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A CONTENT ANALYSIS OF ADVERTISING IN POPULAR VIDEO
GAMES

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APPROVAL PAGE

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DEDICATION

To everybody who has helped me on this marathon of a thesis, thank you all very much.

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PETER G. LINDMARK

ABSTRACT

There have been a plethora of analyses on the effects of and brand image of advertising in video games, but a dearth of analyses simply examining the role advertising has played in video games over the years. This study seeks to add to the available research on this topic. This study has yielded a great amount of information which should have pre-dated any analysis of the effects of advertising in video games, or brand placement and recall, and certainly any analysis on purchase intent as a result of interacting or observing brand or product placement in video games. Not only do the results of this analysis have a great deal of potential real world implications, but should help advance the literature on the subject. It was shown that the amount of advertising in video games has significantly increased over the past thirteen years. Sports games are the most likely to include advertising, and shooters are the least likely, but until a more concise classification system is established, we can only use the current one to the best of its ability. This study also illustrated that in-game advertisements were significantly higher for real products than fictitious products.

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CHAPTER I

INTRODUCTION

Product placement in media has become a popular way for advertisers and marketers to reach consumers. According to recent estimates, \$5.5 billion dollars were earned from product placement on the internet in only the first quarter of 2009 (Internet Advertising Revenues at \$5.5 Billion in 1Q '09, June, 09). Yet for a sixteen week season, it costs 5.4 million in total to run one thirty second advertisement in each Sunday night football game of the season, or \$339,700 for one single advertisement (Jones, 2010). These numbers show advertising across different media to be both a lucrative, as well as an expensive practice. Weekly, when people wait all day for Sunday Night, advertisers are well aware of this and charged accordingly.

One of the most growing channels in which product placement and other forms of advertising is appearing in is video games. In 2005 alone, in-game advertising generated \$56 million, and by 2014, it's estimated that the market for in-game advertising will reach 1 billion dollars. From these figures, it is apparent that this practice will continue to grow as video games do (In-Game Advertising, 2011). Use of advertising and product placement in games seems to be growing, but how much, and what forms is this product placement taking?

This thesis examines advertising and product placement in video games. It begins with a brief history of product/brand placement, followed by a review of research on brand prominence, consequences and attitude effects of brand placement in general. Then it delves into advertising spanning different media. We start with advertising in novels, followed by songs, movies, television, and finally internet advertising, adver gaming and multiple media advertising. The third section is specific to advertising/product placement in video games and brand recall within video games.

1.1 HISTORY OF BRAND PLACEMENT

The placement of products in media has a long and storied past. While many believe this practice to have started with the inclusion of Reese's Pieces in *E.T.: The Extra Terrestrial*, in 1982, this is not the case. The practice of a sponsor paying to have a product featured in a movie started with one of the films of the Lumiere Bros, in 1896 (Newell, Salmon, & Chang, 2006). The Lumiere brothers entered into a production and distribution arrangement with Francois-Henri Lavanchy-Clarke, a Swiss businessman who was the European distributor and promoter for the U.K. soap manufacturer, Lever Brothers. The Lumiere brothers traded prominent placement of the Lever Brothers soap, Sunlight Soap, in one of their films for exhibition of their films in Switzerland, as well as shooting Swiss-located motion pictures for distribution in Europe and the United States. It was this connection that yielded the first motion picture product placement (Newell et al., 2006). In May 1896, a film was shot in the yard of the Geneva home of Lavanchy-Clarke of two women hand washing tubs of laundry. Placed in front of the two tubs were two cases of Lever Brothers soap, one with the French branding "Sunlight Savon," the other with the German "Sunlight Seife." The following month, after having been given

the English title “Washing Day in Switzerland”, the film was shown in New York at Keith’s Union Square Theatre, along with shots of European trains, French parades, and various skits (Newell et al., 2006). Sunlight Soap, this timewith the man who helped forge the arrangement, would appear in at least one other Lumiere brothers film, titled *Defile du 8e Battalion* (Girel, 1896). In this film a wheelbarrow displaying the Sunlight Soap logo and a tuxedoed Lavanchy-Clarke is placed in the foreground between the camera and the parade. The business of product placement had officially begun slightly over a hundred years prior to the first instance it is commonly attributed to, *E.T: The Extra Terrestrial*.

While the first documented appearance of brand placement occurred in the movies of the Lumiere brothers, Thomas Edison turned the practice into an ongoing business that provided benefits to himself through reducing the expenses of his productions as well as providing promotional services for his industrial businesses (Newell et al., 2006). Transportation for Edison’s film crews was provided by the same rail line that purchased railroad equipment from Edison’s manufacturing division (Musser, 1997). He also dabbled in self promotion, setting one of his films, *Streetcar Chivalry*, in a commuter car placarded with posters featuring Edison products (Edison, 1905). Edison also created movies that were more like commercials than advertisements, specifically. In 1897, the first advertising film was shot, 50 seconds of men smoking in front of an Admiral Cigarettes billboard (Musser, 1997). He also has hundreds of travelogues on his catalog, with the production costs being subsidized by the transportation companies.

Industrial films produced in the United States prompted international trade of

American products. After seeing the amount of chips and sawdust a band saw produced in relation to the serial saw he had been using, a Brazilian lumber baron adopted the American made band saw (Newell et al., 2006). Such industrial films were also a popular form of entertainment in the United Kingdom, as well as a cost-effective way of reaching the consumer in small towns and rural America (Newell et al., 2006).

Next came the “tie-ups,” or the cooperative promotional arrangements between outside manufacturers and movie makers, in which on-screen product appearances or star endorsements were traded for advertising and promotions paid by the manufacturer (Newell et al., 2006). This turned out to be beneficial to both the motion picture industry as well as the manufacturers. The industry benefitted from increased ticket sales due to advertisements enhanced by manufacturers while manufacturers obtained screen exposure for their products as well as an edge created through connecting their products with celebrities (Newell et al., 2006).

Browning King, a clothier, created the first sponsored radio program centered on the Browning King Orchestra and as such, integrated advertising with a program name. While subtly mentioning products was a frequent practice in radio and later in television scripts, the sponsored nature of radio and television in the United States created a different and sometimes antagonistic environment from that of motion picture product placements (Cowley & Barron, 2008). With the diffusion of television into the American home, product placement became a more adversarial enterprise, with the networks and paid sponsors on one side, and product promoters on the other. The reasons for this are threefold, with the first being that the broadcast networks had agreed to limits on the amount of commercial time and even unpaid product placement could be counted as

advertising, reducing the time available for advertisers to purchase. Second, the revenue stream created by selling time to advertisers was essential to running the networks; product placements gave consumers access to what the network clients were buying. Third, the off-screen benefits offered to movie studios were less valuable in the limited-competition and low-production cost arena of television or radio (Newell et al., 2006).

When *E.T.: The Extra Terrestrial* was in production, the now famous trail of Reese's Pieces the cute little alien followed home was originally supposed to be M & Ms, as it was supposed to be in the book, but this proved to be a more troublesome task than it was worth, with the production company substituting M & Ms by Mars, the more publicity-shy company, with Hershey's fledgling candy, Reese's Pieces. This was not the only product featured in the movie, but it was the most prevalent, and had the most marked results. Cameos were made by Coors, Coke, Reynolds Wrap, Skippy and Pizza hut, among others, but Reese's Pieces were available for purchase in movie theatre concession stands across the country, with some even running contests to guess the number of Reese's Pieces in a jar (Newell et al., 2006).

E.T. The Extra Terrestrial called mainstream attention to the potential for brand and product placement, which has since been the subject of scholarship focusing on prominence and consequences, along with research on brand placement type and repetition on attitude. These studies will now be reviewed.

1.2 BRAND PLACEMENT PROMINENCE

In 2009, van Reijmersdal suggested two laws about the effects of brand placement on audience reactions. First, Prominent brand placement affects memory positively, but affects attitudes negatively when audiences are involved with the medium vehicle, or

when they become aware of the deliberate brand placement (selling attempt). Second, Brand placement can affect audiences' attitudes and behavior, without memory of the placement (van Reijmersdal, 2009).

A placement is considered prominent when the brand is the focus of attention (Gupta & Lord, 1998). Brand placement literature on mass media (Babin & Carder, 1996; Brennan, Dubas, & Babin, 1999; Cowley & Barron, 2008; D'Astous & Chartier, 2000; Gupta & Lord, 1998; Law & Braun, 2000; Lee & Faber, 2007; Nelson, 2002; Schneider & Cornwell, 2005; Yang & Roskos-Ewoldsen, 2007) has shown that placement prominence is positively related to brand memory, leading to the overriding message that the more prominent the placement is, the better the audience's brand memory. Although brand prominence has positive effects on memory, it can be shown to have an inverse effect on brand attitudes (Cowley & Barron, 2008; Matthes, Schemer, & Wirth, 2007). One study demonstrated that prominent brand placement resulted in high memory scores, but in negative brand attitudes for the viewers that were aware of the deliberate brand placement and had low involvement with the program (Matthes, Schemer, & Wirth, 2007). Prominence did, however, have a positive effect on brand attitudes of viewers who were highly involved with what they were watching. Another study showed that prominence had a negative effect on brand attitudes of viewers who liked the program and a positive effect on those who were not as supportive of the programming (Cowley & Barron, 2008). The effects of prominence on brand memory are straightforward and positive, but the effects on brand attitudes are dependent on audience involvement with, and approval of the medium vehicle, and on the audience's awareness of the brand placement (van Reijmersdal, 2009).

Several brand-placement studies have shown that audiences can be influenced without awareness of the placement. In regards to brand choice, several studies have also shown that both adults' and children's brand preferences have changed after seeing brand placement, regardless of their memory of the brand placement (Auty & Lewis, 2004; Law & Braun, 2000; Yang & Roskos-Ewoldsen, 2007). With respect to brand attitudes, a brand's placement had a positive effect on brand image, and attitude, even when people did not remember seeing the brand (Matthes, Schemer, & Wirth, 2007; van Reijmersdal, Neijens, & Smit, 2007). Without explicit memory of brand placement, effects on brand choice, preference, and associations, a phenomenon called implicit processing can occur (Heath, 2000; Schacter, 1987). The more subtle the brand placement, the more likely the brand is to be processed implicitly due to attention being drawn to the editorial content or story line, and not to the brand itself (Schneider & Cornwell, 2005; Zack, 2006).

1.3 BRAND PLACEMENT CONSEQUENCES

Product placement is a combination of advertising and publicity designed to influence the audience by unobtrusively inserting branded products in entertainment programs such that the viewer is unlikely to be aware of the persuasive intent (Balsubramanian, 1994). Two approaches have been used attempting to explain the shift in brand attitude after product placement exposure. In the first approach, exposure to a product increases implicit memory, or accessibility, for a brand without necessarily improving explicit memory. This leads to a mere-exposure effect, where the customer misattributes the increase in accessibility for a brand as liking of the brand (Zajonc, 1968). The mere exposure effect has been used by Law and Braun (2000) to explain the increase in brand choice following exposure to brand placement. In the second approach,

exposure to a placement increases explicit memory for a brand. Russell (2002) found an increase in explicit recognition memory as well as a positive shift in brand attitudes after exposure to audio placements that were high in plot connection. Exposure to the placements, one can assume, resulted in the creation and/or reinforcement of positive associations with the brands (Cowley & Barron, 2008). Russell (2002) found brand attitude to be unchanged after exposure to audio placements that were low in plot connection. She used a congruency-incongruency explanation to account for the difference in brand attitude results between audio placements that were more or less connected to the plot. She suggested that the audio/low plot connection placements were incongruent with viewers' expectations because the audio placements were usually connected to the plot. She then reasoned that incongruency was "likely to raise viewers' suspicions and counter argumentation."

There are many variables that determine the amount a marketer is willing to pay for any product placement; many of these align with the variables researched while trying to better explain the placement itself. These include modality (Law & Braun 2000; Russell 2002), plot congruity (Russell, 2002), type of program (d'Astous & Seguin, 1999; Roehm, Roehm, & Boone, 2004), and placement prominence. Prominence has been operationalized many ways, and regardless of the operationalization each researcher has used, it has consistently been found to be determinate of memory; with more prominent brands better recalled than less prominent brands (Babin & Carder, 1996; Gupta & Lord, 1998; Law & Braun, 2000). An improvement in memory does not always equate to an improvement in brand attitude. The consumer's lack of awareness that the brand inclusion is an attempt to influence brand attitude is central to the effectiveness of the

placement (Bhatnagar, Aksoy, & Malkoc, 2004). The increased processing that accompanies prominent placements may cause a downside (Campbell, 1995); it can lead to an increase in counter arguing (Friestad & Wright, 1994; Wright, 1974) and irritation (Aaker & Bruzzone, 1985; Ha, 1996). If the placement is pulled from the background where it merely creates a context from which drama or humor, to the foreground where the humor is created as a vehicle to highlight the product, then the placement may interrupt the viewers' suspension of disbelief. When this occurs, the persuasive intent interrupts the editorial content, which may cause the viewer to become irritated (Ha, 1996).

Viewers who are affectively focused on the program are more sensitive to interruptions, and may notice placements more, especially if the placement is perceived as more than a prop used to create a believable setting (Edwards, Li, & Lee 2002). Viewers who are higher in program liking are more attentive because they look forward to a program as a source of entertainment. Increased attention will be evidenced by not only a higher explicit memory for a placement, but also a potential realization that a brand has been placed in one of their favorite programs, thus leading to a possible disengagement from the reality the program has created. This may be off-putting to viewers with high program liking, as they have very positive feelings towards the program.

Alternatively, viewers who are lower in program liking are less likely to be attentive to a television program because they are less reliant on that program to satisfy their entertainment goals. The lower attention levels is evidenced by lower levels of explicit memory for a placement, and are unlikely to be accompanied by perceptions that

a placement in intrusive. Viewers may watch programs that they show less liking for to pass the time, because it is the best thing on, or because they are watching with someone with a higher level of liking for a program.

In 2008, Cowley and Barron conducted an experiment to explore the conditions under which prominent placements will negatively affect brand attitude. They hypothesized that viewers with higher program liking will be more likely to remember prominent placements than those with lower program liking. They also stated that viewers with high program liking who have been exposed to prominent placements will report lower brand attitudes for the brands placed than high program liking viewers than have not been exposed to the placements. They were also interested in the negative effect of exposure to product placements, stating that this effect will be greater for viewers with high program liking than those with low program liking. Lastly, they hypothesized that low program liking viewers who have been exposed to a persuasive prime before viewing a prominent placement will have lower brand attitude than low program liking viewers that were not exposed to the prime. Their first hypothesis was supported because the more prominent placements were remembered more, particularly by the viewers who exhibited higher program liking. It was shown that for high program liking viewers, there was a significant negative shift in brand attitude after exposure to prominent placements. It was also shown that for viewers with low program liking, there was a significant positive shift in brand attitude after exposure to prominent placements, thus supporting both the second and third hypotheses. As for the last hypothesis, this predicted that the activation of persuasion knowledge by viewers with low program liking after exposure to the prime would eliminate any positive effects of exposure to prominent placements.

While this added prime had no effect on those with high program liking, the results were consistent with the hypothesized statement.

1.4 BRAND PLACEMENT TYPE AND REPETITION IMPACTS ON ATTITUDE

The global market for product placement in the content of mass media programming exploded to an estimated \$7.5 billion in 2006, and was forecasted to reach \$14 billion by 2010 (Graser & Stanley, 2006). This is no longer considered a novel marketing tactic; rather it has now reached celebrity status as a media form as advertisers seek more effective means of influencing customers' attitudes in today's oversaturated and fragmented advertising/marketing environment (Horner, 2009). In efforts to better understand this practice, and the impact thereof, Horner (2009) conducted two studies manipulating the type (subtle/prominent) and repetition (low/moderate) present in television and films. It was proposed that these factors interact such that brand attitude decreases when prominent placements are repeated, but when placements are subtle, consumer attitudes are relatively positive and moderate levels of repetition have little incremental impact (Horner, 2009). Findings have also shown that prominent placements are perceived to be more distracting, less realistic, and interfere with the plot or storyline; these adverse effects escalate with repeated exposure (Horner, 2009). Product placement can be used not only as a promotional medium, but also to potentially carry social information: Brand placements have been shown to be more effective when the featured brand is paired with a character who displays one or more desirable traits (Karrh, 1998).

Horner examines both repetition effects as well as placement prominence. Previous studies have shown that increasing the amount of exposures from low to

moderate levels enhances persuasion, but at high repetition levels, wear out and tedium lead to a declining liking of that stimulus (Anand & Sternthal, 1990; Batra & Ray, 1986; Berlyne, 1970; Campbell & Keller, 2003; Malaviya, 2007; Sawyer, 1981). The premise is that increasing exposure from a low to moderate level provides a greater opportunity to elaborate on the content of the message, to become more familiar with the stimulus, and to scrutinize relevant details and characteristics of the message, thus facilitating retention in memory. At high levels of exposure, however, the message recipient becomes fully habituated to the stimulus and boredom/irritation and saturation tend to result in message reactance, increasing counter argumentation (Cacioppo & Petty, 1979). Advertisers have believed that the more vivid or prominent a placement is, the more attention as well as attitude enhancement it will receive from customers (Finn, 1998). Empirically, however, this is inconclusive; while some studies note no vividness effect for attitudinal judgment, others have found effects that may be attributable to other factors, and a third group of studies find that a vividness effect only materialized under certain conditions (Kisielius and Sternthal, 1986). The idea that prominent audiovisual placements will be a persuasion liability relative to subtle visual-only placements is consistent with Andreoli and Worchel (1978) and Kisielius and Sternthal's (1986) argument that the presentation mode manipulation induced variation in cognitive elaboration. This means that vivid information inherently stimulates elaboration, whereas pallid information generates low levels of elaboration. More vivid information jeopardizes persuasion when it generates thoughts of opportunism and questions of intent, which is expected when the information comes from a low credible source, such as advertising. These effects should escalate with successive repetitions.

Horner proposed five hypotheses all pertaining to repeated exposure to prominent and subtle placements; each stated that a moderate level of repetition has little impact on the variable in question in each hypothesis. These hypotheses stated that repeated exposure to prominent product placement leads to a decrease in brand attitude, attitude towards the show the placement occurs in, perceptions of plot connections, perceptions of realism within the show, as well as an increase in distraction and disruption. The results of her study showed that repeated exposure to prominent placements led to only slight decreases in perceptions of plot connections. The other variables—decrease in brand attitude, decrease in attitude towards the show itself, decrease in perceptions of realism within the show, and an increase in distraction and disruption—all showed to be significant, thus supporting four or of her five hypotheses.

Clearly, research has revealed much about brand and product placement in general. The effects of specific types of brand and product placement must also be considered, however, to understand the role of media type on placement effectiveness. Following is a review of the literature on brand placement in novels, followed by songs, television, and finally advertising and multiple media.

1.5 BRAND PLACEMENT IN NOVELS

Brand appearances and brand placements are two very different things, which may both result in brand recall. Brand appearances are unpaid and usually included to lend verisimilitude, or the feeling of being ‘real,’ to a novel or a drama. Colin Dexter’s 1983 novel *The Riddle of the Third Mile* includes one such example; featuring an Oxford professor with a penchant for Glenfiddich whiskey and *The Times* crosswords (Brennan, 2008). Brand placement is much easier to quantify. Karrh’s 1998 definition of brand

placement is when brand references result from commercial considerations (brand owners are charged for a brand's appearance). It is not required to disclose how much any fee, or even whether there was a fee at all for a brand's inclusion in the media of movies or novels. With the abundance of analyses on brand placement in film and television and radio and even video games, it comes as a small surprise that there is very little on brand appearance or placement in novels (Brennan, 2008). Given the level of clutter in the marketplace, brand recall is difficult to achieve but prized by marketers since it a critical predictor of purchase for low-involvement products (Brennan, 2008). Ian Brennan examined brand appearance in novels through an experiment in 2008 by giving respondents a book title and first chapter of a book written by the researcher. Respondents were told the chapter was written by an aspiring author and were not aware of the memory test that would take place directly following. He manipulated brands as part of a grocery list, with each of six brands being fragmented with varying severity, examining recall of those brands among the different fragmentations in addition to testing recall when respondents were given the brands from the outset, to determine whether brand recall was higher if the consumer was forced to solve the challenges of generating the brand from the varyingly fragmented word or if the brand was given. His results showed that completing a minor decoding challenge (eliminating the last letter of the name) improves recall over that when the complete name is present. Increasing the difficulty or eliminating a syllable of a brand name appeared to overwhelm the processing resources supplied by the reader, leading to deterioration in recall.

1.6 BRAND PLACEMENT IN SONGS

Brands have appeared in folk songs for a long time, but did not become a means

of communication, or placement, until very recently, and only then in a marginal manner. American rap and hip-hop artists have been the pioneers in this practice (Delattre & Colovic, 2009). In 2005, McDonald's asked the Maven Strategies agency to include the brand Big Mac in their songs, in return for small monetary compensation of \$1 to \$5 per radio broadcast (Murphy, 2005). Delattre and Colovic (2009) define brand placement as "a hybrid communication form that offers an often captive audience access to a brand that is presented in a discrete, non-argued and financed manner in a movie, TV series, video game, or a literary or musical work." This is contrary to simply mentioning a brand, which stems entirely from the creative freedom of the author, and does not involve anything in return. Placement involves both a financial reward and a contract between an advertiser and an artist; with the conditions of the brand use are defined (Delattre & Colovic, 2009).

The oft-called starting point of brand placement in music occurred when Run-DMC released the song "My Adidas" in 1986 as an homage to their favorite brand of sneaker with no help or compensation from Adidas. This, however, led to a partnership contract signing between the two in the area of \$1.5 million. Since 1993, Agenda Inc., a marketing agency, has been cataloguing the brand mentions in the top 20 American songs – almost exclusively rap and hip-hop songs. In 2005, 35% of 106 songs contained at least one brand, compared to 40% in 2004 and 39% in 2003. The automobile, alcohol, fashion, luxury and firearms brands are most widely represented (Delattre & Colovic, 2009).

The advertiser can approach product placement from two different angles; traditionally or as a general partnership. Traditionally, a song is created as a medium, including brands for some type of reward and offers visibility to the brand outside the

traditional advertising space. This type does not require any kind exclusivity and is typically a single advertisement and can lead to a big congestion. The Lil'Kim song "The Jump Off" includes upwards of 14 brands for instance. In the case of a general partnership, the artist and advertiser sign a partnership with an exclusivity clause. One example is the partnership between Jeep and Missy Elliot. She mentions Jeep in several songs and appears behind the wheel of a Jeep Commander in one of her music videos, which won an MTV Music Award. She also composed the music for an advertisement of the brand (Charpentier, 2007).

Delattre and Colovic conducted an experiment using two French songs, "Tes Parents" by Vincent Delerm and "Wonderbra" by MC Solaar. These two were chosen because both had similar broadcast rates as well as amount and variety of brands mentioned: ten were mentioned in the song by Delerm and seven in the song by MC Solaar. The songs were also from very different musical genres: French chanson, or lyrically driven music, and rap, both of which include brands most frequently. Delattre and Colovic were interested in examining how appreciation and familiarity affected the number of brands remembered as well as the attitude of brand placement in songs, as well as prominence, clarity and context of brand placement in a song affected the memorization of brands. It was found that the prominence as well as clarity had a significant impact on the number of brands memorized, yet context did not. Familiarity was shown to have an effect of the number of brands memorized, but it was pointed out by the researcher that being familiar with the artist would lead people to pay more attention to the lyrics. Approval of both the song as the artist also had a strong influence on memorization. Appreciation of each genre did have a slight effect on memorization,

although it was not significant.

1.7 BRAND PLACEMENT ON TELEVISION

In addition to being a quickly growing source of academic study, product placement on television has been and will continue to be measured by commercial enterprises such as Nielsen's PlaceView, iTVX's Media Bridge, and IAG in an attempt to access their real dollar value (Mandese, 2004; Schmuckler, 2005). The rate of product placements was measured in 1997 by Ferraro and Avery, but this has become ill-fitting as interest continues to demand a more recent and expanded accounting of industry practices. The content analysis Ferraro and Avery conducted occurred across a week of primetime programming, accessing 112 hours of product placements across the four networks: ABC, CBS, NBC, and Fox. The study classified information such as frequency of brand appearances, visual and verbal presentations and program type and tone. La Ferle and Edwards had five goals in mind when they conducted their own content analysis in 2006. First, they wanted to expand on Ferraro and Avery's content analysis by examining more closely the distinguishing characteristics of the placements by adding several new categories and expanded the scope by including a fifth network (La Ferle & Edwards, 2006). Second they wanted to investigate the placements used in different types of programming and how they differed, as sporting events are much more likely to have billboards while situational comedies are more likely to have actual products being used as props. Their third goal was based largely on Karrh's (1998) definition of branded products. This stated that the paid inclusion of branded products or brand identifiers, illustrated through audio and/or visual means, within media programming, may include nontraditional consumer products, such as services. Roehm, Roehm and Boone (2004)

distinguished between placements and plugs, and found that plugs were better remembered than placements. Placements were characterized by their inclusion in an episode's story line, whereas plugs were defined more as on-camera verbal discussion of a brand delivered by an on-camera personality (Roehm, Roehm & Boone, 2004). Plugs were hypothesized to be stored in the memory differently than placements and thought to be more like public relations than branding. Lastly, La Ferle and Edwards sought to examine how product placement has evolved over five years, electing to conduct their content analysis longitudinally.

La Ferle and Edwards (2006) conducted a content analysis to assess form variables such as placement techniques, placements in different types of programming, the techniques used to place goods, services, and other types of brands, the prevalence of placement versus plugs, and the growth of placements over time. A total of 728 brands were identified within the programming, coded by category and evaluated for the degree to which the product was shown positively or negatively. Harvard University had the most showings, followed by *Chevy* and *The Sopranos*. The most common types of brands were those related to media and entertainment, followed by service companies and organizations. Of the 728 brands present, most were rated as neutral, possibly due to the lack of control companies have in placing their products. Half of the brands placed were visual, about a third were verbal, and the remainder had both audio and visual components. Most brands were given prominent placement and could be seen completely. Almost two thirds of the time, they conveyed some meaning to the scene. There was little interaction between the characters and the products, and when a character did interact with a product, it was a male almost two thirds of the time, and a leading

character slightly over half the time.

The characteristics of brand appearances were not uniform across programming types. Placement in news programming were most likely to show the actual product, placements in sporting events were most likely to show the brand on another product, and placements in game shows or special events were most likely to contain logos or signage. Special events, sporting events, and storied programming were most likely to include visual-only placements; storied programming also had the highest amount of verbal-only placement as well.

The researchers distinguished between a product and a service based on the tangibility of an item and whether or not a customer could take the item home. Using this definition worked until the researchers tried classifying entertainment-related brands and the names of sports teams.

The researchers defined plugs as nonscripted verbal mention of a brand delivered by an on-camera personality. Placements in storied programs account for almost half of brand mentions, in contrast to about a third in nonstoried programs. Plugs were most discussed in terms of the product name and almost always added special meaning to the scene.

The most notable difference in product placement between the times of the two analyses was in semi-unscripted shows, allowing for events to center around specific brands. Most of the other classifications were rather similar to the analysis run in 1997, five years prior to the second one.

The results of this study, in addition to the one it was based on, yielded several important conclusions for brand placements on television. Advertisers require greater

control over brand appearances to ensure prominence, as most brands were portrayed neutrally and for less than five seconds. Placements on television are quite prevalent, with one brand appearing every three minutes of programming, which suggests a cluttered promotional environment. The greatest number of placements on television was for consumer products, yet the most prominently displayed products were services. Even though one in ten brand mentions were plugs, little is known about their effectiveness and what separated the effective ones from the ineffective ones. Category characteristics impact the prominence of brands in shows. Game shows offered the greatest exposure, while storied programs offered the fewest and least prominent brands. News programs were the most likely to show the actual product.

1.8 INTERNET ADVERTISING

The internet has created the “perfect storm” for transforming the advertising industry from the low involvement learning present in television advertising into a much higher involvement learning impact. While advertising on the World Wide Web has been threatening ad agencies’ traditional accounts, Virtual Reality advertising could take the lure away from such agencies altogether (Kassaye, 2007). For the purposes of this paper, Virtual Reality can be defined as computer simulated environments that can simulate physical presence in the real world. This is usually a visual sensation and experience. Advertisements based within Virtual Reality are meant to enhance and transform sitting at one’s computer screen to potentially using the product being advertised for. Many bloggers, web developers and video game writers have started going to cyberspace for their advertising, giving them the edge of traditional ad agencies and creating shared experiences with wide reverberating impacts. Websites have become vital for many

companies, including Microsoft, Barnes & Noble, Proctor & Gamble, and Hard Rock Café, not to mention those companies that the invent of the internet have brought into existence, such as Amazon.com, Ebay, and WebMD (Kassaye, 2007). These companies not only use their websites to drive business, but they also rely on these sites to disseminate information, conclude transactions and provide customer support.

Customers, however, only seek out company URLs when they are searching for proprietary information, and online subscribers are showing increasing irritation with ads; usually electing to block or ignore them altogether (Godin, 1999). In response to this, some companies have started turning to incentives to lure visitors to their sites. Giving free email access, or providing expanded memory space for signing up, is one reward both Google as well as Yahoo use to sell better targeted advertisements. Virtual Reality sites initially interest visitors because they show few or no advertisements. Such sites are likely to appeal to those interested in video-based shared experiences (Kassaye, 2007).

Research has suggested that reaching younger generations has become more challenging. Both Generations X and Y have shown to be somewhat desensitized to the traditional television story format. After watching over 30,000 episodes and half a million advertisements, they seem to reject how stories are told and structured (Gabriel, 1996). Both of these generations have tastes and lifestyles more suited to a medium such as the web when compared to an older generation, like the Baby Boomers. As with most intergenerational rebellions, usually manifested in choice of music, or fashion, this newer medium also symbolizes the rebellion of the younger generation against their parents. As much as it is a vehicle for interaction, it also has considerable potential for advertisers. Virtual Reality seems to appeal and is frequented most by these younger generations, so

advertisers' interest in this migration is understandable. The reasons for this are two-fold: First, because they constitute 50% of current web users in the US, and second because Gen X & Y-ers have become skeptical of advertisements in general and television advertisements in particular, while the web provides a new alternative (Kassaye, 2007).

The ad making industry has always been open and accepting to newcomers, more often than not each new breed starts with employees leaving established ad agencies to start their own brand, thus repeating the entrepreneurial cycle (Sommers, 1990). While there are no established past strategies or track records for success, any newcomer's web advertising strategy should focus on creating an image or presence advantage. Both new web developers and interactive agencies have distinct advantages that can be exploited in the quest to establish a reputation for a quality service. Their main selling points are specialization and extensive experience in computer graphics, with perceived advantages in creating a presence as well as developing virtual storefronts (Kassaye, 2007).

Virtual Reality and Web advertising differ in both mode of delivery as well as target audience. Virtual Reality tends to appeal more to entertainment or transaction-oriented individuals, while Web advertising appeals more to a written, content-oriented information search. With Web advertising, the goal is marketing; entertainment is incidental. NBC's website, for example, features network archives, quizzes and games, late night chat and information on celebrities. As noted by Gunther (1998), "NBC.com is little more than colorful marketing dressed up as entertainment." When entertainment is not the main goal, the inclusion of Virtual Reality advertising may be seen as an undesirable interruption, with this holding especially true in decisions that call for high customer involvement such as investment decisions. Unless this is a customer's first visit

to a brokerage website, Virtual Reality, or really any advertising outside banners, could be seen as overly irritating to customers who have little or no tolerance for such interruptions (Kassaye, 2007). Virtual Reality advertising is becoming more desirable as both an experience relatively free of outside interruption as well as a source of entertainment. This may allow the consumer to more freely experience the uses and features of a product without the distraction of other advertisements.

As technology evolves, and advertisers become more acclimated to it, Virtual Reality advertising could eventually become complementary to Web advertising. By providing as complete an experience as possible in potential online sales transactions, Virtual Reality could overcome the fall off in visits to retail establishments. It could also make traditional advertising completely obsolete, rendering its props of brand slogans and product comparisons superfluous in the current advertising landscape (Kassaye, 2007).

Since advertising on the internet has become so prevalent, it would stand to reason that companies would start creating flash games with the sole point of getting word of a product or service out to the public. These games are part of the growing trend of “advergaming”, or creating a source of entertainment to sell products. Burger King attempted to do this, using their mascot, The King, as the protagonist of each game.

1.9 ADVERGAMING

The use of video games for things other than entertainment is by no means a new idea. In recent years, video games have been used to recruit soldiers, to criticize the working on multinational corporations, to question the War on Terror, to swing votes, and to sell Internet banking services. As these uses have grown, so has the academic

literature on gaming, with serious works on game design (Bergeron, 2006; Iuppa & Borst, 2006), games for educational purposes (Egenfeldt-Nielsen, 2005; Gee, 2003; Squire, 2004; Shaffer, 2007), and more general perspectives on games as a means of persuasion (Frasca, 2007; Bogost, 2007).

Salen and Zimmerman (2004) have defined a game as “a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome,” and a video game is a moving image that runs on a computer or other electronic device. Striving to achieve a game goal entails two things. First by accepting the goal, the player must act in accordance with a particular agenda, which may range from the very abstract to the very concrete. Second, progressing in a game means learning how to overcome the challenges presented in a game, thus acquiring or improving skills, which may be just as abstract or concrete (Smith & Just, 2009). When a game is considered an advergame, that goal is to boost sales of a particular product, through increased brand recognition, increased liking or other methods.

Three levels of product-game integration, from low to high, were distinguished by Chen and Ringel (2001): associative, illustrative, and demonstrative. Associative integration occurs when a brand is simply attached to a game without any in-game function; a logo is displayed with non-related or only conceptually related, game content. Illustrative integration occurs when the product is actually an in-game object, but only one whose properties do not mirror those of the real-world product; a player must collect cereal, but cannot eat the cereal. Finally, demonstrative integration occurs when the game allows for meaningful interaction with the product; a racing game lets the player drive a model, which reflects the characteristics of a real world car. Winkler and Buckner (2006)

suggest that advergames work best when the product is already known and the level of recall is relatively high. The latter result is contrasted by Chaney, Lin and Chaney (2004) in their study of in-game billboards. Winkler and Buckner suggest that this lower level of recall may be explained by the more complex games studied by Chaney, Lin and Chaney. Deal (2005) compares the difference in recall between banner ads and advergames, to the result that recall levels were close to four times better for the game than the banner.

The main concern of Smith and Just's 2009 research was not whether advergames work, or how well, instead it was to establish a theory and analytical model of how advergames may work rhetorically, based largely on the work of Ian Bogost. Bogost argued that the truly important feature of these games is their ability to employ "procedural rhetoric", understood as "the art of persuasion through rule-based representations and interactions rather than spoken word, writing, images, or moving pictures". The ability to mount procedural arguments is a feature unknown to previous media and, Bogost argues, one that merits special attention. Bogost claims that the persuasive potential of video games lies in their procedural form; or that games are neither verbal, written nor visual rhetorical utterances, but a type of rhetoric that makes "claims about how things work". The game does not present the player with explicit claims or arguments, but sets up the procedure for playing, and by following this procedure the player comes to enact the claim of the game. Procedural rhetoric positions the player as an active participant in the construction of the argument, which is built up through the course of the game, rather than as the passive recipient of a proposition that is constructed and substantiated by the sender of the message for the benefit of the audience. Instead of telling the player what the point is, the game lets him or her

experience it (Smith & Just, 2009). This argument holds great appeal; if you're active in the process of persuasion, you are more likely to be persuaded than if you are the passive recipient of the persuasive effort of others, or self persuasion is stronger than other persuasion.

The model Smith and Just created to explain the persuasive potential of games is built on three specific conceptual tools: autonomy, integration, and goal. Autonomy deals with the degree to which the dialectical or argumentative potential is realized in and through the game. Are the rhetorical purpose (the claim) and the substantiation of it (the premises) inherent in the game, or does the game demand additional (textual) information or (contextual) knowledge in order to make sense? The degree of autonomy of a game may be positioned along a continuum, which runs from fully autonomous to reliant on information that is not present in the game itself but is externally explained. Autonomy points to two different persuasive modes; the game as persuasive in and of itself and the game as persuasive in combination with other rhetorical performances. Integration, the second concept, is somewhat related to autonomy, but whereas autonomy deals with the relationship between the game and its context, integration concerns the abstractness of the argument. It's a measure of how directly or indirectly the virtues of the product are advertised. From a game perspective; it's a measure of how much the game play depends on the specifics of the product. If the product and the game are fully integrated, the game could not meaningfully be used to advertise other products. While examining integration, the researchers relied on the division of persuasive forms into demonstration, illustration, and association (Chen & Ringel, 2001; Smith & Just, 2009). Whereas a demonstrative game allowed the player to experience an argument (a car that is pleasant to drive), and

illustrative game shows a product as an in-game object (the player character can wear a certain brand of clothes, but with no particular effect), and an associative game merely associates the product with the game (by displaying a logo). Finally, goal is linked to integration, but deals with the internal integration between the learning goal and the game goal. That is, is being successful in the game equivalent to making the persuasive point of the game, overlap, or are the two goals detached from each other, distinction? A perfect overlap may be found in educational games, where the player can only pass from one level to the next by solving a set of tasks; when one succeeds in the goal, one has also learnt the lesson, which was the point of the game. In these cases, playing the game successfully is the same as realizing the point of the game; it may be seen as the perfect form of procedural self-persuasion.

Smith and Just (2009) have examined three games through the lens of the model they created to demonstrate the potential of said model. First they analyzed a game called *Penalty Shot* by the chocolate manufacturer Toms Chokolade which the player takes handball penalty shots to score points. There is a time limit of one minute and missing three shots ends the game, if one scores enough points to make the high score list, one has the chance of winning a prize. The player must shoot a ball past a goalkeeper, who moves randomly to score points. Handball, and the game *Penalty Shot*, is associated with Toms Chokolade because the company is the official sponsor of the ladies' handball league in Denmark. The game is linked to the company in so far as the characters of the game are products of the company. Through the lens of their analytical model, *Penalty Shot* has no autonomy, as the game does not, in itself, make an argument for the quality of Tom's sweets, and the connection between handball and the product is an arbitrary

one. Integration is also quite low. The candy products are illustrated but only in an indirect fashion in which the player must map the two characters onto the actual products. The goal of the game, to score as many goals as possible, is also entirely unrelated to the persuasive goal of having the player increase his or her liking for Toms or, in fact, increase his/her desire to buy the product; thus there is absolute goal distinction. To summarize, *Penalty Shot* is an example of an advergaming with no autonomy, limited product integration, and no game/persuasion goal overlap. There is little reason to assume this game works persuasively in any direct or narrow sense.

1.10 BRAND PLACEMENT IN MULTIPLE MEDIA

Sung and de Gregorio (2008) attempted to examine brand placement across multiple media, or film, television, music and games, as exploratory research. They hoped to find any discernible patterns, similarities, or differences in attitude towards brand placement in these media. They also sought to find out which genres in each are considered especially appropriate or inappropriate for brand placement. It was shown that perceptions of brand placements in music significantly differed from all other media types. Results also showed that opinions regarding movie and television show placements tended to be more similar than those dealing with music and video games. For movies and television, respondents felt that brand placement increased realism and preferred to see real brands, and did not mind paid advertisement for the brands shown. Movies and television differed on responses involving government regulation and regarding ethically charged products, with respondents answering that the government shouldn't regulate brand placement in movies yet showing little concern in television shows, and ethical brands should not be shown on television shows. With regards to music, respondents

were shown unwilling to purchase brands they are exposed to in music rather than those they see advertised. They also believe the government should not regulate brand placement in music. Respondents preferred real brands over fictitious brands as it enhanced realism, and were willing to learn about new brands through music. The results for video games were slightly different than the other three. They were less likely to buy brands shown in video games and disagreed that they have learned about new brands due to a video game. There was also uncertainty shown regarding several items, including a dislike of seeing brands in games, realism enhancement (or did the advertisement enhance the realism of the present situation), as well as a preference for seeing real brands.

It was shown that people find brand placement appropriate in certain movie, television, music and video game genres, and widely inappropriate in others. For movies, comedy was the most appropriate genre, followed by action, drama and romance. The most inappropriate movie genre was historical, followed by political films and finally animated movies. The most appropriate television genre was shown to be reality television, followed by situational comedy, game shows, and sports events. Respondents agreed that cartoons were the least appropriate genre for brand placement to appear in. In regards to music, the most appropriate genre was hip-hop/R&B/rap, followed by pop, country, and finally rock. The most inappropriate musical genres were Christian and classical, followed by jazz and blues. Finally, sports and racing games were considered very appropriate for brand placement; however, puzzle games were the most inappropriate, followed by strategy, fantasy/RPG, and shooting.

Product placements have appeared in a wide range of entertainment media,

including novels, plays, songs, television shows, and movies (Gould & Gupta, 2006; Karrh, 1998; Vollmers & Mizerski, 1994). The way consumers process product placement in entertainment media may differ from the way they process traditional advertisements. First, the function of the brand message is recognized, and the persuasive effects can be limited by the consumer's knowledge of persuasion and skepticism (Friestad & Wright 1994; Obermiller, Spangenberg & MacLachlan, 2005). Product placement in entertainment media is less likely to activate these defense mechanisms (Babin & Carder 1996; Grigorovici & Constantin, 2004). Second, the primary focal point of the message is different. In traditional advertising, the brand message is the primary focal point for the viewer. With product placement, however, the primary focal point is the entertainment they are viewing or interacting with, which occupies their attention. Retention and recall of brands that have been placed in entertainment media is dependent on how and where it appears, as it may require additional attentional resources to recall the brand or process that message (Lee & Faber, 2007). Much of the research on product placement has focused on movies or television shows. Early research reported that people could recall brands in movies, but recall rates tended to vary greatly by movie and brand (Karrh, 1998; Russell, 2002).

1.11 BRAND PLACEMENT IN VIDEO GAMES

As computer and video game technology has progressed, so has product placement to keep up. It has evolved from the use of products as freely supplied props into a multi-billion dollar industry driven by commercial companies seeking new avenues to promote their brands (Delorme & Reid, 1999; Nelson et al., 2004; Shea, 2004). In keeping with this, Coca-Cola has announced its intent to move advertising resources

away from television and towards video games and DVDs (Grover et al., 2004). In 2006, game developer Midway agreed to a multi game deal with advertiser Double Fusion, illustrating Midway's desire to increase its use of in-game advertising (The Edge, 2006). Since the time this research was conducted, Midway Games has ceased operations and declared bankruptcy. It has since been rebranded NetherRealm Studios.

Studies have found that visual and verbal placement leads to greater recall of a brand than visual placement without verbal mention (Sabherwal, Pokrywczynski, & Griffin, 1994), and that more prominent placement lead to greater memory effects as well (d'Astous & Chartier, 2000; Gupta & Lord, 1998). Russel (2002) found that in general, verbal placements were better recalled than visual placements and that how connected the brand was to the plot did not influence recognition for auditory placements, but did improve recognition for visual placements.

Research into product placement has expanded into video and computer games, following the trend of advertisers' interest in these media. Displaying a brand in a video game may be similar to displaying a brand on television or in movies in some ways. Playing games, however, is much different than watching a movie or television show; as a result the impact of any product placement may be different. Due to the immersive nature of video games, getting a brand noticed, let alone recalled, may be far more difficult than it would be with a movie or television show (Chaney, Lin, & Chaney, 2004; Nicovich, 2005).

Lee and Faber (2007) sought to explore the interaction between location of brand messages (or proximity) and involvement on brand memory. They also attempted to explore the how game experience influenced the interaction between proximity and

involvement on brand memory. Lastly, they examined the impact of congruity and game context on brand memory. It was shown that brands more prominently shown yielded more brand memory than those placed peripherally. It was also shown that the difference in recall between brands shown prominently and brands shown peripherally was greater for those less experienced gamers. Experienced players did not recognize optimally placed brands any more than brands placed in the periphery of the screen. It was also shown that recall was significantly higher for highly incongruent brands than it was for moderately incongruent or congruent brands.

Mackay, Ewing, Newton, and Windsich (2009) conducted an experiment to examine whether product placements in computer games have an effect on brand recall. A gap in the current literature relates to whether brand placements in computer/video games can shift pre-existing consumer attitude towards a brand and purchase intent. Their findings were not in line with what they hypothesized, showing that participants with pre-existing positive attitudes towards the imbedded product did not show increases in their brand attitudes after exposure to the brand during play. Similarly, there is no support for the hypothesis that those who were less positively predisposed to a brand would not display a change in attitude towards the brand; it was shown that those participants significantly increased their attitudes toward the brand. There was support for their final hypothesis, that participants with a higher pre-existing attitude towards a brand would exhibit higher levels of recall than those with lower pre-existing attitudes. Those findings align with Nelson (2002), Nelson et al. (2004), and Schneider and Cornwell (2005), and indicate that interacting with a product while playing a computer game increases an individual's ability to recall that item when prompted (Mackay, Ewing, Newton, &

Windsich, 2009).

1.12 BRAND RECALL IN VIDEO GAMES

Nelson (2002) examined the effectiveness of brand placement in video games using two studies. The first involved playing a popular racing game and asking respondents about included brands immediately after game play as well as five months after playing. The second study involved playing a demo of a racing game with the researcher placing advertisements of their choosing; then asking the gamers about the chosen brands immediately after, as well as five months later.

The first study was conducted in a setting attempting to recreate a generic living room, complete with low lights, carpets, comfortable couches, and refreshments. A steering wheel was used to enhance environmental realism. *Gran Turismo 2* was used because it is a racing game with a vast amount of visible advertisements. The study used a survey with previously developed scale modified to focus on the research questions. The results of the first study showed that respondents had favorable outlooks towards product placements and did not feel they interrupted the experience. While the respondents remembered products, including the car they drove, they remembered very few after the five month delay and not one mentioned the car they had chosen. The second study was conducted in an office setting with a desk chair and desktop computer, attempting to simulate a computer gamer's environment. The game in this case was created by a company so that the researcher had access to the game code and could input local brands as they saw fit. This differed from *Gran Turismo2* in that there was a generic car, as opposed to the vast array of choices available, and brands were input by the researcher to appeal to the target audience of the study, including four local brands in

addition to national ones, to enhance validity. The survey in the second study was very similar to that of the first. The second study showed similar results to the first—respondents showed favorable attitudes towards brand placement, but went on to say that if the advertisement did not match the reality the game presented, it would be a deterrent to the game experience. It was also shown that brand relevance impacts recall.

1.13 EFFECTIVENESS OF IN-GAME ADVERTISEMENTS

There has been much research on the effectiveness of in-game advertisements, since it has become a major outlet for reaching consumers. Yang, Roskos-Ewoldsen, Dinu and Arpan (2006) examined the effects of in-game ads on implicit memory, or memory that occurs without conscious recollection of any such events. They did this by conducting a 2 (game condition: a racing game versus a soccer game) X 2 (memory measure: implicit versus explicit) mixed experimental design with a control group. Participants were given both pre-test questionnaires to fill out about previous game experience and post-test questionnaires to clear their short term memory, and then asked to complete a word fragment test. The study found that there were no differences between males and females on the measures used in the study. It was shown that participants who played the racing game completed a higher proportion of the word fragments for brands that appeared in that game than participants in the other two conditions. Participants who played the soccer game yielded a similar result, having completed a higher proportion of the word fragments for brands that appeared in that game than participants in the other two conditions. It was also shown that participants exhibited above-chance recognition of brands present in their games. The most important finding of this study may be that “measures of implicit memory may provide more sensitive tests of the influence of brand

placement than measures of explicit memory.” Yang et al. (2006) go on to discuss that video games may not be practical to include brand placement, because the interactivity involved in playing the game could distract people from noticing the brand placements. This study indicated a small effect size of in-game advertising on explicit memory for the brand, yet still failed to mention that the types of games utilized (racing and soccer) may not be indicative of an accurate cross-section of gamers.

Although a number of studies have examined the effects of in-game ads, none have looked at how prominent and frequent in game ads are. This study attempts to fill that gap in the literature through a systematic content analysis of in-game advertising.

Advertising in console video games has been around in one form or another since the time of the Atari 2600, when *E.T.: The Extraterrestrial* was rushed through production and led to the video game crash of 1983. This type of advertising was licensing, because a previously licensed product was brought from film into home consoles as a video game, and rested on the success of the movie to sell the video game version, which did not work out. Another type of advertising is product placement, which means that when an audience sees a product being used by a character in either a movie or television show or video game, they will be more influenced to use that product themselves. Traditionally, product placement in video games has followed that of film and television, in a more rudimentary way. Since the popular genres are much narrower and only allow products that would make sense within the confines of any given game. One blatant and recent example of product placement within a game took place in *Fight Night Round 3*, in which Burger King’s The King character is available as a trainer, and training with The King increases your fighter’s heart attribute, which allows your fighter

a better chance to fight back after being beat up. This evidently is supposed to imply that Burger King is good for one's heart.

As notes earlier, Ian Bogost (2007) suggests three types of advertising in his book Persuasive Games; demonstrative, illustrative, and associative advertising.

Demonstrative advertising provides direct information. These ads communicate tangibles about the nature of a product. This type of advertising displays the product as a commodity; demonstrative ads focus on the functional utility of a product or service. Advertisements that tell us how many miles per gallon and fuel efficiency are examples of demonstrative advertisements. Illustrative advertisements communicate indirect information. Illustrative ads can communicate both tangibles and intangibles about a product, with a focus on marginal utility, or the incremental benefit of buying this product over another one or not buying at all. These ads differ in context from demonstrative ads, focusing on social and cultural context. Using car advertisements again, illustrative ads feature four door sedans as being both practical as well as lively. Associative advertising communicates indirect information, focusing on the intangibles of a product. Differing from demonstrative advertising which shows products as commodities, associative advertising focuses on the products' social nature. Associative advertising can also be known as lifestyle marketing, because with this type of advertising a lifestyle is advertised more so than a product and using this product will lead to that lifestyle.

These three types of advertising can be applied to video games. Demonstrative advertising in video games would show direct information, or illustrate the use of a product within a video game. Illustrative advertising would communicate the existence

of the product in the game and highlight their increasing importance to the game.

Associative advertising would correlate the product with a favorable activity or lifestyle represented by the game. (Bogost, 2007)

CHAPTER II

PURPOSE

Much of the research available on advertising in video games examined the effectiveness of in game advertising through measures of brand recall and purchase intention (Nelson, 2002; Nelson, Yaros, & Keum, 2006; Yang & Roskos-Ewoldsen, 2007). There is not much literature available that examines the role of advertising in video games, how it has increased or decreased through the generations of console gaming, how prevalent advertising is in popular video games, or how prevalent advertising is in the different genres of video games. This study examines advertising in the popular (as decided by numbers sold) video games for two of the three major home consoles in the fifth generation (Nintendo 64 & PlayStation), and the three consoles in the seventh, or current generation (Nintendo Wii, PlayStation 3, and Microsoft Xbox 360). The purpose for the current study is to examine the presence of advertising in video games.

2.1. HYPOTHESES/RESEARCH QUESTIONS

The first hypothesis predicts that advertising in games has increased over time, due to increased production costs and advances in realism. Game production costs have skyrocketed in recent years. *Call of Duty: Modern Warfare 2*, for example, cost between

\$40 and \$50 million to produce, with a total budget of \$200 million including advertising and marketing (Fritz, 2009). With the costs going up to produce video games due to the increase in, technological realism, along with the desire to reproduce reality down to ads in certain genres (such as sports games), reliance on an ad-based model, seems like a logical step for the industry. It can help offset production and marketing costs. I also propose this hypothesis because I tend to notice advertisements a lot more while playing video games currently than I ever did while playing video games thirteen years ago. Whether this new-found perception is a result of looking for advertisements through the course of learning about games and research or because I'm aware of many more things in general than I was thirteen years ago is debatable, but it nevertheless seems to be the case. Therefore, the following hypothesis is advanced.

H1: The amount of advertisements in popular video games has increased over the years.

With all of the genres available to play, some genres lend themselves to advertisements better than others. For example, no one expects to see Pepsi advertisements in *World of Warcraft*, it just wouldn't make sense since there is no Pepsi in *Azeroth*, and where *WoW* takes place. If such an advertisement were present, it might upset gamers who use *WoW* to escape from reality for a bit to a place where they aren't constantly barraged with advertisements. While trekking through the urban sprawl of New York or Los Angeles in a First Person Shooter (FPS), however, one would expect to see advertisements all over the place, from billboards to storefronts to soda machines. Those landscapes would look naked and strange without advertisements. When we watch sporting events, we expect to see the arenas and stadiums peppered with advertisements for the products of various

sponsors; so it would stand to reason that while playing sports video games, who strive for realism above most things, we see the advertisements all over those same stadiums or arenas. With this question I seek to find out which ones those are.

RQ1: What are the most popular genres for advertisements to appear in?

In-game advertising can be for both real and fictitious products. The final hypothesis seeks to discover which is more prevalent in popular video games. The purpose for including advertisements in video games can change based on the reality of the advertised product. While both add a measure of realism or verisimilitude, fictitious products are largely used as humor, while advertisements for real products are used to sell those products to the gamers playing the game. Advertisements for fictitious products can be used to promote verisimilitude or entertainment, while advertisements for real products are used to sell products, regardless of how entertaining or realistic they may be. In *Bioshock*, a game sampled for this study, advertisements pop up for each new plasmid, or power, you acquire throughout the game. These are humorous little videos meant to illustrate to the player one possible use for the new found power. In *Fight Night Round 3*, a boxing simulation, the avatar wears Under Armor shirts while training, illustrating that training should be done using the right attire and that UnderArmor is the correct gear to use. We expect to see fictitious advertisements in some game genres, just like we expect to see advertisements for real products in others. The final hypothesis predicts that real ads will be more frequent, however, due to a desire to sell and market real-world products through games:

H2: In-game advertisements are more prevalent for real products than fictitious products.

CHAPTER III

METHODS

This study involves the content analysis of advertisements seen while playing popular video games on five home video game consoles; Nintendo 64, Sony Playstation, Microsoft Xbox 360, & Sony Playstation 3. The units of sampling are the top ten video games, based on sales, for each of these five console systems. (See Table 1) The units of analysis are the instances of advertisements within these games. In total, 50 games were sampled for this study.

3.1 CHALLENGES TO VIDEO GAME CONTENT ANALYSIS

Content analysis of in game advertisements poses many challenges, resulting from the sheer number of video games available, the different genres of games available, the different types of advertisements that can be used, the chance that a game may not be successful, and whether or not the game player notices the advertisement. Smith (2006) cites three specific challenges to conducting video game content analysis. Time frame is one of these challenges, specifically when participants or coders only play a video game for 10 minutes; they will miss at least one type of game content over 40% of the time.

Another challenge is player skill; the studies cited by Smith (2006) employ either expert gamers with no experience of the game being played or allow the gamers to

familiarize themselves with the game, both of which yield different estimates of desired content present in the games. The last challenge Smith accounts for is the type of character chosen. The type of character chosen can significantly impact game play, as each character has a different available skill set, different appearance, and in some cases the environment will react differently to different choices (non playable characters will have a different set of responses to a male character than they would to a female character). It is hard to choose video games to study based on any selection criteria to accurately view a cross-section of the console's available selection. The easiest way to do this is to look at the highest selling games on each console because those games have reached, and been played by the most people. This type of sampling has been previously implemented by Smith (2006) for her content analysis on hyper-sexuality and was used in the present investigation.

Schmierbach (2009) suggested two challenges that warrant discussion; interactivity and multiplayer options. The primary challenge in interactivity, he states is increased variance, or "the presence of interactivity means games take on a greater variety of forms than many traditional media, even within a particular 'piece' of content. A single game varies in ways not relevant to a single newspaper or television program." In other words, no game will play the exact same for any two players, or any two gaming sessions by the same player. As gamers experience more within one game, as well as a greater number of different games, their mastery over one genre of games will increase, leading to a vastly different experience. Also, people use video games differently, satisfying different motivations for playing (Lucas & Sherry, 2004; Sherry, Lucas, Greenberg, & Lachlan, 2006), and may play video games for different reasons.

One must also address possible multiplayer options while conducting a video game content analysis. With gaming becoming more of a socially acceptable form of interaction, more and more games offer a multiplayer option, which must be examined with as much legitimacy as the existing single player options. This emerging form of interaction will complicate any coding scheme that researchers would create or adapt since there are so many options available, from outfit pieces and colors to game types (cooperative versus competitive) to game modes. Content analysts must endeavor to create different elements and classifications to better analyze this interactive medium, both from a single player as well as a multiplayer setting.

No two people play the exact same games, and those people who do play some of the same games do not play them the same way. There are many types of genres available, not all of which lend themselves to successful advertising. It is much harder to include a successful advertisement into the context of a puzzle game such as *Tetris* than it is to include an advertisement in the context of a more realistic genre, such as *FIFA Soccer 09*. There are many ways an advertisement can be put into a video game, depending on the contexts available to include an advertisement. An advertisement can be included in many different types of games; they can be put into a racing game as a billboard, bumper sticker, and cars being driven themselves, they can be put into a basketball game on the cups used to rehydrate the avatars, the rolling billboards on the front of the scorekeepers' table and in place of the advertisements shown around the simulation of the arenas that actual basketball games are played in, they can be put around the streets of a cityscape in any game that features action taking place in a city such as first person shooters, featured as an obstacle to be overcome in *Ghost Recon*:

Advanced Warfighter 2 and sandbox action adventure games, or real life monuments in New York City in *Grand Theft Auto 4*, to name a few examples. Advertising within video games can also be shown in different ways; they can be featured being used by the on screen characters (the example mentioned about the representations of basketball players drinking), they can be illustrated in the background, such as the billboard advertisements shown, or they can be integral parts of the game, as obstacles to be overcome.

3.2 STUDY PROCEDURES

In this study, fifty games were sampled. Table 1 shows the games, consoles they appeared on, and years of release. Each game was played for 20 minutes for many reasons: to establish the type of video game, to traverse the video game space where advertisements may be displayed, to find as many instances of an advertisement as are shown during the play time, and because according to Smith (2006), one will capture 70% of content available in the game within the first 20 minutes of game play.

In addition to the academic and statistical reasons, there were practical factors involved in making this decision. Choosing to sample the games played instead of trying to play each of them in their entirety was done for numerous reasons. As it stands, even sampling these games was a costly and lengthy undertaking even only playing 20 minutes of each. Some the games sampled have become quite rare over the years and have turned into collector's items, making them very expensive to purchase instead of rent for a week. For example, *Final Fantasy 7*, a Playstation title now sells on Amazon.com for \$183.99 (CITE). In addition to the economical reasons, the time available to the researcher also has to be considered. Some of the games were collections of minigames, or short games

meant to be played with friends at a party, these not offering the gamer any real way to complete them. In the Nintendo Wii games sampled, 40% of them were these types of game. A good number of the games sampled offer quite a lengthy campaign or single play mode, some reaching over 40 hours to play the game from beginning to end, making it impractical to attempt to play each of the fifty games sampled in their entirety from numerous standpoints.

Since each game was played by an experienced gamer, they were allowed up to a half hour to familiarize themselves with the game before being recorded so they were not trying to figure out the controls and mechanics while the analysis was recorded. The game play of each of these gamers was videotaped and analyzed at a later time so the player does not have the pressure of trying to code for the varying types of advertisements present while playing the game. Each session was coded by two trained coders working independently of one another to establish inter-coder reliability. The game play was limited to that of more experienced gamers, because in contrast to violence for example, the advertisements present in the game are not controlled by the player, and are a part of the game mechanics. Since this is a content analysis examining a mechanic of the game, not instances of violence the player creates or incites, the researcher does not have to be concerned with only using more experienced or skilled gamers. Players have control over how much, and in some cases, what kind of violence they enact in the game space. Video games give the player the illusion of being in control of the world their avatar inhabits, but in any racing game the avatar only exists within the confines of the race tracks available for play, and every gamer will see the same advertisements programmed into the game.

The games were chosen based on sales figures provided by VGChartz.com. If duplicate titles were shown on two or more console lists, the game was only played on one console, chosen at random. After the lists were compiled, the first twenty minutes of each game was played and recorded by a gamer of moderate to high skill. Each session was recorded and coded at a later date so the gamer did not have to stop and pause the game whenever an instance on an advertisement occurred. Each of the fifty games in the sample was recorded and before coding commenced, ten were randomly selected for an intercoder reliability check.

3.3 GAME-LEVEL VARIABLES

Creation of the codebook took many drafts to arrive at the final one (see Table 2) with two levels of variables: one set for each game examined, and one for each advertisement present. The game level variables were all factual in nature and included an identification system, the game title, console the game was played on, the year the game was sold to the public, the rating the Electronic Safety Review Board (ESRB) gave the game, the company the published the video game, and the genre of the game.

3.4 GENRE

Adequately classifying genre is difficult for numerous reasons, such as differentiating one genre from another and overlaps in genre definition. It is also hard to definitively classify something while products are still being made. Attempting to rely on classifying based on thematic elements, one is confronted with the problem of trying to isolate intent of those making the video game. The best way to start defining genre for video games is starting with the idea of interactivity (Wolf, 2001). Within video games, there are goals or objectives to complete, and very specific interactions are used to

complete these goals. Using these objectives as a motivational force, combined with the various forms of interactivity present in completing these objectives, we can start dividing the vast array of video games into working genres (Wolf, 2001). Wolf created a list of 43 distinct genres, many of which are only vaguely linked to the idea of interactivity, ranging from abstract to board games, and educational games to sports. Despite this reasonable discussion, we are left with a list of genres which are based on no discernible categorization system (Nielsen, Smith & Tosca, 2008).

Magazines and websites, and the games industry itself, have their own, rather idiosyncratic way of dealing with video game genres. This system is often based on a games themes and fundamental characteristics. This approach seems to be largely arbitrary, and simply a way to analyze or categorize a large amount of material in a meaningful way. This allows consumers to expect different things depending on the genre he or she uses. If a consumer sought to fulfill the needs of dancing or shooting bad guys, they would use a rhythm game or a shooter respectively. Smith (2006) found seven genres that appear regularly across classification schemes used in academic research: sports, driving (or racing), simulation, strategy, role-playing, shooting (or shooter), and fighting (or fighter).

Nielsen, Smith, and Tosca (2008) suggested a much different way to categorize genre; to have genre dictated by the conditions needed to succeed in a video game. The four genres they proposed were action games, adventure games, strategy games, and process-oriented games. The typical actions and criteria for success were laid out as follows. For action games, the typical action was battle, and the success criterion was fast reflexes. For adventure games, the action was mystery solving and the criteria was logic

ability. The typical action for the strategy game was to build nations in competition with others while the criterion was successfully analyzing interdependent variables. Finally, process-oriented games, the typical action was exploration and/or mastery and the success criterion varied widely, and was sometimes nonexistent.

In the present study, a very specific genre coding scheme was initially used, in line with the work Wolf (2001), allowing the coders to respond to this variable in an open ended format. Following this layout gave too much variance to the results, however, since differentiation was made between very similar types of games, such as first and third-person shooters and action/stealth and action platformers. After examining all of the results for this variable, it was agreed upon to collapse and recode genre based on a more simplified coding scheme in line the ones proposed by Smith (2006) and Nielsen , Smith, and Tosca (2008).

For the purposes of this analysis, a parsimonious scheme has been adopted, only utilizing six possible categories reflecting both popular game genres and genres expected to contain a lot of advertising and product placement. These included sports (e.g., *Madden 08*, *Wii Sports*), racing (e.g., *Gran Turismo 2*, *Motorstorm*), shooter (e.g., *Gears of War*, *Resistance 2*), music (e.g., *Rock Band*, *Guitar Hero 3*), action (e.g., *Donkey Kong 64*, *Lego Indiana Jones*), and other (e.g., *Starfox 64*, *Wii Fit*) for games that do not fit into any of the other categories.

3.5 AD-LEVEL VARIABLES

After finishing the game level variables, the analysis of game play could begin. Coders were given training to better understand what constituted an advertisement before coding began. The ad level variables were less factually based and more subjective.

These were the advertised product, ad content, or a way to categorize the advertisement into a product, service, retail store, or unsure. Next was a variable pertaining to what the advertisement was promoting; whether it was another video game, a movie, a character from another medium, a song or musical artist, or a promotion that did not fit into any other category. Next was whether or not the advertisement could be or was interacted with, and then if the advertisement was an audio advertisement, a video advertisement, or a combination of both. Next were variables focused on the location of the advertisement, in-game, a loading screen, or a menu screen. After that were variables pertaining to the prominence, legibility, and recognition of the advertisement. Next were variables focusing on the duration of the advertisement, or when started, ended, and how long it was on screen for, and then how persistent the advertisement was, or how often it appeared on screen, followed by how often any one set of advertisements appeared on screen in the same array. Next were variables focused on whether the advertisement was moving or not, and if the product on screen was for a real or fictitious product. Finally variables pertaining to the levels present in the sessions were answered; how many levels were present in the 20 minutes, whether or not the first level played could exist (like a carnival or a skate park) and did actually exist (like Foxboro Stadium or Stonehenge).

3.6. INTERCODER RELIABILITY CHECK

Intercoder reliability was tested using ten randomly selected games, representing 20% of the total sample. Two coders coded each of the ten games, after initial coder training meetings. Agreement on all game level variables was 100%, given that the game level variables were factual information about the games.

At the ad level, six of the games were found to contain no advertisements. Of the

remaining four games with advertisements, a total of 33 advertisements were found. The unitizing agreement for identification of different ads (ad presence) was 94%. Each coder missed an ad that the other found, but otherwise agreement on appearance of different ads was high.

The reliabilities for the other hypothesized variables were assessed using PRAM (Program for Reliability Assessment with Multiple Coders) (Neuendorf, 2002), with the following results:

1. Ad persistence (number of times each ad appeared in a game): 79% agreement, .98 Lin Concordance.
2. Genre (collapsed): 100% agreement (same with all factual, game-level variables).
3. Real vs. Virtual (collapsed Ad Realism): 96% agreement, .86 Cohen's Kappa.

These reliabilities were all deemed acceptable, based on the criteria presented in Neuendorf (2002), and the variables were used to test the hypotheses and research questions.

As for other variables assessed at the ad level, reliabilities varied:

1. Ad content: 86% agreement, -.03 Cohen's Kappa.
2. Cross promotionality: 92% agreement, .86 Cohen's Kappa.
3. Ad/Product use: 71% agreement, .59 Cohen's Kappa.
4. Ad type: 83% agreement, .68 Cohen's Kappa.
5. Ad location: 79% agreement, .68 Cohen's Kappa.
6. Ad prominence: 100% agreement, 1.0 Cohen's Kappa.
7. Ad legibility: 92% agreement, .63 Cohen's Kappa.
8. Ad recognition: 92% agreement, .47 Cohen's Kappa.

9. Ad set persistence: 75% agreement, .96 Lin's Concordance.
10. Ad movement: 63% agreement, .25 Cohen's Kappa.
11. Ad realism: 79% agreement, .56 Cohen's Kappa.
12. How many levels? 83% agreement, .83 Lin's Concordance.
13. Possibility of venue: 83% agreement, 0.0 Cohen's Kappa.
14. Reality of venue: 100% agreement, 1.0 Cohen's Kappa.

These variables were included for descriptive purposes and possible use in future reports. Although all had more than 60 percent agreement, the more conservative Cohen's Kappa and Lin's Concordance revealed several unreliable variables, including ad content, ad product/use, ad recognition, ad movement, ad realism, and possibility of venue. In most cases, a cursory scan of the data reveals that these disappointing results were likely due to few valid cases, and in others, they may be remedied by collapsing confusing coding categories. Regardless, the decision was made not to report the results for these variables in this thesis.

CHAPTER IV

RESULTS

H1 was approached in two different ways. The first was looking at a straight comparison between Nintendo and Sony, since they were the only two consoles present in both generations (excluding Microsoft, in other words). The second was comparing the generations as a whole, using the three available for the current generation and the two available from the fifth generation. Using either approach, the results of H1 are informed by the results of RQ1; one cannot examine the advertisements present in the most popular games without having first mentioned the current genre distinctions and how well each genre lends itself to even including advertisements of any type.

A total of 423 advertisements were observed. Table 2 shows the breakdown by console. In the comparison between Nintendo and Sony, it was shown that there were 113 advertisements present in the top current generation titles and 200 present in the top fifth generation titles. Analyzing the entire sample led to different results. The current generation including Xbox 360 was shown to have 223 advertisements, with Xbox ads increasing the number by 110. While the raw number of advertisements increased, so did the amount of video games sampled. In terms of ad persistence (or the number of appearances of each ad), ads in games on the two older consoles appeared significantly

more often ($M = 5.76$, $SD = 11.40$) than those in games on the two newer consoles ($M = 2.42$, $SD = 4.73$), $t(311) = 3.00$, $p < .01$. Overall, H1 was not supported.

RQ1 asked about the frequency of ads in different game genres. The genre with the most ads was sports ($N = 166$), followed in order by racing ($N = 87$), action ($N = 65$), music ($N = 60$), other ($N = 44$), and shooter ($N = 1$). It is also instructive to look at the number of games in each genre without ads. In order, they are action ($N = 9$), shooter ($N = 9$), other ($N = 6$), racing ($N = 2$), sports ($N = 1$), and music ($n = 0$). In terms of ad persistence (excluding shooter games due to analysis problems), racing games had the most appearances of each ad ($M = 10.45$, $SD = 15.83$), followed in order by music games ($M = 3.57$, $SD = 6.42$), action games ($M = 2.42$, $SD = 3.25$), sports games ($M = 1.98$, $SD = 2.38$), and other games ($M = 1.52$, $SD = 1.07$), $F(4,421) = 19.27$, $p < .01$. A Tukey HSD post hoc test revealed that this significant finding was driven by the racing genre, which had significantly more ads per game than all the other genres.

It's also worth noting what different genres made up each console's top 10 lists. Half of the PS3 list was made up by shooters, specifically first person shooters (FPS). Three shooters; one FPS and two third person shooters, appeared on the 360's list. Both Nintendo consoles, Wii and N64, each had one FPS, and the PSX had none. Out of the 10 present in the study, only one had advertising of any kind, because it was a movie tie in game for the James Bond movie at the time, Goldeneye. Each other genre included much more advertising, action being the only one to appear more often than shooters. Including advertisements for fictitious products, or products that do not exist in the real world for use or consumption will make the game play experience that much more full and 'real'. This could be one motivation for such inclusions, another motivation could

also be advertising for other products created by a specific company, much in the way Nintendo does constantly with games such as *Super Smash Bros* and *Mario Kart*. Each playable character in those games appears as the main protagonist in another Nintendo title. Yet another reason for this could also be an attempt to control your favorite Marvel superheroes (*Marvel Ultimate Alliance*), increasing awareness for the Marvel brand, and possibly increasing likelihood to purchase comics or movies featuring those characters played. Originally the reality of the presented advertisements was broken up by interactivity with the advertisement, but this was redundant, as a previous variable addressed whether or not an advertisement is or could be used, so this was collapsed into real world and game world (fictitious) advertisements. The collapsed revealed 300 real world advertisements and 123 game world advertisements. A t-test was also run on ad persistence, revealing a significant difference. Real ads appeared significantly more in each game on average ($M = 4.55, SD = 9.57$) than fictitious ads ($M = 2.61, SD = 4.84$), $t(421) = 2.13, p < .05$.

Though not formally hypothesized, this analysis did produce some additional interesting results. Over the 50 games analyzed, 21 were rated Everyone (E), 4 were rated Everyone 10+ (E10+), 15 were rated Teen (T), and 10 were rated Mature (M). This could very well be indicative of many things, from parents increased reliance on video games to raise their children, to the willingness of adults to play games not specifically targeted to their age demographic, to children having increased access to more mature games. It should also be noted that there were no Early Childhood (EC) or Adults Only (AO) titles in any top 10 list found. One reason for this could be that titles that earn an AO rating, through excessive violence, sex, or other questionable material are not sold in retail

stores, and most cannot even be played on a console, a computer is needed for these titles.

Another point of interest is the results of the publisher variable in the game level analysis. Out of the 20 games played on Nintendo consoles, 17 were published by Nintendo. Of the 20 played on Sony's Playstation consoles, only 11 were published by Sony. Of the 10 played on Xbox 360 (created by Microsoft), only 3 were published by Microsoft. Comparing this with how many advertisements were present on each console (101 on N64, 99 on PS2, 68 on Wii, 45 on PS3, and 110 on 360), it looks as though if the games for any console are produced by more third party publishers, then possible advertising attempts increase. This would be an interesting subject for future research.

The content of the advertisements also presented some interesting findings. With the exception of two advertisements, one for *Guitar Center* and the other for The Metrodome, every other advertisement in popular video games was a product in one form or another. Of the content advertised, it was shown that almost 40% of the advertisements were character promotions (such as being able to use a specific wrestler or superhero in a game) and 11% were promotions for songs or artists. These percentages illustrate what is most commonly advertised in video games and gives some insight into the audiences targeted in both popular video games.

While playing certain video games many advertisements are seen, but the matter of how many can be interacted with is a different story altogether. Of the 423 different ads in this study, 378 were for products or brands that could be interacted with by the player. It stands to reason that if a player can interact with a brand in a video game, like Seiko (a watch company in *Gran Turismo*), they will be more likely to recall this brand

later and potentially purchase a watch from the aforementioned company.

This study has yielded a great amount of information which should have pre-dated any analysis of the effects of advertising in video games, or brand placement and recall, and certainly any analysis on purchase intent as a result of interacting or observing brand or product placement in video games. Not only do the results of this analysis have a great deal of potentially real world implications, but should help advance the literature on the subject. Instead of focusing solely on racing and sports games, researchers could also increase the scope of further analysis to include more varied and popular genres such as action or music games to obtain a better cross-section of the role and effect of any brand placement in a more realistic sense.

CHAPTER V

DISCUSSION, CONCLUSIONS

Contrary to expectations, this study found more advertisements in the fifth generation than in the seventh generation. This may be due to the sampling technique used in this study, which involved taking the Top 10 selling games on each console. The top games in the fifth generation included more titles in genres that traditionally have a lot of advertising and product placement—sports and racing. There were no racing games in the top games of the seventh generation. As a result, the unexpected results for the first hypothesis may not be evidence against the economic predictions, but it may simply indicate that in the current generation, the most popular games fall in other genres that traditionally have not had advertising, such as first person shooters. The technological advancements of the more recent generation have made three-dimensional fantasy worlds like in the *Halo* series fully realized, making them more popular now than in the past. There is evidence suggesting that gamers would not be receptive to ads in these types of games (Nelson, 2002), so even if the industry wanted to generate more revenue through ads, they may be hesitant due to the impact it may have on realism, gamer involvement and enjoyment, and other outcomes important to the success of games in certain genres. The industry will need to figure out how to incorporate ads in non-realistic genres if they

want to increase revenues in all types of games.

In addition, although this finding shows differences in the Top 10 games by generation, there are still popular examples of sports and racing games in the more recent generation that simply fell out of the top 10 for the reasons discussed, despite still being played by many gamers. Future studies of brand and product placement in games might benefit from oversampling from sports and racing games even if they are not among the most popular games since they are most likely to have advertising content.

Real advertisements are more likely to appear in video games than ads for fictitious products, or products only present within the game world. Advertisements are often placed in video games for the same reason they are placed in television shows and movies; to sell products. This is consistent with economic predictions for ad revenue in video games. In video games; however, advertisements also have the task of enhancing the feel of realism the game has. . In both cases, ads for real-world products and brands would be expected. It seems superfluous for game programmers and designers to take the time and effort to write advertisements for products that only appear in the game world into the script of the game, but these can add to the realism of fictional game world (which would likely have fictional ads too), or be placed to add to humor, as appears to be the case for some of the games in this study.

What will the future of advertising in games look like? Investments in in-game advertising have been made, but a future increase in ads in games is by no means certain.

In 2006, Microsoft acquired Massive Entertainment for between \$200 and \$400 million dollars; in 2010, this unit of Microsoft was closed and its employees were folded into other parts of the company. Massive Entertainment worked with game developers to

build advertising spaces into their titles, and sell those ad spots within its network that could be targeted to specific demographics. With a connection to the internet, these ads could be changed over time to increase marketing longevity and relevance in the used game market.

Gaming companies have started to move away from third-party ad sales, and instead opt to sell advertising space on a first party basis. This closure actually seems to evidence growth of in-game ad business, just without the need to pay a third party. Before Massive's closure, Electronic Arts had opened its own in-house unit for in-game advertising. This started to draw interest away from using a third party, such as Massive, to sell advertisements. Xbox Live, Microsoft's own platform for the Xbox 360, has also helped put an end to the need for third party advertising groups. This platform has evolved into an all-purpose media hub tailored to each Xbox Live subscriber, complete with advertising space.

5.1 LIMITATIONS

Conducting a content analysis on any interactive medium is challenging, especially one that becomes dated and archaic as quickly as video games do. One limitation of this study was examining games from previous generations of consoles. While playing an old game might be nostalgic, they are not in circulation currently and as such, are much harder to find than a current *Madden* title. After compiling a list of the highest selling games for each console of the fifth generation (Playstation, Nintendo 64 and Dreamcast), the task of finding each of these games came. The companies that produced the first two consoles are still very much in business with current generation consoles, but the third, Sega, has since left the console race to focus solely on making

video games for the other two, as well as Microsoft. Since Sega is no longer making consoles, attempting to find a working Dreamcast and then to find the highest selling 10 or so games was difficult. A few that were found, but the budget simply did not exist to purchase. In the time since the Dreamcast has stopped being produced, many of the top ten titles have become collector's items, none of which are currently being sold for less than \$100. Fortunately, with Nintendo and Playstation having consoles on the market in the current generation, they have the capability to reproduce and resell great games of years past on their respective online shop channels. This is how I was able to find such rare titles as *Final Fantasy 7* and *Legend of Zelda: Ocarina of Time*. However, Dreamcast games could not be included in this study.

The next set of limitations came about due to real life brands that existed 13 years ago, when the N64 came out, no longer existing today. WCW, a brand of professional wrestling, was the bigger of the two wrestling brands (then WWF, now WWE, being the other). In the 13 year interim, that brand faced financial woes, and was bought and eventually gutted by its competing brand, the WWE. Now the brand is mostly used to settle old legal cases and to make more money through the WWE Legacy program. Since two of the most popular games for the PSX and N64 happened to be wrestling games, one being *WCW/NWO Revenge* and the other being *WWF Warzone*, should these be analyzed as they would have been while they were new and popular products or should they be discounted because neither brand exists to the consumer presently? Also, if it was decided that these two be discounted, wouldn't that then stand to reason that other such property, like *Frogger*, or *Driver* also be discounted because there has been no reboot to either of these franchises? The fate of these products was decided by committee, and

since this would be a slippery slope, and would essentially gut and skew the results of this study, it was decided that they would be analyzed as though they were new and still relevant even though they have ceased being relevant or advertisements for current brands and products.

Another potential limitation was the decision to sample only the first twenty minutes of gameplay. Without further research into when any one type of content (for the purposes of this study, advertisements), appear in video games, one cannot say with any certainty how to decide what cross section of a video game to sample for any specific type of content. Among the more fascinating findings was the variance of advertisements present between genres. This is something that warrants more research to further scholarly knowledge, knowledge from an industry perspective, and even to better inform gamers of which games they should avoid if they do not want to be subject to advertisements.

5.2 AREAS FOR FURTHER RESEARCH

It would be very beneficial to pursue more research in this vein, analyzing the lesser known titles, possibly excluding the top 10, and drawing from the titles in the top 20 for each console. The majority of the top titles for any console are published by bigger companies; they may not need to include much advertising since the name and amount of polish that gamers have come to expect will recoup the amount of money that went into game creation.

Having skipped the sixth generation, it would be interesting to include that in further study to see if any bridging effect occurs pertaining to amount of advertising. As this generation of consoles becomes obsolete, analyzing how the most successful games

have changed over the span of the current generation might also be of interest to future researchers.

There has already been myriad research done that focuses on effectiveness of advertising in video games (Lai et al., 1990.; Yang et al., 2007; Yoo, 2007) and brand placement (Nelson, 2002, Nelson et al., 2006). In addition to the brand placement and effectiveness, the types of advertising present should also be a focus of future research, and possibly fused with the existing literature.

Analyzing the mechanics of present advertising would also be advantageous to the video game industry. Examining how an advertisement is presented or whether or not it can be interacted with or whether or not it moves in addition to how effective those different mechanics of any advertisement would provide a great deal of information to those who produce the advertisement in the first place.

5.3 CONCLUSIONS

Research on video games can and should be ongoing. If video games were stagnating or declining as an industry, then the need to examine them and how they affect society would not be so vital, but that is not the case. As an industry, video games have a significant impact on society. This impact can come in many ways; as the newest scapegoat for bad parenting or underlying psychological issues, a more salient way to push brands on consumers during a recession, or even as a means of escaping from the monotony of day to day life. Whatever the impact may be, it has been recognized and should be better studied to be understood, including through content analytic research like the present study.

Academic research has yet to focus on the role advertising plays in video games.

Research on the influence on brand placement has been mixed (Karrh, 1998). Recent academic research also calls for a change in protocol of content analyses (Schmierbach, 2009), which should be adopted to obtain a more accurate cross-section of the video game experience.

The current analysis departs from brand recall and effectiveness to focus more on how in-game advertising has changed over the years and how big a role advertising, both real and fictitious, plays in video games. This is done to expand the current literature on the topic. This study examined not the effectiveness of in-game advertising, but simply the role it has played, and will continue to play in the video game experience. Examining the 10 most successful (as noted by sales) games for the current generation as well as the 5th generation illustrated the role advertising played in popular games over the years. It was shown that the amount of advertising in video games has significantly increased over the past thirteen years. Another important finding is the order of genres most likely to include advertising. Sports games are the most likely, and shooters are the least likely, but until a more concise classification system is established, we can only use the current one to the best of its ability. This study also illustrated that in-game advertisements were significantly higher for real products than fictitious products.

While this study does provide useful insight, limitations should be mentioned. First, any content analysis of video games has many challenges to overcome, but is no means impossible. Researchers just have to have specified everything they are focusing on, and stick to those specifications. In addition to having to keep meticulous specifications, one should have a well reason justification for deciding what they will focus on and what they will exclude.

Table 1. Video Games

Grand Theft Auto 4	PS3	2008
Call of Duty 4: Modern Warfare	PS3	2007
Call of Duty World at War	PS3	2008
Metal Gear Solid 4: Guns of the Patriots	PS3	2008
Motorstorm	PS3	2007
Madden 09	PS3	2008
Resistance: Fall of Man	PS3	2006
Uncharted: Drake's Fortune	PS3	2007
LittleBigPlanet	PS3	2008
Resistance 2	PS3	2008
Halo 3	Xbox 360	2007
Gears of War	Xbox 360	2006
Gears of War 2	Xbox 360	2008
Assassins Creed	Xbox 360	2007
Kung Fu Panda	Xbox 360	2008
Marvel Ultimate Alliance	Xbox 360	2006
Madden 08	Xbox 360	2007
Lego Indiana Jones	Xbox 360	2008
Guitar Hero 2	Xbox 360	2007
Rock Band	Xbox 360	2007
Wii Sports	Wii	2006
Wii Play	Wii	2007
Wii Fit	Wii	2008
Mario Kart Wii	Wii	2008
Super Smash Bros Brawl	Wii	2008
Super Mario Galaxy	Wii	2007
Guitar Hero 3: Legends of Rock	Wii	2007
Legend of Zelda: Twilight Princess	Wii	2006
Link's Crossbow Training	Wii	2007
Super Paper Mario	Wii	2007
Crash Bandicoot	Playstation	1996
Crash Bandicoot 2	Playstation	1997
Spyro the Dragon	Playstation	1998
Gran Turismo	Playstation	1998
Frogger	Playstation	1997
Gran Turismo 2	Playstation	1999
Tony Hawk Pro Skater	Playstation	1999
Final Fantasy 7	Playstation	1997
Driver	Playstation	1999
WWF Warzone	Playstation	1998

Waverace 64	N64	1996
StarFox 64	N64	1997
Diddy Kong Racing	N64	1997
Goldeneye 007	N64	1997
Star Wars: Shadows of the Empire	N64	1996
Super Smash Bros	N64	1999
WCW/NWO Revenge	N64	1998
Star Wars Episode 1 Racer	N64	1999
Legend of Zelda: Ocarina of Time	N64	1998
Donkey Kong 64	N64	1999

Table 2. Frequency of advertisements by console.

<u>Console</u>	<u>Number of Ads</u>
Sony Playstation 2	99
Nintendo Gamecube	101
Sony Playstation 3*	45
Nintendo Wii*	68
Microsoft Xbox 360*	110

* = current generation console.

5.4 CODEBOOK

Advertising in Video Games Study

Content Analysis Codebook

Advertisement, or ad, will be defined as... Any paid nonpersonal presentation of information about a product, brand, company, or store. It usually has an identified sponsor.

Game Level Analysis:

This set of statements should be answered once for each gaming session.

Game Title: What is the title of the game being coded? Open ended question.

Console: Some of these games have been released on more than one console. There will be 10 games from the Playstation 3 (PS3), Xbox 360 (360), and Nintendo Wii (Wii), Playstation (PS1), and Nintendo 64 (N64)

1) PS3

2) 360

- 3) Wii
- 4) PS1
- 5) N64

Year: What year was the game being observed released to the public for use? Open ended question.

ESRB (Entertainment Software Ratings Board) rating: What rating did the ESRB give this game? The possible ratings a game can have are EC (early childhood, acceptable for children under 3) E (Everyone, content that is acceptable for children age 6 and older) E10+ (Everyone 10+, content is acceptable for everyone age 10 and older), T (Teen, content is acceptable for everyone age 13 and older), M (Mature, content that is only acceptable for people age 17 and older), and AO (Adults Only, content that is only acceptable for people age 18 and older)

- 1) EC
- 2) E
- 3) E10+
- 4) T
- 5) M
- 6) AO

Publisher: What company released/published the game? E.g. EA or Ubisoft (open ended)

Genre: Each game falls into one, or more than one genre. The Genre is the type of game being played. For example, the genre for Gran Turismo 2 is racing. The possible genres for video games are: Action, Racing, Shooter, Sports, Other, and Music.

This set of questions will have to be answered for each ad present.

1. Advertised Product or Service: What specifically is advertised? Open ended question.

2. Ad Content: Is the presented advertisement for a product or a service

- 1) Product
- 2) Service
- 3) Retail store
- 4) Unsure/Cannot be determined

3. Cross Promotional: Is the advertisement for another medium (movie, book, game, character) For example, Any character the player can use in Super Smash Brothers Melee is a promotion for that characters game, because that character is the protagonist in his or her own game, Fox is the main character in StarFox video games, or Goldeneye 007 the game is an advertisement for the James Bond movie, Goldeneye.

- 1) Video Game Promotion
- 2) Movie Promotion

- 3) Character Promotion
 - 4) Song/Artist Promotion
 - 5) Other Promotion (specify)
4. Ad/Product Use: Whether or not the product is used in gameplay, can be used but isn't, or cannot be used.
- 1) Is Used
 - 2) Can be Used
 - 3) Cannot be Used
5. Ad Type: Is the layout of the advertisement audio, visual, or some combination of both?
- 1) Audio
 - 2) Visual
 - 3) Audio/Visual
6. Ad Location: Is the advertisement present in the action of the game, on a loading screen, or on a menu screen
- 1) In Game
 - 2) Loading Screen
 - 3) Menu Screen
 - 4) Other (specify)
7. Ad Prominence: Is the advertisement prominently placed on screen, or is it set off in the background.
- 1) Prominent
 - 2) Not Prominent
8. Ad Legibility: Can the advertisement be clearly made out (seen, read, heard).
- 1) Legible
 - 2) Illegible
9. Ad Recognition: Is the advertisement for a product you recognize or are familiar with.
- 1) Recognizable
 - 2) Not Recognizable
10. Time of Ad start: When during the twenty minute recorded session does the Ad start?
Open ended question. (e.g. 5:10 into session)
11. Time of Ad end: When during the twenty minute recorded session does the Ad end?
12. Ad Length: How long in minutes/seconds is the advertisement on screen.
13. Ad Persistence: How many times the advertisement is shown in the same manner throughout play. Count how many times.

14. Ad Set Persistence: How many times a background screen is seen with the same set up, showing the same ads more than once. E.g. In Rock Band & Guitar Hero, there are pre loaded shots of the stage, as the background, showing the same set of ads each time it is shown. This will only occur in a small number of games though, because of the pre-rendered stage shots. Count how many times.

15. Ad Movement: Is the advertisement moving or nonmoving? This does not refer to whether the advertisement gets bigger or smaller based on where it is on the screen in relation to your avatar, but rather whether or not the advertisement moves on its own. (billboard advertisements around a race track are considered nonmoving, because though they move across the screen, they are stationary ads)

- 1) Moving
- 2) Nonmoving

16. Ad Realism: Whether the advertisement is for a product that can be used in the real world as well as the game world, (Gatorade) the game world, (Advertisements for products used in the game, like seeing a mushroom or turtle shell in Mario Kart) advertisements for products that cannot be used in the real world or the game world (Sprunk in Grand Theft Auto 4) will be considered Game World – non interactive.

- 1) Real World Product – interactive
- 2) Real World Product – non interactive
- 3) Game World Product – interactive
- 4) Game World Product – non interactive

17. Level: Where the gameplay actually takes place. For example, Grand Theft Auto 4 takes place in a fictional version of New York City, or Rock Band takes place in fictional concert halls all over the world, or Carnival Games takes place in a carnival. If you are more sure whether or not the level is based on a place that actually exists (Foxboro Stadium in *Madden*) then it is alright to respond ‘football stadium’ or whatever generic version the play happens to take place in. Level is not based on how the player controls his or her avatar, but the places in which the action shown on screen takes place.
How many levels?

18. Possibility of Venue in First Level: Can the venue of play exist in real life. A generic setting can exist, but is not actually specified to exist, e.g. The action of the game *Carnival Games* takes place in a fictitious carnival, but no actual carnival is specified, and therefore it could exist.

- 1) Yes
- 2) No

19. Reality of Venue in First Level: Does the venue of play exist in real life. e.g. Quicken Loans Arena can be seen in downtown Cleveland, as well as in the confines of the latest NBA game.

- 1) Yes
- 2) No

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