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Running Header: Video Game Product Placements

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Product Placement in Video Games and Its Effect on Brand Recall

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Dedication

To my family and loved ones:

Knowing you are all proud of me makes this whole trip worth it. For your support throughout all my years of schooling and putting up with all my headaches, thank you.

To the faculty and staff of the Department of Communications & Media Technology:

A simple thank you does not seem enough. You were available anytime we needed you, you helped in any way you saw possible, and you went the extra sometimes mile just because. You saw things in us that we as students may not be completely aware of yet, and though some of us may resent it now, in the future we will be grateful for your pushing us that extra distance.

Abstract

Since the early 1980's there has been an increase in the use of product placement in the fields of motion pictures and broadcast television. Recently, companies have begun to use product placements in video games to increase exposure to their products. Being an interactive media, video games allow the user to interact with the advertisement, unlike motion pictures and broadcast television. The present study investigates game players' recall of product placements in video games. Two focus groups of high school students and church members were monitored playing the *FIFA World Cup 2002* video game. A pre-test/post-test was administered regarding the subjects' recall of brands advertised in the video games. The results of the tests were compared with a content analysis to see if a relationship exists between the products that the players viewed in the game and how their opinions may have been altered.

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Product placement in television and motion pictures has slowly become a lucrative way for both advertisers and the producers of media-distributed content, such as movies and television programs, to generate revenue. Product placement takes place when a name brand product is used as a prop, or the product, company name, or logo is used as scenery, in a motion picture or television show. For example, Pierce Bronson drives a BMW Z3 Roadster in a James Bond film, or the Disney film *Toy Story*, that used popular toys such as Etch-A-Sketch and Mr. Potato Head as characters. With product placement, there is less hype or hard sell than direct advertising. The brand name products get subtle exposure in so called natural settings (Macklem, 2002, p. 34). There are no loud commercials or pushy sales people. The product is placed within the environment of the film/show where the characters will mention, interact with or stand near the product. The product can be used as a focal point of the show. The television show *Seinfeld,* for example has an episode in which Junior Mints become the focal point after a character drops one in a patient during an operation. The product can also be used as part of the background where a character may pass by a Coke vending machine.

"Product placements are the use of brand-name items in movies or on TV, sometimes in exchange for a fee paid by the manufacturer to the producer" (Wells, Burnett, & Moriarty, 2000, p. 48). Rather than have the audience exposed to thirty second commercials that try to show what the product does, advertisers can show their product actually used in a show if even for a few seconds. Advertisers may also aim for the trade off-effect, where the audience's appreciation for a show or movie might rub off on an advertiser's product for being associated with it. This exposure is not meant to

cause the audience to immediately react and purchase a product. However, it is meant to make the audience more familiar with the brand. "There is little support for brand attitude change resulting from product placement, but there is some evidence that people do recognize or recall brands so promoted" (Gould, Gupta & Grabner-Krauter, 2000, p. 43).

In the beginning product placements were casual; products were placed in films and television to add a bit of realism to the picture. For example, in the 1949 film *Sands of Iwo Jima*, and the 1969 film, *Patton*, Jeeps were used to add a sense of realism to films. The use of the Jeep in these movies helped solidify the Jeep image in the United States (Gulla, 2002, p. 62); people saw the Jeeps as rugged vehicles since the soldiers were driving them through a battlefield. Whether or not the results were intentional, television and movie makers began seeing that they could help advertisers increase their exposure and familiarity and profit from the relationship.

Not all of the products that are shown in films/shows are advertisements. It seems that drink containers or boxes of cereal may look like the real thing, but have some generic brands printed on them.

> "Not so long ago, it seemed every soda can or shampoo bottle on TV or in films was generic. Sure, the colors suggested Pepsi or Head and Shoulders. But the brands were always Cola and Shampoo. Using actual products meant getting legal clearance from the brands – something most studios didn't want to bother with." (Vista Group, 2002, para. 4).

It was not until the last twenty years that product placement became deliberate. The 1982 film *E.T.* and its placement of Reese's Pieces is recognized as the first time that a product

placement came to the attention of the general public. This became the point from which movies began to be employ mass product placement. After the film *E.T.* Reese's sales jumped 85% and other advertisers wanted to utilize product placement (Mikkelson, 2001,para.). This started a boom in the product placement industry.

Since *E.T.* product placements have become commonplace; "the top five grossing movies of 1990 contained more than 160 product placements" (Brennan, Dubas & Babin, 1999, p. 324). Today, most large advertising agencies and many film studios have departments and personnel that specifically handle the placement of products in motion pictures and television shows. Product placement can even be found in the television industry. CBS Television Network recently pursued product placements for its series, *The Amazing Race 3*, at a price of nearly $3 million to $5 million for each placement (Friedman, 2003, p. 8).

Product placements have received mixed results from many different groups. "Viewers like product placements (unless there are too many) because they enhance realism, aid in character development, create historical subtext, and provide a sense of familiarity" (Nelson, 2002, p. 80). A study by Ong and Meri (1994) revealed growing fear among some that product placements act as subliminal messages, convincing individuals to purchase items. The study revealed that product placements were only successful at brand recall and were not subliminal messages.

As the demand by companies to rises product awareness becomes more competitive, it is surprising that a fast growing and heavily used venue may not be used to its full potential: video games. While television and movie product placement may be

popular due to the vast exposure, "the gaming industry's financial influence is irrefutable. Larger than the motion picture box office in terms of revenue, and growing at three times the pace, gaming is a path to 145 million rapt customers of all ages" (Powell, 2003, p. 11). "Last year, U.S. computer- and video-game revenue surpassed domestic box office receipts, and this year, the game industry is expected to widen the gap with more than $10 billion in sales" (Slater, 2002, p. 80) and "twice as many people played computer and video games last year as attended major League Baseball games in 1999" (IDSA, 2001, p. 4). The financial impact and popularity of the video game industry is overwhelming.

The video game industry has evolved quite drastically through the years. Pinball machines are considered the predecessors of video games. The first pinball machines were created in 1871 by the Redgrave Company. However, the flashy pinball machines of the early 1960's and 70's left companies trying to outdo one another. Companies would create tie-in deals with movies such as Star Wars, Tommy or Jaws to attract audiences to their machines. 1972 saw the advent of home entertainment systems the Odyssey, with the world's first ever computer game, Pong. These early systems had very little memory; graphics were shown in two colors (black and white or green), and had little detail to them. Though advanced for the time, these machines attracted millions of followers. Atari reached a popularity of 26 million worldwide with its Atari VCS system (Demaria & Wilson, 2004, p. 98). Sony's Playstation, which brought about the new high tech gaming revolution, had about 27 million users (Demaria & Wilson, 2004, p. 290). New game systems, such as Xbox, Playstation 2, and PC Gaming have even greater

graphics capability and have sold at levels similar to the original Playstation. The projected users within the United States, in 2002 alone were about 145 million (Jensen, 2002, p. 23). The market is always expanding, from the introduction of games, to cell phones, to portable gaming systems such as Nintendo's Game Boy, which sold a record 500 million systems worldwide (Demaria & Wilson, 2004, p. 234). The market keeps growing and the companies continue to increase profits.

The rise of video game popularity has also resulted in some of the characters from these games becoming embedded into American culture and influencing the entertainment industry. Some video game characters are recognized world wide and have reached the status of popular hero. "Pac Man was the first electronic game superstar to join the ranks of pop icons like Mickey Mouse and Bugs Bunny. This sets Pac Man apart" (Demaria & Wilson, 2004, p. 62). Movies and television have been influenced by the video game craze. Game characters like Laura Croft, Mario, and Sonic the Hedgehog have been the new fad of movies and television shows created after popular video games. This demonstrates a vast change from the old method of using games as marketing tools for popular movies or shows to games becoming the basis for the movies and shows themselves.

As the popularity of video games grows video games are beginning to appear in places in which they are least expected. Games have become more portable than they once were. Now games appear on cell phones, there are gaming systems in cars, and some MP3 players have games on them. Games have also begun to appear in schools as well, primarily for recreational purposes. Some high schools have games installed on the

computers for students who have free time. Colleges like Rochester Institute of Technology, in Rochester, New York have an entertainment technology lab, and Monroe Community College, in Rochester, New York has a video game room on campus in which students can unwind.

The increase in the use of video games at schools can also be attributed to recent studies that have shown uses for video games other than entertainment. Video games are being used for a wide number of reasons, by psychologists, people studying human development, and sociologists. A study by Gee (2003) showed that video games can be used for educational purposes leading to active and critical thinking. This showed that video games may actually help people to think more clearly. Another study by Bavelier and Green (2003) shows games used as visual aids alter visual attention processing. The more children played video games, the better and more focused their visual attention became. A study by Jones (2003) shows that video gaming does not affect academic performance in students however, is a positive social activity. Students' grades were not hurt by their game playing and they were able to meet more people. Durkin and Barber (2002) added to this with their results proving that video gaming is a sign of a normal lifestyle. For a child to play video games is simply a sign that that child is healthy and well-adjusted. The results from these studies may change the way in which the video game world operates. Video games may inevitably become part of a classroom setting one day with valuable lessons built into each game, developing and educating its audience while entertaining them.

With the rise of video game popularity and the increase in video game market revenue, companies are still hesitant to have their product placed in this medium, even though the possible level of exposure through video games could be greater than traditional methods.

> "Instead of receiving information through a single sensory modality as in radio (auditory) or print (visual) or with these two senses combined (e.g. television), entertainment-seeking consumers are able to experience two additional senses through the use of haptic technology (touch) which, for example, allows the consumer to feel the vibrations of a racing car in a game, and in the near future consumers will experience smells" (Nelson, 2003, p. 4).

Also, game producers and players want realism; they want the game to look as life-like as possible. For instance, Electronic Arts (E.A.) has been aiming for a sense of authenticity with their games. It started in the early 90's when E.A. licensed its football titles under former coach John Madden's name and created a series of games that set the pinnacle for video football games.

E.A. does not stop at licensing game titles. The producers want the game to be as realistic as possible "when the real life Tampa Bay Buccaneers were constructing a new stadium, anyone playing the Bucs through the season in *Madden* saw the stadium going up in the background, each week one step closer to completion" (Ratliff, 2003, p. 98). Fans do not just want to play the game now; they want to live the entire experience, even down to career-ending injuries in games. NASCAR, however, was extremely hesitant about having the cars get damaged in their games; they did not want to upset the car sponsors, but after testing the game they found that fans wanted realism and wanted to

see the cars get dented and smashed since it was part of the real racing experience (Slater, 2002, p. 80). To make the games more realistic, producers have resorted to making deals with popular companies to put their names within the games in some capacity. Sega, for example, made their games seem more realistic by licensing ESPN, a major sports broadcasting network. Sega uses ESPN's name on the product and ESPN announcers in its sports games (Ratliff, 2003, p. 100). Recently the game *FIFA 2002 World Cup* used for this study contained real announcers from European soccer leagues to add realism to the game.

McDonalds and Intel experimented with product placement when they signed a deal with Electronic Arts in December of 2002 to put their products in The Sims video game. The Sims is a popular simulation game in which players can create characters, and live out their lives, making decisions that can impact character's lives. Players can buy furniture, choose jobs, interact with other user created characters online, or decide what they would like to eat, all in a virtual world. Players can even go online and download new furniture or other items for their characters. If a company such as McDonalds places their product in the game they not only can get repeated exposure by the players interacting with it, they can post more items for the players to download on their website. These items can be anything from furniture, name mention in the games, the actual product itself or characters either dressed as employees or trademarked (i.e. Ronald McDonald). This may in turn attract more traffic to the advertiser's website, thus receiving more exposure. However, the undertakings of McDonalds, ESPN and Intel are no indication of a booming trend in product placement in video games. Though

companies are starting to use product placements in video games, the numbers do not compare to those used in films/shows.

The present study examines the role of product placement in video games over a short term, in an attempt to determine any influence it may have on the brand recall of its audience. With this information, the viability of video games as an outlet for product placement can also be examined.

Research Questions

An investigation into the realm of video game product placement can begin by answering these questions.

H: Product placement in video games leads to a high level of brand recall among game players.

RQ1: What are the immediate effects of product placements in video games on brand recall?

RQ2: Does product placement in video games influence a person's attitude towards a product?

Rationale

The benefit of this study is that it could provide information as to whether or not video game product placement is a practical and lucrative method of advertising and building brand awareness among a young audience. If this research verifies the effective potential of product placement in video games, it may be logical to explore business

awareness of and the potential that it may. Since product placement in video games is a field that is still developing and relatively unexplored, those companies that currently use product placement in video games may set the standards on how product placement can be accomplished and be effective. "There are approximately 1,000 brand name products that utilize product placement in their marketing mix" (Marshall & Ayers, 1998, para. 3). These companies could be given a new area in which to advertise. Also, knowing if video game product placement is effective provides the chance to assess a filed that has not yet fully matured.

With the information that will be gathered on this subject, this study intends to determine whether product placement in video games can be a successful alternative in which various businesses can advertise. "TV's importance is dropping, radio's importance is dropping, and video-gaming is more important" (Powell, 2003, p. 11). Statistics show the likelihood that the video game industry is one that can rival motion pictures and broadcast television as a prominent avenue for advertising. Video game product placement would also provide yet another way for advertisers to get their products or brand name out to a younger audience.

With the knowledge gained from this study, companies may get a better understanding of the field of video game product placement. This study will provide them the information they need to make an educated decision about whether to place their product in a game. Companies may come to know that video game product placement is not a practical way to advertise thus saving money and effort. On the other hand, the study may yield some information that advertisers were not previously aware

of in relation to video game product placement. This may allow the companies to spend their advertising money on methods of brand awareness and brand building that provide better returns.

For many years video games have not been properly acknowledged by scholars; this could be because video games were viewed as a children's toy. "Despite three decades of development there has been relatively little scholarly study of these games, or even an acknowledgement of the medium of video games as a whole." (Wolf, 2001, p. 1) The placement of products in video games not only opens a new market for business but also for scholars in the field of advertising. Scholars have studied the effects of product placement in television and motion pictures on a mass audience. Scholars now can follow this new method of product placement and not only track its evolution but the effects it has on game players as it evolves. By studying product placement in video games in its early stages, scholars may be able to properly analyze the effects of product placement in video games over time, compared to its counterparts, television and motion pictures. Scholars have now been given the chance to study an advertising medium that is interactive, where advertisers not only show their logo but entice players with downloads and updates from the website, generating further exposure.

Literature Review

The ability to perform product placement in video games is relatively new, when compared to the popular mediums, television and motion pictures, for product placement. In the past, there was not enough memory in the gaming systems to allow a game

producer to place a product in a game without taking quality away from the game itself. In the 1980's, video games were eight and sixteen bit systems with almost no memory space available. Every bit of available memory was needed to run the graphics and sounds of the game. Today, video game systems are powered by Pentium class processors, hundreds of times faster than their predecessors, with thousands of bits of free space available. In the past few years, the introduction of bigger and faster video game machines has made the available memory space nearly limitless. Now some game designers are looking to add advertisements to their games to make them more realistic, and possibly generate some revenue to decrease game costs. This should be of special interest to advertisers and product placement companies as an opportunity to raise product awareness.

One question the may arise about product placement is whether or not they are successful at all in brand recall or recognition. A study by Brennan, Dubas, and Babin (1999) explores the influence of product placement type and exposure time on product recognition. The researchers studied products placed in the *Rocky III* and *Rocky V* films. An audience was asked to sit through projections of these films and were then questioned about the brands that they recalled seeing from the film. The researchers compared the answers from the audience to the type of placement that a brand had in the film, as well as the time the audience was exposed to the brand. Only brands that were on-set were counted in the study.

The researchers found that product placement type had a significant impact on viewer recognition. The type of exposure a brand received was more significant than the

duration of brand exposure. Only when brands that were exposed more than ten minutes were eliminated from the study did the rate of recall improve. This may indicate that the audience may have started to mentally block the advertiser after a certain period of time. Products that had long exposure times had a greater level of false recalls. The results from this study support the movie industry's practice of classifying product placements. Since product placement type has a significant impact on viewer recognition over product placement exposure time it would seem that viewers are most likely to recall a novel or random type of advertising rather than an advertisement that is on the screen for an extended period of time.

As for the medium of video games, there have been few studies that have analyzed the effects of product placements within them. The first study to examine the use of product placements in videos games was performed by Nelson (2002). Nelson explored the effectiveness of placing brands in a racing game across two preliminary studies (Nelson, 2002, p. 80). The first was a preliminary study examining racing games on video game consoles; the other study focused on localized advertisements in computer games. The first study was performed using the video game *Gran Turtismo 2*. Nelson recruited twenty people as participants for this study. Participants were selected and asked to play the game exactly as they would at home, either alone or with friends. The subjects were surveyed after game play to measure their short term brand recall; five months after the session participants were contacted by email to gauge their long term brand recall. The second study recruited participants to play a different racing game. The game was a demo game created by a game technology company specifically for this

study so that the researchers could access the source code and insert local brands into the game. The participants were asked to play the game alone for fifteen minutes. Again the subjects were surveyed after game play and were contacted by email five months after the session and asked what brands they recalled seeing.

The major finding from this study for the short term recall was that game players could recall about 25 to 30 percent of the brands shown during play. For the long term recall, game players could recall 10 to 15 percent of the brands, but 94 percent of the players could recall the brand of car they "drove" or used. The researchers also found that game players were more likely to recall local brands rather than national brands. Brand familiarity seemed to play no role in brand recall, while unknown brands faired better than known brands like Pepsi. One possible theory that was stated in the study was that the national brands advertise so much that people have learned to block them out. It was also found that the size of the advertiser's name in the game did not affect recall. Another result from the study showed that subjects were in favor of product placements in video games, depending on the genre of game that they are placed in.

A second study by Nelson, Yaros and Keum (2003) supports the previous findings in Nelson's first study. The researchers looked at the racing game genre to explore consumer processing of the background brands placed in the game. The researchers recruited people to participate by either playing or watching the racing game. The participants were exposed to the game for three minutes. Once finished they were asked to browse the CNN website for an additional three minutes after which they were

given a questionnaire to complete. Players and spectators were evaluated separately for this study.

Through the results from the study Nelson, Yaros and Keoum (2003) showed players possessed a higher level of telepresence than spectators. "Telepresence is the experience of presence created when using a communication medium, such as a telephone, computer network, or teleconferencing system" (Barnes, 2003, p. 46). The researchers also revealed that players were able to recall fewer brands from the game than spectators were. Specifically, players could recall fewer background brands than spectators. There was no change in brand attitude by either the spectator or the game player. Some respondents did report that the greater their level of excitement was toward the game, the less likely they were to recall brands. A positive relationship was found to exist between game liking and brand attitudes. This relationship was true for both the players and the spectators. The researchers believed advertisers may have reason to be concerned about how well a game is liked. Their results showed brand attitudes were mediated by game liking, and suggested that negative feelings about a game may be transferred to ads within the game.

These studies, although very comprehensive in the genre of video game racing, are not exemplary of the entire field of video gaming. They represent only one genre of gaming, video racing. Other studies may be done on action/adventure, role playing or even sporting games to get a better understanding of the audience's reaction to the brands. Another area of these studies in which to improve is that the general audience did not play or were not exposed to the advertisement for a reasonable period of time. Most

gamers play video games for at least a half hour. More studies should be done in which the players are exposed to the brands for a longer period.

If the medium of video games seems to be such a viable item, and product placement seem, to be excellent at inducing brand recall, how does one attract the game players? A study by Selnow (1984) points out a relation between video games and television. Selnow surveyed children attending a sports camp to find out their entertainment preferences and habits. He found that there was a relation between how much time a child spent watching television or motion pictures and how much they played video games. Children who watched a lot of television had a greater involvement with video games. The average child played video games the equivalent of half the time that they had watched television. For example, if they watched five hours of television, they played two and a half hours of video games. Of the children studied many felt as if television did not provide enough active participation, which is why they played video games. The study concluded that video games rated higher and were considered more fun and exciting than human companions, by game players. Children would prefer to play a game rather than play with a friend. Also, children with fewer friends were found to play the games even more. This shows that children have a greater connection with video games than may have once been thought.

One current flaw of Selnow's (1984) research is that it is dated; technology has brought about many changes in the area of video gaming since the time of the study. Respondents were asked to respond on the basis of how often they played video games at the arcade, something the new home systems like Xbox and Playstation 2 have virtually

eliminated. The ease of going in another room to play a game rather than down the street to the arcade may increase the percentage of game play to television viewing. The survey would need to be performed again in order to have answers that would be representative of the entertainment habits of children today. Selnow does offer a possible answer to why children prefer video games over human companionship, and that it may be deeper than an entertainment preference. He cites the U.S. Surgeon General at the time who indicated that video games cause users to become "addicted body and soul" (1984, p. 148). Though Selnow's (1984) study does not wrap the studies cited here together, it offers an added way of thinking, concerning that video games may be considered addicting. Now there is a medium in which companies may advertise where the participants may become addicted and will play, increasing their exposure to the product placements.

Selnow's (1984) study, in connection with Brennan, Dubas, and Babin (1999) is significant when examined together. Not only are children playing video games at an increasing rate, but they are exposing themselves to new types of product placements in the video games. Wartella (1984, p. 175) noted that "the heavier television viewers among the grade school boys they (Rossiter and Robertson, 1974) surveyed were more likely to request advertised products on a Christmas wish list." Could the exposure of the brands in video games lead to children requesting more of the brand products for Christmas?

As for product placement, is this merely a trend that will take off in the United States or will it be viable in other countries as well? A question such as this may be important to marketers and advertisers. Gould, Gupta, and Grabner-Krauter (2000)

explored the issues of international product placements. The researchers performed a cross-cultural study on consumers' attitudes toward product placements. The researchers studied individuals in the United States, France and Austria to test their attitudes toward product placement. Respondents were shown photographs of product placements and asked questions pertaining to their attitude towards this method of advertising. Some products that were shown that were considered controversial or ethically charged by some groups (i.e. cigarettes, alcohol and guns), while others were considered neutral.

The results from this study indicated that Americans were more accepting of all product placements, both ethically charged and non-ethically charged, than were the Austrians. The French differed in their answers because they did not favor the ethically charged items. Though no individual was for the ethically charged items, some felt that they were necessary in the film and common enough to ignore. Overall, a majority of individuals surveyed felt that product placements added to the realism of the films. Another finding was that heavy moviegoers for all countries studied were more in favor of product placement than light moviegoers. This research may prove that as long as game producers obey a level of ethics they may see product placements in video games accepted universally, especially by heavy consumers of video games.

The research that was compiled in the previous articles is a very useful start in the research on video game product placement. However, to fully study the influence of video game product placement one would have to create a study using pieces of the previous studies to help produce a viable answer.

Method

The purpose of the study was to test the short-term recall of product placements by the game players. "The only measure of product placement's effectiveness is the recall rate of brands," (Ong & Meri, 1994, p. 162). Studies have shown that product placements are successful in stimulating brand recall and brand recognition in viewers. Brand Recall "is the extent to which a brand name is recalled as a member of a brand, product or service class" (Asia Market Research, 2004). "Recall is the most commonly used measure of product placement effectiveness by practitioners (Turcotte, 1995) and academics, based on the theory that brand exposure leads to recall, which builds equity and instigates the purchase process," (Nelson, Yaros & Keum, 2003, p. 8). By testing this it will allow one to measure the practicality of video game advertising.

The research was conducted as a lab study that was administered on two groups of individuals. The study examined the game players' attitude toward and recall of brands advertised in video games through a survey that was administered both before and immediately after game play. Since the previous studies on brand recall by Nelson (2002, 2003) were performed on racing games, a different genre of games was selected. For this study the sport gaming genre (football, baseball, soccer) was to be studied. The game that was chosen for this study is *FIFA World Cup 2002*.

FIFA World Cup 2002 is a video game version of the FIFA World Cup soccer tournament. This game was selected after testing a series of games and finding it to have the greatest amount of product placements, low violence and universal appeal (multiplayer ability, sport and game popularity). The game was also chosen for the

popularity of video sports games, making up 22% of the video game market in 2001 (Ratliff, 2003, p. 101) and popularity of the FIFA soccer series. *FIFA Soccer* is "published in 15 languages that, in some seasons, tops *Madden* as EA's best seller worldwide" (Ratliff, 2003, p. 98). Placements for this study were considered to be the billboards within the video game environment. These billboards are placed in the background of the virtual stadium, in the exact location that a real advertisement would exist if the game were to take place in a real stadium.

The study examined two groups of individuals. The first group was a random selection of students at McQuaid Jesuit High School in Brighton, New York; the second was a random selection of volunteers from the Church of Christ in Rochester, New York. McQuaid students' ages range from 12 to 19. A parental consent for participation was sent home with all students a week before the study for those who wanted to participate. (A copy of this consent form is located in appendix A, cover letter appendix B) Only students who returned the consent form signed by a parent, parents, or guardian, as well as their own signature, were allowed to participate in the study. The age of participants within the church group ranged from 13 to 32. Parents were on hand with the church group to supply permission prior to any adolescent playing.

For students at the high school, the study took place during the school day from 1:00 p.m. to 2:00 p.m., the 'Flex' time or free time, during which some students may study or catch up on assignments. Special permission was given by the principal's office to perform the study under the condition that all students be allowed to view the study if they desire, a school official (teacher, monitor, staff) be present at all times, and the

researcher be present at all times to answer any questions that the student may have had. The study was performed in the computer labs located in the school. A Microsoft Xbox was installed on a video projection system for the participants to play on. Participants were seated in their typical classroom chairs located in the lab room. The room was comfortably climate controlled in an attempt to simulate the typical settings of the game players. Participants were allowed to listen to music or eat while playing. The spectators were oriented behind the game players in their typical setting style so as to not interfere with the game players, viewing range. However, spectators were allowed to speak to and cheer on participants. All steps were taken to attempt to simulate the setting in which most video gamers play.

Permission to perform the study with the church group was supplied by the pastor of the church and was conducted during a weekly retreat/sleepover at the church. The study was performed in the lounge of the church. The lounge was designed to resemble a typical living room, where most video gamers play. Participants had their choice to sit in a lounge chair, couch, or kitchen chair. The room was also climate controlled and participants were allowed to act just as they do when they play at home, listening to music or eating food. Pizza and soda were provided to the participants for their involvement. Participants who were not playing were not allowed to watch and were asked to sit in the kitchen until their turn came. Non-participants were allowed to sit near the participants as long as they did not block their field of vision.

The gaming platform used for this study was the Xbox gaming system. At the Church of Christ one Xbox was connected to a 20 inch television. One version of *FIFA*

World Cup 2002 was purchased for the study. Four participants were asked to play per game in any order they chose, one on three, two on two, or four against the computer. A minimum of five games were played at each location; no fewer than twenty participants were needed at each location for a total of forty. The participants rotated out after playing so new players were allowed to play. No participant was allowed to play or contribute twice; if they did their surveys were not counted.

Thirteen companies have advertisements placed within the game; (a list of these advertisers is available in appendix C). Companies such as Adidas, Coca Cola, Fuji, Gillette, Hyundai have billboard advertisements placed within the game. These billboard advertisements were the focus of this study. Ten companies were chosen from the thirteen. These companies were chosen due to their strong marketing campaigns in place in the real world. Three companies that have product placement within the game were left off. These companies are NTT Corporation, Ayana, and Electronic Arts. NTT was excluded from the study because it is the national telephone company of Japan and some gamers may not be able to recognize or relate to it. Ayana is a bottled water company and was excluded due to lack of a strong marketing campaign in the real world in comparison to the other advertisers. Electronic Arts was left off due to the fact that they are the creators of the game and their name and logo are everywhere, from the title screen to the game packaging.

Though there are thirteen advertisers, *FIFA World Cup 2002* generates specific and consistent combinations of these advertisers for each team. For example, if a player chooses to play Germany against Hungry, the stadium advertisements would be the same

every time these two teams played, using only six to seven of the advertisements. Therefore, the stadium advertisements are the same six or seven advertisers if the same teams are played against each other. Italy and Argentina were the two teams that were chosen for the study. For this study a coder first played the game as Italy versus Argentina to determine which advertisers were used for those two teams, recording this information. The advertisers in this game between the two teams were Adidas, Fuji, Gillette, Hyundai, MasterCard, and McDonalds. Xerox, Yahoo, JVC, and Coke were not used in the game and would be used as norms for the study.

The participants were asked to select the teams of Italy and Argentina for this study and to play only one game. The participant only could play against other participants. A typical game of *FIFA World Cup 2002* lasted from fifteen to twenty minutes. Prior to playing the game participants filled out a survey measuring their attitudes towards certain brands.

Each survey was assigned two numbers at the top one for the game, (one for the first game, two for the second game), and each player received a number, one through four, respectively. These numbers helped keep data from each game and player organized. The survey consisted of ten questions, each one regarding one of the ten advertisers in the game. (A sample of the pre-game questionnaire can be found in Appendix D) The questions on the survey measured how favorable the audience's opinion of the advertiser was at that moment. This was done on a seven point scale ranging from the first being extremely favorable, to neutral, then ending with an extremely unfavorable. All advertisements used in this study have strong branding

campaigns in progress in the real world. This pre-survey used the names and logos of six companies' product placements in the game, as well as four that were left out. After the survey the four participants were asked to play the one game for no more than twenty minutes.

Immediately after playing the game the participants were asked to fill out a second questionnaire. (A sample of the post-game questionnaire can be found in Appendix E) The questionnaire analyzed the recall of the game players to determine what specifically they remembered from the game. The questions were similar to some of those asked by Nelson in her first study on video game advertisements. Each question determined how well the participants remembered the advertisements if at all. The questionnaire was also labeled with the corresponding number of the game being played. Mixed in with these questions was the second half of the attitude survey. These questions were the same as presented in the pre-survey and were used to measure any attitude change that may have occurred. Following the attitude questions were the recall questions. This was a list of the ten advertisers and their logos. Participants were asked to tally, to the best of their ability and, how many times they recalled seeing the advertisements during game play.

These questions provided the information needed to properly evaluate the short-term brand recall and attitude change among video game players and any possible relationship that may exist between recall rates and exposure time of the players. (A total cost for the study is available in Appendix G)

Results

This study yielded many interesting results. One of the major results of this study was that though participants did report seeing the advertisements in the games they did not see them in great numbers. The participants reported that the most they remembered seeing any advertisement in a game was eight times, despite the fact that each advertisement was passed multiple times on the field. However, advertisements in the center of the field, as well as on the jerseys of the players, were reported as being seen the most. Participants stated that they were paying too little attention to the game to look for advertisements. Occasionally they would see one as a focal point in the game (an open player, a goal kick), but the game was moving too fast and they were focusing too much on the game play to even look at the advertisements. A few of the advertisements that the participants claimed to see had colors similar to the billboards they claimed to see. For example, one participant claimed to see a Coca-Cola advertisement for its red colors, when in reality what he really saw was the red McDonalds' advertisement. This may signify that the players actually see the advertisements but do not process them; they simply recognize the colors as they pass them. This could also be a sign that the participants have become desensitized to the advertisements since they are constantly exposed to them in their daily lives, or that product placements in video games do not work.

Another result of the study was that product placements in the video game did not lead to a high level of short-term brand recall among participants. Participants did recall seeing advertisements in the game, though they did not see high numbers of them. The number of advertisements they recalled in relation to the amount of times these

advertisements were displayed was negligible, considering that the four advertisements not in the game were believed to be seen at almost an equal rate. (Graphs showing the recall rates are located in appendix F, pp. 49-50)

The attitude change towards the advertisers was also calculated. To arrive at this information numbers were applied to the opinion scale that was give in the pre and post survey. (3=Extremely Favorable, 2=Somewhat Favorable, 1=Slightly Favorable, 0=Neutral, -1=Slightly Unfavorable, -2=Somewhat Unfavorable, -3=Extremely Unfavorable). The difference in opinion was added up for all individuals. Drastic differences of +/- 5 or 6 on the scale were excluded. For example pre-surveys that were extremely favorable for one advertiser followed by a post-survey from the same individual that was extremely unfavorable, were not counted. Only two of these existed within the study.

Another result from the study was that there were no immediate effects of the product placements on the participants' brand recall. When the results of the surveys were analyzed there seemed to be no significant change in attitude towards any of the advertisers, either in the game or not in the game. Overall most attitudes levels were unchanged for most participants. Therefore, they would circle extremely favorable on the pre-test and somewhat favorable on the post-test. However, there were a few respondents' answers that deviated up or down, though the numbers were not significant enough nor was the change enough to conclude that any influence in opinion had occurred. These results may represent that the participants may not have remembered exactly what they circled on the pre-test, yet their feelings towards the product did not

changed. (Graphs showing overall changes in attitude for all forty individuals are located in appendix F p51-52).

One important note to the study is that the high school used insisted that the researcher be on hand to answer any questions that the students may have had, and that the students be allowed to attend the entire study if they chose to do so. This was helpful because it gave participants and spectators a chance to ask questions or discuss thoughts related to the study during the study. A few participants at the high school pointed out that they noticed product placements that had some local relationship or personal significance. Fuji was recognized because of its relation as a competitor of Kodak located in Rochester, New York, and MasterCard was recognized because a few of the students had MasterCard debit or credit cards. Two participants also claimed to see the Xerox logo on a few banners, even though the Xerox logo was not on the field. After debating with the researcher the participants were shown that the banners they believed to see were actually Hyundai advertisements. This information supports the belief that a participant is likely to remember brands that have some significance or importance to them. Therefore, game producers might want to explore the possibilities of creating local editions of games, to attract different or more advertisers.

It could be assumed by the result of this study that the participants' opinions were not notably affected by the product placements, at least for short-term exposure. The participants' opinions were not affected after only playing one game. This may mean that short term video game playing (video game rentals and game demos) may have little effect. A study may need to be performed to obtain and analyze the possible long-term

effects that a product placement may have on a person who willingly buys a game and plays multiple games over a period of a month or two. This may provide better insight into the long-term effects as well as over all effects of product placements in video games.

A result of the study that was not measured was the spectators' recall of the brands. Nelson, Yaros and Keoum (2003) showed in their study that spectators recalled seeing brands more than the actual game players. Though the spectators were not examined for this study they were present in the room at the high school and gave their feedback after game play. Most of the spectators could not only recall which advertisers were in the game, but could also remember where the product placements were located (where on the field in the game). Participants who discussed the game afterward related that they concentrate too much when playing to look at the ads. However, the spectators did not hesitate to mention the ads, either after the game or as locators for the gamers, for example "You have an open man near the Yahoo sign" or "Hook your kick towards the top of the McDonalds sign". The spectators made it a point to use the billboards in the game as a point of reference. It was easier for the participant to locate someone on the field when they knew to look for a specific point rather than a random open player on the field. This action by the spectators was not counted against the participants in the study, nor were the spectators discouraged from doing so. Since many game players play games in groups, the participants acted no differently than they would have if they were at home.

On a few occasions spectators wanted to fill sheets out to prove that they had actually seen advertisements in the games. The study was not designed to examine the spectators' responses and the reports of the spectators were not recorded. However, the spectators were claiming to see more advertisements than participants reported. These results may support Nelson, Yaros and Keoum's (2003) findings and may warrant a study to be performed on the spectators of video games rather than the players. Since some games are played with groups of people around, product placements may be more effective on the spectators than the game players.

This study was successful in yielding some other important data that was not intended but is significant. On the third day at the high school, a short debate erupted in the lab over whether or not the product placements were advertisements. Though the debate was only a few minuets long, and grew heated towards the end, it was fascinating. Of all the participants and spectators in the lab only about ten to fifteen percent of the students actually believed that the product placements in the game were intentional. A majority of the students argued that the product placements were only in the game because they are in the stadiums in real life. They used Electronic Arts' old advertising slogan "If it's in the game, it's in the game" as their defense. They stated that that was proof that they were just trying to make the games real. A few of these students also believed that a study like this is ridiculous since advertising has no effect on people their age. This situation is an interesting look at how a young generation views advertising. Perhaps they are so over-marketed to that they have reached a point of almost expecting advertising in their daily lives. In fact, the lack of advertising may seem surreal to them.

As for the video games the, one student claimed to have invested over 100 hours of time into an E.A. football game, creating players, teams, franchises, and playing entire seasons. The amount of time this player claimed to have spent with his game is higher than the estimated thirty hours that an individual spend with each game (Nelson, 2002, p. 81). Although, Brian Coleman, a marketing director for Electronic Arts, repots that "a popular sports title can generate upwards of 100 hours of game play" (Powell, 2003, p. 11). "The average number of family members who play PC game regularly (5 or more hours per week) is 1.6 while for console games about 2 percent per household play regularly" (IDSA, 2002, p. 3). However, as the video games begin to develop deeper game play, and take on more realism, it should be no surprise that the game players spend that much time with a game. Ten years ago most sports games would only allow the player to trade players or create their own playbooks. Now players can create players and teams, draft, trade, retire, and even manage all the head office details of an organization.

With players spending this much time with one game it may be beneficial for an advertiser to not simply have a product placement in a game, but to offer their audience something more. For example, a cheat code on the website to help pass a difficult board, downloads for their game so that they can update, or novel downloads like McDonalds offering a download of a team or Ronald McDonald to give the players something novel to play with. This may offer some stickiness to the target audience, giving them not only more reasons to play the game but also more reasons to continue to return to the advertiser's website more often looking for updates. This 'stickiness' will bring repeat

exposure to the advertisers, increasing brand familiarity and possibly creating a brand trust.

One last bit of information gained in this study was that participants reported owning multiple gaming systems (Playstation 2, Xbox, Gameboy Advanced, games on their cell phones, Game Cube, PC). Players reported that they had some combination of two to four of these machines. Some even had gaming systems installed in their vehicles so that their friends could play while they drove. Video games are no longer only home entertainment. Now they have become portable in many ways, offering people a greater variety of places to play and more time to play their games.

Limitations and Future Research

A few major limitations of this study may have caused a skew in the results and represent a future area of opportunity for the study. First, with regards to the high school used, the study was performed primarily on adolescent individuals. This may cause a skew in the results of the study. There becomes less likelihood for true or valid responses when surveying an adolescent group. As evidence of this, two surveys had to be ignored when students circled all positive answers on the pre-test and all negative answers on the post-test. This also showed that the survey style lends itself easily to random guesses. If a participant did not know exactly how they felt about a brand they may circle the approximate position. For example, on the pre-test participants would circle somewhat favorable answers and when filling out the post-test may circle slightly favorable, not

remembering what they circled originally but coming close. Also, participants at the high school had prior exposure to the game before the survey. As part of the request by the school the students were allowed to sit as spectators even when not participating. Though only three to four participants actually stayed, their opinions may have skewed the results.

This study only examined one soccer game in the sports gaming genre. There are many other genres of gaming out there from role-playing, to shooters, to simulators. These games are not representative of all game genres, and product placements in other genres may have different effects. The advertisers may get better responses from the short-term brand recall of individuals in games that do not require such constant attention.

Another limitation to the study was that the researcher did not record the number of hits for each product placement, or the number of times each product placement appeared on the screen. To accomplish this it would have been necessary to record each of the games played by the participants and viewed them to count the number of times that each product placement appeared. The participants may have reported the correct number of times that they actually saw the advertisements in the games; however, due to time constraints counting product placements was not an option for this study. Again, a future study may be performed counting the number of times the product placements appear in relation to the number of times the participants reported seeing them.

Lastly, only eight percent of the participants were female. Though males represent the majority of the game playing population, 62%, the female population of

gamers is 38% and constantly growing (IDSA 2002, p. 5). Female video gamers may also have different game preferences than the male population. Therefore, a future study may be performed either on a mixed group of male and female participants or on a strictly male or female basis, playing the genre of game that they would prefer.

Conclusion

Though this study did not prove that the video game was effective in influencing the short-term brand recall of product placements in video games, used it is by no means an indicator that product placements in video games are not effective. With the different styles of games available and multiple methods of inserting product placements in video games, it could only be a matter of time before marketers find a method that works. With people spending a great deal of their time playing these games rather than watching television or reading a magazine marketers need to find a new way to get their attention. By going right into their major source of entertainment, markets may be able to get their attention and at least build brand familiarity.

In conclusion, this research was intended to study the possibility that video game product placement may have the potential to become a successful form of product placement. Buijen & Valkenbburg's (2000) study that proved that the more a child is exposed to an advertisement the more likely they are to request an item on their Christmas list may be a sign of the future of video games. Though this test was not on Christmas wish list, the participants do play video games for extended periods of time and the products advertised receive repeated exposure. If Nelson's (2002) statement that

"the average video game is played for thirty hours" (p. 81) is correct, that may mean the more the participant is exposed to these advertisements the more likely he/she may be to support, recognize or recall that brand. This information may be a vital tool for some advertisers to utilize to help them get in touch with or establish their brand with a younger, more technological generation.

Appendix A

Consent/Parental Consent form

Rochester Institute of Technology
INFORMED CONSENT FORM

Execution of a survey examining the effect of product placement in video games on a participant's brand recall.

Principal Investigator: Christopher Cameron

You are invited to participate in a research study. The purpose of this study is to test the effects of product placement in video games on brand recall. In order to participate in this study, you must give your consent. If you are under the age of 18, consent will also be needed from your parent(s) or guardian(s). If you do not wish to participate, or to have your child participate do not sign this form.

INFORMATION

We will be testing the participant's brand recall and attitude change towards products that are placed in video games. This involves the participant completing a pre- and post-survey. The participants will also sit through a monitoring session, where an investigator observes the participant playing one game on a video game system. This study should take no more than twenty minuets of the participant's time.

RISKS

To the best of our knowledge there are no risks associated with this study.

BENEFITS

This study may provide evidence as to whether of or not product placements are a practical source of advertising. This study may also allow scholars to examine product placements in video games while this advertising method is still in its infancy.

CONFIDENTIALITY

All individual information that is collected in this study is strictly confidential. The data will be used to complete the evaluation of brand recall on product placement. The results of the overall information will be included in the report. There will be no individual references to any participant in the study.

CONTACT

If you have questions at any time about the study or the procedures you may contact the researcher, Christopher Cameron, 585-317-3522 or e-mail, offero76@aol.com.

PARTICIPATION

Participation in this study is strictly voluntary. Participants may withdraw from the study at anytime if they so choose. If the participant withdraws their data will be omitted from the study.

CONSENT

I have read and understand the above information. I agree to participate in this study.

Subject's signature _____

Date _____

Parent(s)' Guardian(s)' signature (if under 18)_____

Date _____

Investigator's signature _____

Date _____

Appendix B

Cover Letter to subjects

Communication & Media Technology
College of Liberal Arts
George Eastman Building
18 Lomb Memorial Drive
Rochester, New York 14623-5604
585-475-2649
Fax: 585-475-7732

April 8, 2004

Dear Student and Parent/Guardian:

I am a Communication & Media Technology graduate student at Rochester Institute of Technology currently working on my thesis. The Topic of my research is brand recall of product placements in video games. The project is supervised by David Neumann, Ph.D., a professor in the RIT Communication & Media Technology Program.

Between April, 27 2004 and April 30, 2004 I will be performing a study in the computer lab at McQuaid Jesuit High School. This study will have students play a video game and fill out a survey regarding their recall of brands advertised in the game. Participation in this study is voluntary and information will only be used for the thesis.

Attached is a consent form that describes the study and the survey students will fill out. The total survey time should be no more than twenty five minuets. Students will only be allowed to participate during their flex time, lunch time or study hall, and only students who return their consent forms will be allowed to participate. To participate students must return this form to Scott Simkins or may present it at the day of the study.

If you have any questions regarding this study or the project, please contact me at Offero76@aol.com or David Neumann at Dsngsl@rit.edu. You can also contact the RIT Communication & Media Technology department directly at (585) 475-2649.

Please return the consent form with your approval.
Thank you for assistance.

Sincerely,

Christopher Cameron
RIT Graduate Student
Communication & Media Technology

Appendix C
Advertisers in the game

The following is a comprehensive list of companies that have advertisements in the *FIFA World Cup 2002* game.

Adidas, Coca Cola, Fuji, Gillette, Hyundai, JVC, MasterCard, McDonalds, Xerox, Yahoo, NTT Corp, E.A. Sports, and Ayana.

Advertisements used in Italy vs. Argentina.

Adidas, Fuji, Gillette, Hyundai, MasterCard, and McDonalds.

Advertisements not used in Italy vs. Argentina.

Coca Cola, JVC, Xerox, and Yahoo.

Appendix D
Pre game questionnaire

Following are ten popular brands of commercial products. Think for a moment about each brand and record your general attitude towards each brand. Do not respond with you likelihood of actually purchasing or using the brand's product, rather respond with your general attitude towards the brand.

Game number ____
Player number_____

1. Adidas

Extremely Favorable	Somewhat Favorable	Slightly Favorable	Neutral	Slightly Unfavorable	Somewhat Unfavorable	Extremely Unfavorable

2. Coca- 

Cola

Extremely Favorable	Somewhat Favorable	Slightly Favorable	Neutral	Slightly Unfavorable	Somewhat Unfavorable	Extremely Unfavorable

3. Fuji

Extremely Favorable	Somewhat Favorable	Slightly Favorable	Neutral	Slightly Unfavorable	Somewhat Unfavorable	Extremely Unfavorable

4. Gillette

Extremely Favorable	Somewhat Favorable	Slightly Favorable	Neutral	Slightly Unfavorable	Somewhat Unfavorable	Extremely Unfavorable

5. Hyundai

Extremely Favorable	Somewhat Favorable	Slightly Favorable	Neutral	Slightly Unfavorable	Somewhat Unfavorable	Extremely Unfavorable

6. JVC

Extremely Favorable | Somewhat Favorable | Slightly Favorable | Neutral | Slightly Unfavorable | Somewhat Unfavorable | Extremely Unfavorable

7. MasterCard

Extremely Favorable | Somewhat Favorable | Slightly Favorable | Neutral | Slightly Unfavorable | Somewhat Unfavorable | Extremely Unfavorable

8. McDonalds

Extremely Favorable | Somewhat Favorable | Slightly Favorable | Neutral | Slightly Unfavorable | Somewhat Unfavorable | Extremely Unfavorable

9. Xerox

Extremely Favorable | Somewhat Favorable | Slightly Favorable | Neutral | Slightly Unfavorable | Somewhat Unfavorable | Extremely Unfavorable

10. Yahoo!

Extremely Favorable | Somewhat Favorable | Slightly Favorable | Neutral | Slightly Unfavorable | Somewhat Unfavorable | Extremely Unfavorable

Tracking Sheet

Game Number ____
Player Number ____

Billboard

Adidas

Coca Cola

Fuji

Gillette

Hyundai

JVC

MasterCard

McDonalds

Xerox

Yahoo

Appendix E
Post Game Questionnaire

Game Number_____
Player Number _____

What is your current rating of the following advertisers?

1. Adidas

Extremely Favorable	Somewhat Favorable	Slightly Favorable	Neutral	Slightly Unfavorable	Somewhat Unfavorable	Extremely Unfavorable

2. Coca- 

Cola

Extremely Favorable	Somewhat Favorable	Slightly Favorable	Neutral	Slightly Unfavorable	Somewhat Unfavorable	Extremely Unfavorable

3. Fuji

Extremely Favorable	Somewhat Favorable	Slightly Favorable	Neutral	Slightly Unfavorable	Somewhat Unfavorable	Extremely Unfavorable

4. Gillette

Extremely Favorable	Somewhat Favorable	Slightly Favorable	Neutral	Slightly Unfavorable	Somewhat Unfavorable	Extremely Unfavorable

5. Hyundai

Extremely Favorable	Somewhat Favorable	Slightly Favorable	Neutral	Slightly Unfavorable	Somewhat Unfavorable	Extremely Unfavorable

6. JVC

Extremely Favorable | Somewhat Favorable | Slightly Favorable | Neutral | Slightly Unfavorable | Somewhat Unfavorable | Extremely Unfavorable

7. MasterCard

Extremely Favorable | Somewhat Favorable | Slightly Favorable | Neutral | Slightly Unfavorable | Somewhat Unfavorable | Extremely Unfavorable

8. McDonalds

Extremely Favorable | Somewhat Favorable | Slightly Favorable | Neutral | Slightly Unfavorable | Somewhat Unfavorable | Extremely Unfavorable

9. Xerox

Extremely Favorable | Somewhat Favorable | Slightly Favorable | Neutral | Slightly Unfavorable | Somewhat Unfavorable | Extremely Unfavorable

10. Yahoo!

Extremely Favorable | Somewhat Favorable | Slightly Favorable | Neutral | Slightly Unfavorable | Somewhat Unfavorable | Extremely Unfavorable

What is your age?_____

What is your gender? Male Female

How many hours do you spend playing video games in a week?_____

How many times do you recall seeing each of these brands?

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

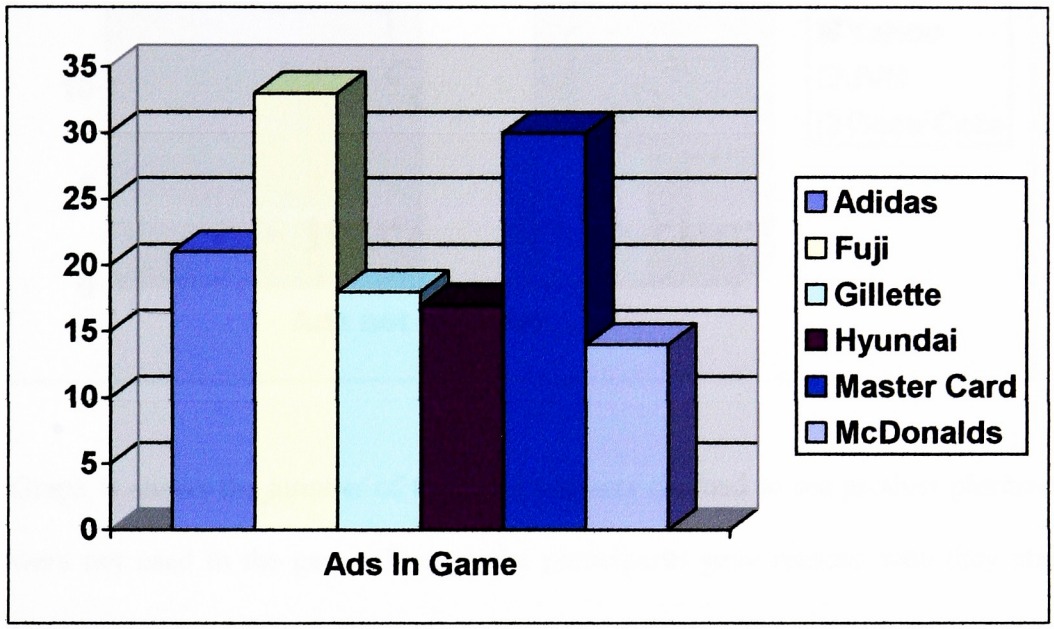
9. _____

10. _____

Appendix F
Graphs

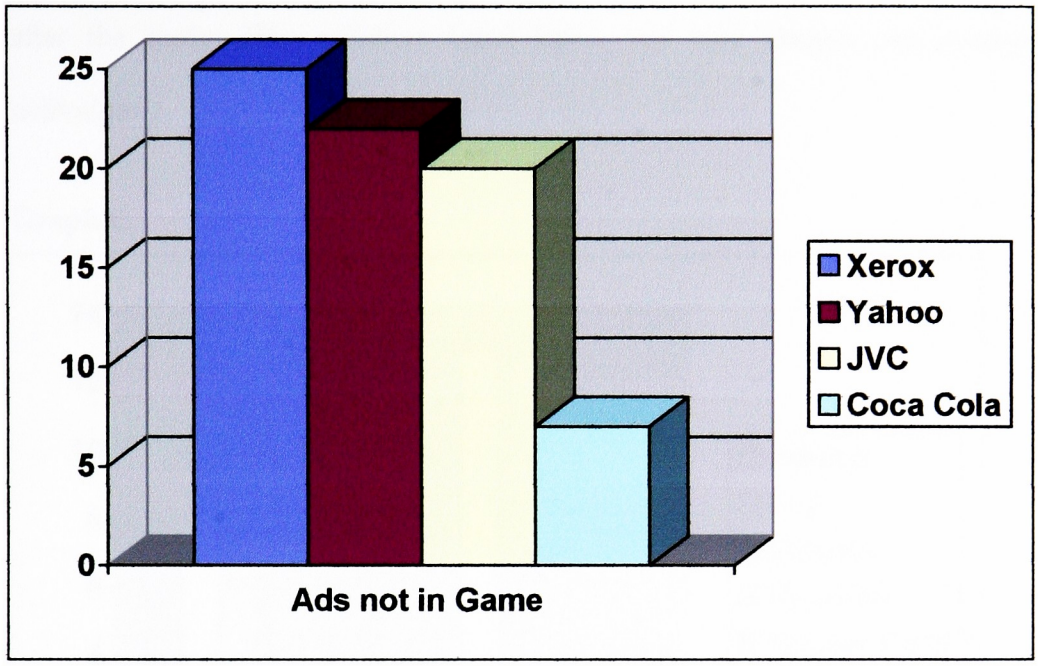
The graphs below chart the total number of times that all forty participants reported seeing the product placements in the game.

Graph A



Graph A shows the total amount of times that all forty participants reported seeing an advertisement in a game. These advertisements were actually in the game and were the focal point of the study. Due to the low number of times participants reported seeing the product placements in the games, the responses were tallied together. This gave the overall picture of what the participants saw during the study. Though participants did report seeing the product placements, no participant reported seeing any of the product placements more than eight times in one game.

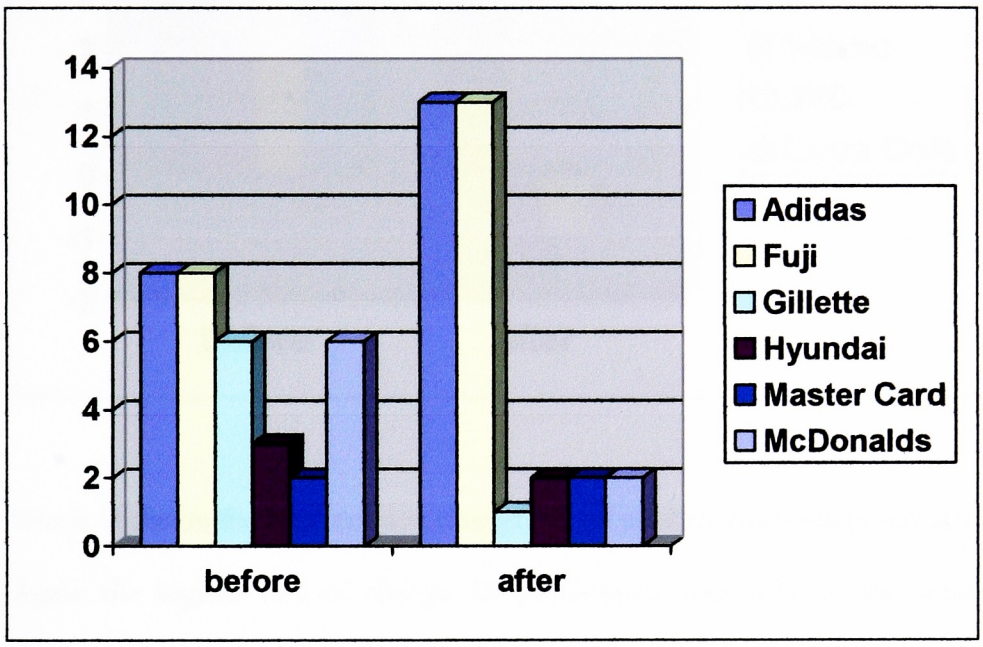
Graph B



Graph B shows the number of times participants claimed to see product placements that were not used in the game. Though the participants gave reasons why they claimed to have seen some of these product placements rather than the real advertisers, the number of times that the participants recalled seeing these product placements was comparable to the advertisers that were in the game.

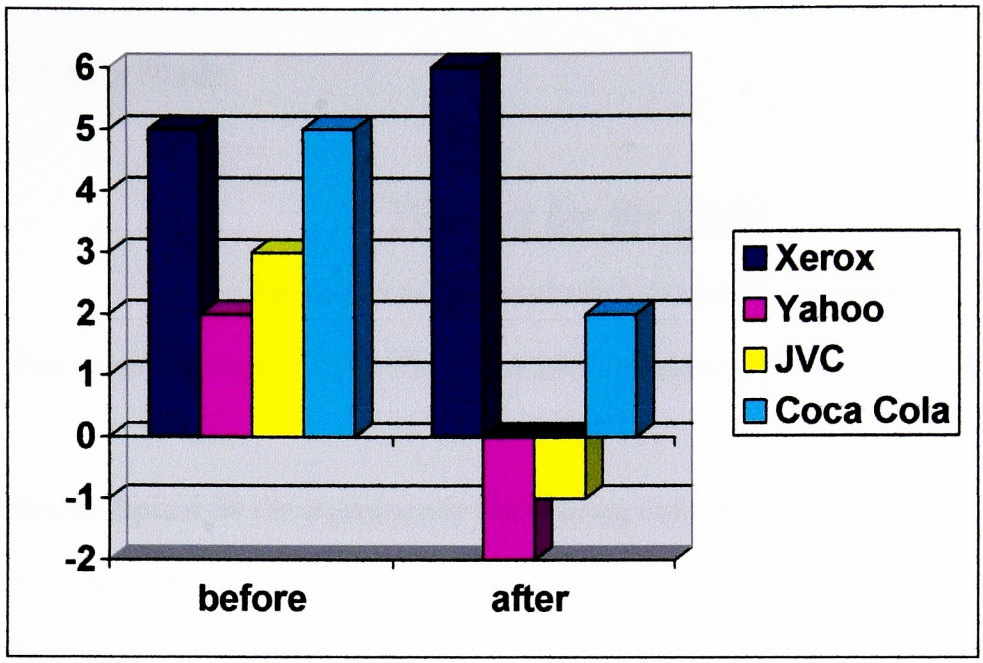
The graphs below chart the overall attitudes towards brands by all participants before and after the study. (The numbers listed below are total change, not average or per-individual.)

Graph C



Graph C shows the total change in attitude after game play for all participants. To arrive at this information numbers were applied to the opinion scale that was give in the pre and post survey. (3=Extremely Favorable, 2=Somewhat Favorable, 1=Slightly Favorable, 0=Neutral, -1=Slightly Unfavorable, -2=Somewhat Unfavorable, -3=Extremely Unfavorable). The difference in opinion was added up for all individuals. Drastic differences of +/- 5 or 6 on the scale were excluded. The average change in opinion, if any, was up or down one point on the scale. The total change for all forty participants game play is listed above. The highest amount of opinion change was +4 for Adidas and Fuji, and –4 for McDonalds. A 10% change in attitude for participants.

Graph D



Graph D shows the total opinion change for all product placements not used in the game. Again the highest rate of change for participants was 10% on the scale. The rate of change in opinions for advertisers not in the game was similar to advertisers that were in the game. A conclusion may be drawn that product placements in video games may have had no real effect on participants, at least after playing one game. Given that their opinion change rate was similar for products advertised in the game.

Appendix G

Cost for Study

The cost for the study

The cost to perform the study is broken down below.

One purchased copy of *FIFA World Cup 2002*, the game that was used for the study. $15

Snacks &pizza for the church group that is being studied..... $27

Price for copies.....$10

Estimated total $52

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