of such devices is that they allow viewers to watch programs on their schedule, putting a premium on maximizing time and schedules. It is apparent that one thing consumers will try to reduce or eliminate during their busy lives is advertisements. With a move toward a more consumer-based interactive type of programming, the future potential of virtual advertising's ability to remain "zap proof" during programming is unrealized.

Market Segmentation Capabilities

Third, given the advances in digital broadcasting, advertisers will not need to advertise to non-relevant groups, as they would by airing advertisements that might not appeal to all of the audience, or by merely purchasing signage at a venue. Segmentation is critical; from national magazines with regional covers, to international video game companies, many marketers are utilizing this potential. Virtual ads can be targeted geographically to particular viewing audiences, using specifically crafted messages, and as the technology improves, the ability to reach more differentiated target audiences will increase (i.e. by race, gender, class, and other demographic variables). Viewers from New York and California watching the Yankees play the Dodgers could see totally different virtual ads, ones that are specific to their local team and location. In fact, during the 2007 World Series, MLB introduced this technology, feeding different virtual ads to Canada, Japan, Latin America and Mexico (PVI, 2007).

This is even more useful when broadcasts span not only different regions, but multiple countries and languages. As many sports continue to span across international borders, so too does its viewing audiences. Major League Baseball and the National Basketball Association have seen a tremendous influx of international players recently, thus creating a borderless audience, yet including many marketing challenges. If the needs and demands of these audiences are realized, the ability for virtual ads to specifically target these groups is extremely valuable. As Moorman et al. state (2007) "planners need additional weapons in the intensifying battle for consumers' attention" (p.132).

According to their website, CKE Restaurants has franchised over 3,000 fast food restaurants in the United States. However, all of their restaurants, though almost identical, do not go under the same name. They operate 1,000 restaurants in the western U.S. called Carl's Jr., and almost 2,000 restaurants in the Midwest and Southeast under the Hardee's name. If CKE had the ability to purchase a single advertisement during a national broadcast, yet with the different brands reaching the different regions simultaneously, virtual advertising's benefits become evident. The ability of organizations with multiple brands and products to reach very specific segments of their consumers would be valuable to many. Similarly, an auto manufacturer such as General Motors, who has many brands and has advertised during many sporting events via traditional means, could also benefit greatly. Convertibles might be more prevalent in warmer regions, where four-wheel drives might be a necessity for consumers in snowy conditions. Through virtual advertising, GM could focus specific products in specific regions during a single broadcast, making a much more efficient use of advertising revenue. The potential for marketers to utilize geographic, demographic and psychographic data when crafting advertising campaigns is immense. With every internet-connected computer containing a unique Internet protocol number, and home digital video recorders also being connected to the web, if the data on each computer or recorder is present, virtual advertising via the Internet and DVR systems could ultimately be customizable on a per-household basis (Deutsch, 2000).

Sony is offering virtual advertisements in its PlayStation 3, which includes sports games. A Sony spokesperson claims that certain games are played by certain types of people, which create opportunities for marketers to target these specific groups with specific messages (AFP, 2008). This supports the opportunities for marketers to reach specific groups with varying messages through virtual advertising. If Sony already knows the characteristics of its various consumers, their ability to craft specific messages allows for a much more efficient marketing strategy.

This ability to reach market segments not only allows marketers to maximize what they can advertise, but also exclude what they can't advertise. Until recently, marketers of liquor products in the U.S. have followed a 50-year self-imposed ban on television advertising of liquor. Cigarette broadcast advertising has been banned in the U.S. since 1971. Similar product advertising is also regulated in Europe. With regulations differing between countries, the ability to *not* include certain brands or products might have legal and regulatory ramifications as well.

Deutsch (2000) indicates that this issue is a universal problem that virtual advertising can help combat. Europe's Formula One auto racing organization has successfully used the technology to display tobacco ads in countries with tobacco-friendly advertising policies, yet omitted those ads from the broadcasts in countries where regulations on tobacco advertising are more stringent.

Dynamic and Interactive Virtual Advertisements

Fourth, virtual advertising benefits not just advertisers, but also media groups and viewers. As revenue for marketing is allocated, advertisers must compete for financial resources. Virtual advertising technology allows broadcast media to provide something other media cannot: animated, changing and dynamic ads. The messages can be changed throughout the coverage, and be adapted to fit the action (Bennett et al., 2006). In other words, virtual ads are not just snapshots, logos, or static pictures; they can be energetic, lively advertisements that move and change. For instance, a shoe company does not just have to put its logo on the electronic billboard, but instead, it can highlight the product spokespeople wearing the product, when those people are central to the game. For instance, when a star soccer player dribbles toward the goal, the shoe company can place his or her image on the field advertisement, and if a goal is scored, the advertisement could change to a celebratory or congratulatory ad. Similarly, a beverage company could show different players drinking their product depending on which team is on offense, or even by the team leading the game – hence connecting their product with a winner.

The advertisement can also be instructional or educational, such as the digital caddy sponsored by FedEx in the Professional Golfers' Association (PGA) broadcasts (Thomaselli, 2004). The digital caddy used in PGA broadcasts shows viewers at home recaps of players' performance, including putting success and even provides insider tips on the course positions that would be most helpful for the golfers. According to Liberman (2004), this is not only helpful as a tool to learn the game and evaluate strategy as an armchair golfer, but as networks look for additional sources of advertising revenue without clutter, this provides a seamless and unobtrusive way to sell advertising space.

As the technology continues to develop, Bernstein (2002) states that PVI, an innovator in the virtual technology can "compete with other forms of advertising by making its virtual ads more dynamic, complete with animation, and perhaps some day, interactivity" (p.17) that would lead to viewers' ability to immediately interact with and respond to the ad through obtaining more information about the product, or even ordering the product simply by using the television's remote control. Bernstein calls the potential for interactivity through virtual advertising the industry's "savior in waiting" that will take viewing to the next level. For instance, in the future, if a PGA fan was watching the game, saw the virtual caddy and the ad placed by FedEx, he or she could instantly retrieve FedEx rates via the television screen (linked through the Internet), and even schedule a package pickup. David Stitt of PVI echoed the capabilities behind virtual advertising (Bernstein, 2002). He claimed that the value of the technology is not in the enhancement of a broadcast with features like a virtual first down marker, but in the full dynamic array of benefits to the advertisers. In most cases of advertising, exposure to a brand or product is futile if it does not result in increased revenue. As virtual advertising technology continues to expand, the direct link between advertising exposure and consumer behavior will be easily measurable.

The interactivity of ads can be further heightened by the use of computer and television "cookies" that can determine which ads are most appropriate for the particular viewer (Deutsch, 2000), and ultimately, some scholars predict that the customization of the ads via individual televisions, and demographics preferences is inevitable and beneficial for all parties: viewers see ads for product that interest them, advertisers concentrate their dollars on potential consumers, and media can sell multiple ads for the same virtual space.

Having a more direct relationship with a particular team, event or venue, can enable companies to reap the dynamicand intangible benefits of virtual advertising. With so many consumer products available being marketed through multiple outlets, advertisers need to "connect" with consumers more. In an interview with CNN, Jack Pitney, vice president of marketing for BMW of North America, claims that BMW tends to focus on consumers' psychographic characteristics versus their customary demographic data, like age, gender and location (2008). He claims this marketing strategy looks at a consumer's "mindset" and then BMW can target their different products in a way that resonates with consumers' emotions.

Ultimately, these different emotions and allegiances can be utilized via virtual advertising, tailoring specific products at different times to different groups. This type of targeting is becoming increasingly important for advertisers, as has been seen by the NFL's purchase of consumer viewing habits during the Super Bowl from TiVo. This information allows the NFL to more thoroughly explore its consumers' broadcast behaviors, and utilize that information with potential advertisers in mind (Miller, 2002). Though more primitive than individual targeting, it is clear that the need for segmentation and targeting appropriate audiences is critical, and virtual advertising technology allows marketers to pursue their goals in increasingly sophisticated ways.

CRITICISMS OF VIRTUAL ADVERTISING

In practice, some critics feel that there is no value in virtual advertising and that the entire practice takes away from the coverage of the sports, itself. They argue that sports, in general, are too commercial and this practice continues this problematic trend of consumerism in athletic events (Reich, 1996; Sherman, 2001). Reich asserts that virtual advertising creates negative value for everyone, including the viewers, purists, sponsors, advertisers and broadcasters. He compares virtual ads to the colorization of classic black and white movies, asserting that this technology tampers with "reality." Further, he claims that ultimately overall revenue will decrease as advertisers vie for position within the virtual event, and eschew traditional advertising. Virtual advertising can lead to contentious issues surrounding the authenticity and integrity of a venue or event surrounding a virtually-altered broadcast, or at the very least one seen as intrusive or distracting. Another concern involving the authenticity of an event is the ease at which unofficial sponsors are capable of ambushing corporate sponsorships. Here, the intricate relationships between teams, venues, broadcasters and marketers can be tested. For example, according to Cianfrone, Bennett, Siders, and Tsuji (2006) networks have the ability to replace actual stadium signs with electronic images. Since the networks do not receive revenue from venue signage, this allows them a new revenue stream. As discussed within the legal aspects surrounding sports, Deutsch (2000) indicates that team owners, venue owners, media conglomerates, and advertisers need to wrestle with difficult questions, such as whether virtual ads will supersede stadium signage, or whether advertisements imposed into stadium landscape will result in viewers confusing advertisers with sponsors (which can be significantly more costly), and how the virtual ads will potentially ambush the advertisements that occur in commercial breaks.

Further, addressing virtual advertisings role within media's control of sport reality, Arne Harris, the long-time producer and director of WGN's Chicago Cubs games, fielded complaints from station executives immediately following the introduction of virtual ads into televised Cubs games (Sherman, 2001). Station executives asserted that WGN was compromising the integrity of the broadcast and bringing into question whether the game was televised or "created," by the network. Relating this event to the capabilities of virtual advertising, the authenticity of the broadcast of sporting events can come into question. There is a potential for backlash, either against the event or advertised product if viewers feel they are being misled. Many venues are seen as sacred, and virtual ads have the capacity to "desecrate" the pristine nature and history of these venues.

Virtual advertising literally has the ability to re-write history as it allows for repeated mere exposure, as well as removed exposure. During the 2008 Summer Olympics, Visa, an official Olympic sponsor, ran a campaign titled "Go World." According to Visa's website, the campaign "Celebrated moments that exemplify the Olympic Games spirit." One commercial featured a British sprinter competing in the 400 meters at the 1992 Olympic Games in Barcelona. Derek Redmond injured himself during the race and attempted to limp the final stretch. Redmond's father appeared on the track and, arm in arm, helped his son across the finish line. The original visuals of this poignant moment included Redmond's father being dressed in Nike gear from head to toe. In Visa's updated commercial, Redmond's father appears to be dressed in all white, digitally removing the Nike slogans and logos that were actually there. Visa succeeded in re-writing a historic moment. This can lead to official sponsors of past teams or athletes losing their association in future digital representations and advertisements. There is also the potential to not only removing original products or messages, as Visa did, but to replace them with contemporary, updated images. For example, images of Mary Lou Retton and her 1984 gold medal performance could show her preparation routine to include listening to an iPod, which was not in existence at the time.

Fendrich (2001) not only objects to the change in the event for television viewers, but also claims "Sports events are mere fillers employed as a means to flash sponsors' names on the screen." He claims that all networks are guilty of catering too much to advertisers and that this has too much influence on the actual games being played. Fendrich is not alone in his concerns. Ferguson (2001), claims that media critics oppose the technology, and that the credibility of the broadcast is threatened; he quotes Derrick de Kerckhove, a culture and technology researcher at the University of Toronto, who refers to virtual advertising "electronic littering" (Ferguson, 2001). Even best-selling author Stephen King has weighed in on the ever-increasing advertising in sport, addressing concerns in an article he wrote titled "How TV Ruined Baseball" that appeared in *Entertainment Weekly* (2008). In his essay, he says, "'Sometimes you just want to say to the suits running America's pastime, 'Have you no shame? Is there nothing you won't sell? No disgrace you will not visit on this wonderful game in order to turn a buck?'" (p. 1). Thus, for many pundits and fans, sport has been too long lead by corporate objectives rather than fan appreciation, thus this new turn to virtual advertising represents one more encroachment on many peoples' opportunity for leisure activity and escape.

CONCLUSION

Recently, though not used as a product advertisement, the 2008 Olympics opening ceremony in Beijing came under scrutiny for using digital technology to enhance a fireworks display. The broadcast of the ceremony included what appeared to be 29 synchronized firework "footsteps," representing the previous 29 Olympiads. In actuality, these computer-generated effects were only seen by the television viewing audience. Many major news networks and wire services, including ESPN, MSNBC and the Associated Press, brought attention to the previously recorded digital fireworks that were broadcast as a live event, telling us they were fake and letting us in on the "secret." Yet, these same critics readily offer virtual space to advertisers within sporting events. This technology that allows companies to break through the clutter, create advertising space within the sporting event, and become part of the event itself, can also be used in other applications such as fireworks that are not seen in the sky, but on the monitor. Even today, we could see virtual billboards in a baseball broadcast for products where only sky exists in the actual terrain -- in essence, creating revenue out of thin air.

Virtual advertising is relatively new, but the need for advertisers to get their message into the minds of consumers is not. As we move from phone books to yellowpages.com, encyclopedias to Wikipedia, landlines to cell phones, and VCRs to DVRs, marketers and the media are looking for ways to expose consumers to their product, and to do so repeatedly and with the desired effect. As consumers become more media literate, they recognize that models are airbrushed, that product placement in movies are not accidental, that spokespeople are well-paid, and they are empowered to skip ads through channel surfing and digital editing. Research on mere exposure is clear: familiarity produces results. Thus, while literacy and savvy increases, and ability to elude traditional advertising improves, advertisers must continue to get their companies' messages in front of the consumers. Though critics may not like the practice of using virtual ads in sport events, it clear that the practice will only continue to evolve. Theoretically, better understanding the process and mechanisms of mere exposure, as well as the other relevant variables that teasing out the variables that influence the effects of the ads on consumers, will help advertisers make better choices for positioning their product and allocating their marketing budgets.

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