

Product Placement in Videogames:  
Does In-game Violence Really Have an Effect on Product Evaluations?

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## Abstract

### Product Placement in Videogames:

#### Does In-game Violence Really Have an Effect on Product Evaluations?

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In this study, we look at one of the most common components of videogames (aggression brought upon by violent stimulus) and how that affects the impression of an advertised brand (brand placement within the game) and the gamer's responses to a related brand failure scenario. In this study, findings suggest that there are clear differences in the interpretation of the stimuli with regards to film and videogames.

The subjects watched a video of a modified version of the PC game "Half-life 2" where they were exposed to different brand cues throughout the gameplay experience and were tested in several ways. In a laboratory experiment the degree of violence (high vs. low) and the attribution of brand failure (internal vs. external) were manipulated. The dependent variable was various reactions to the observed scenario.

Results indicated that higher levels of violence led to lower levels of brand recall while it was not affected by the respondent's enjoyment of the stimuli nor their attitude towards the brand. There was also evidence that female subjects had an easier time remembering the brands than male subjects did. It was found that there were 2 2-way interactions effect between violence level, brand failure attribution and gender with respect to anger; female subjects scored higher than male subjects in anger and desire for revenge across all manipulation combinations. Not only that but male and female subjects differed in terms of their level of anger relative to the source of service failure attribution (women had a stronger negative reaction to internal attribution). Although some explanations involving possible biological and behavioural gender differences can be suggested for the observed differences further studies are needed to pin down the reasons for the differences.

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## Introduction

With the advent of the internet and new forms of media, traditional cable providers are facing their lowest subscription base in decades (Leichtman Research Group, 2014). Coinciding with this is the ever-increasing amount of subscribers for much less expensive online streaming services. Netflix as well as services such as YouTube, Crackle and Crave have seen sharp increases in subscriptions, vividly contrasting the floundering cable companies (Richter, 2015). But what happens to advertising revenues when people start watching television shows that do not contain commercials? As consumers engage more in videogames, choosing a more interactive option? How will marketers get their message across at that point?

Videogames are quickly becoming an integral part of the way people pass their time. According to recent statistics, fifty eight percent of Americans play video games, sixty two percent of which are adults with an average age of 30 years old (Galarneau, 2014). This relatively young group of gaming enthusiasts represents a very large potential audience for marketers. Beyond the traditional means of gaming (home entertainment console, arcade or personal computer), portable gaming has seen a resurgence with the introduction and ubiquity of the smart phone. No longer do you need to purchase a stand-alone gaming device (such as the Gameboy, Gamegear etc.) in order to play on the go; smartphones have the potential for immersive and addictive gaming experiences like never before.

Thirty six percent of Americans report regularly playing games on their smartphones (Galarneau, 2014) making up a completely new market that was virtually nonexistent a few years ago. Since many mobile games are free to download, they depend on the revenue gained from advertisements that are integrated into the games themselves in the form of banner ads or product placements. These games need to be enjoyable and captivating adequately of conveying the advertising message in order to realize the financial returns to their full potential. It is important to walk the fine line between the two, making a game entertaining while properly transmitting the advertising message. Video games are increasingly becoming an integral element in today's society and popular culture.

In recent years, the amount of money spent on alternative media advertising (which includes product placements in videogames) has increased almost four times faster than for traditional

media, signalling that marketers are looking to exploit a new medium of advertising that has yet to become as saturated as traditional ones. In 2010, advertising expenditures for product placement in videogames was estimated at 733 million dollars (Gerdes, 2006) in an industry that saw sales of 10.5 billion dollars (Entertainment Software Rating Board, 2015). The majority of these advertisements were aimed at adult males who are traditionally the heaviest users of video games (Walsh et. Al. 2006).

This begs the question, beyond the simple ignoring of advertising cues in videogames, do game developers run the risk of players having a significantly negative reaction to the brand being placed in a video game? If so, under what circumstances is this likely to happen and why? This possible negative outcome can have important implications to advertisers as well as the game publishers themselves. Losing money on an advertising investment is an issue in itself but if that investment subsequently backfires and creates negative publicity or impressions of the brand being advertised, the consequences can be much graver. If a brand placement can result in a net loss in attitude towards the brand, then advertisers will have to think twice about where and how they invest in videogames.

Considering that brand placement is becoming an increasingly common form of advertising, it is important to look at its effects on mediums other than print, television and movies. Through this research, we will be gaining insight into the benefits and possible drawbacks of advertising through videogames. Although it can be considered similar to that of television, experimentation through electronic media and specifically interactive videogames has its unique characteristics that students and marketers would benefit from being exposed to and understanding. There are inherent complications that are not present in other mediums.

As it stands, there is limited research done with regards to the effects and possible drawbacks to advertising in videogames in general. There are still many questions that need to be answered and this is a step towards that. More than just looking at the effects of aggression in videogames and their link with the repercussions of brand failure, this study will set the stage for several different variant studies that can help shed even more light on this currently understudied topic.

Pertinent variables that will be looked at will be the presence and level of violence in the videogame itself (low and high) and the source of brand failure in the brand failure scenario (internal and external). The dependent variable will be the subjects' response to the presented

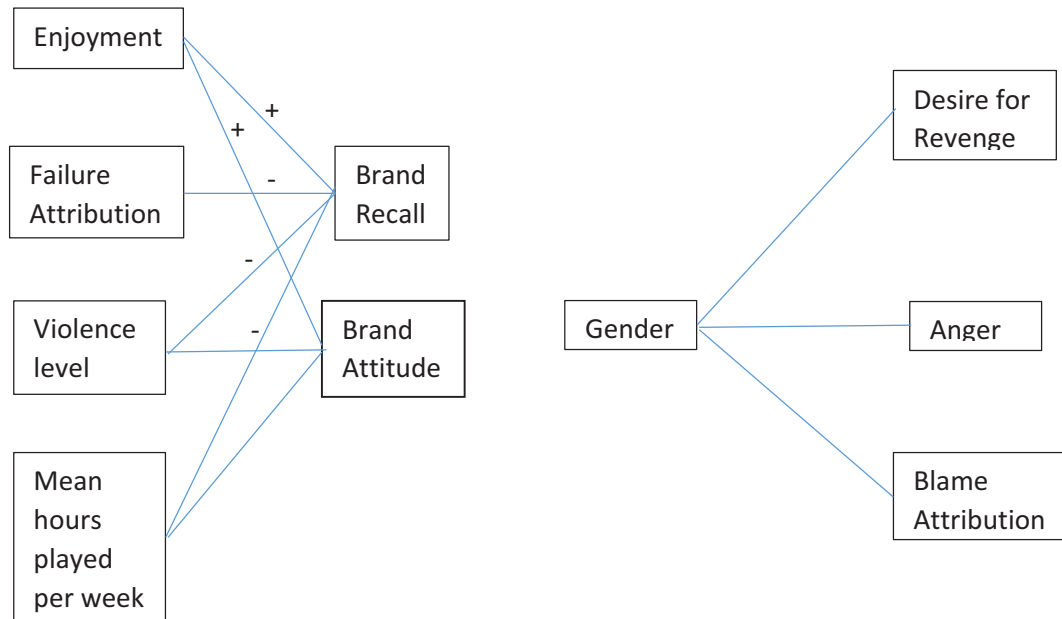
scenarios following the game experience with regards to their sentiment towards the brand being placed in the game. There will also be a control case where the subjects will not be exposed to the videogame experience itself. Moderators that could affect the relationship between the variables include but are not limited to: individual personality differences and preferences of respondents towards the type of brand and videogames, individual predispositions to aggression, previous exposure to the brand in question and demographic differences (age, gender, etc.). These will be looked at within the context of the experiment.

Just like with all forms of marketing investments, marketers are looking to maximize the return on their marketing expenditures in video games. It is in the best interest of companies to understand how effective their brand placements will be. With this in mind, it is important to look at several variables that are in play and to be able to properly draw conclusions as to what works best and under which circumstances.

This research will look at categorizing the possible negative repercussions (low brand attitude for example) of brand failure and how much of an effect this has on the positioning of the brand. The practical implications for marketers will be an insight on how to understand and properly gauge the severity of their brand failure when advertising in videogames. This will provide insight into whether or not including their brand as a placement in a videogame that elicits aggression is a good idea. If the findings suggest that the aggressive videogames have a negative effect on the brand attitude and the perception of the brand, it will then imply an adverse effect on the brand being placed. This will give further insight into the possible negative repercussions of exposing your brand in a (most commonly) violent video game.

## Literature Review

### Flowchart of Hypotheses and Propositions



### Brand Failure and Service Recovery Literature

One of the main facets of this study involves brand failure. This study focuses specifically on service failure where the company fails to provide the purchaser with the promised service and the recovery is handled in two different ways for two different reasons. In order to distinguish whether or not it was the company that caused the effects or the brand placement we are using service failure as one of the manipulations in this study; in one case it is clearly the fault of the company itself and their inability to follow through with their promises (internal attribution) along with a mishandling of the post-failure situation (according to research elaborated upon in the following paragraphs). The second case is outside the control of the service provider which is not necessarily their fault but rather something that they were not able to anticipate (external attribution) and the post-failure situation is handled more appropriately. These two scenarios have their own implications on the perception of the company by the respondent who is playing the role of the purchaser facing the service failure.

Previous research has looked at the effect of the acceptance of the blame by the company and concluded that it is an important aspect of service recovery (Boshoff & Leong, 1998). Another

aspect that was found to be quite important was the subsequent apology and empowerment of the employee delivering the news. According to the research, the best method to deal with a service failure is to have an employee with a relatively high level of empowerment accept the responsibility and apologize either in person or by phone (Boshoff & Leong, 1998). Since there are no notable effects caused by perceptions established before the service, it is important to react accordingly when facing unsatisfied customers due to service failure and not rely on positive brand image that has been established previous to the circumstance.

Another aspect of service recovery that has been looked at is the concept of compensation for the failure itself. It has been found that it is best to match the aspect of the service that was lacking or had failed (Smith, 1999) with regards to compensation. This has a bearing on service recovery, indicating that it's not necessarily the amount of resources that are important in the recovery but rather the appropriateness of the resources themselves that has a large effect on the outcome. Along with the appropriateness of the recovery, it is important to administer it in a timely fashion (Hart et. Al, 1989). This is important since they will initially be quite upset and an upset customer is much more likely to spread this discontent than a happy customer praising the company to others (Berenbaum, n.d.). This information will be relevant with regards to the service recovery scenario that the respondents will be faced with.

### **Previous Research Regarding Brand Placement**

Brand placement as a form of marketing has been happening for over a century. One of the earliest documented cases was found in the German newspaper "Die Woche" which had a picture of a woman holding the titular paper (Anonymous, 1902) as a means of promoting it (appendix A). As redundant as that may have been, it was one of the first cases of a very common marketing practice today. This form of advertising is very popular today due to the shift in media viewership caused by new technology (and the ability to phase out traditional commercials and advertisements).

Brand placement in videogames has been around since as early as the mid-eighties when companies like Chef Boyardee, Coca-Cola and Samsung distributed the very first floppy disk advergimes for computer (Davis, 2006). The advergime is possibly the most direct form of product placement in games today and is broadly defined as "a video game which in some way contains an advertisement for a product, service, or company. Some advergimes are created by a

company with the sole purpose of promoting the company itself or one of its products, and the game may be distributed freely as a marketing tool. Other times, an advergame can be a regular popular video game, which may be sponsored by a company, and include advertisements within the game for the sponsoring company” (anonymous, 2014). In pure advergames, the game itself revolves directly around the products or mascots and the brand image is focal as opposed to peripheral. Essentially, an advergame is a game that contains a brand promotion in some form or the other as a part of the game itself.

There have been many cases of brand placement in videogames ranging from fairly subtle to far more overt. During his run for presidency in 2008, Barack Obama used brand placement in the game “Burnout Paradise” to raise awareness about his campaign (Freeman, 2014). This is an example of a more subtle and “tasteful” approach to brand placement (Appendix B) while others are far from subtle and much more evident. One of the more memorable instances is the inclusion of the “Burger King” in the game Fight Night: Round 3 (Appendix C). The fast food chain’s mascot serves as your trainer and even follows you into the ring to pump up the crowd before you take on your opponent (Johnson, 2010). It is indeed as ridiculous a scene as it sounds; the irony of a fast-food chain mascot posing as a boxing trainer is quite blatant, leading to possible conflicts of opinions with regards to its appropriateness for this type of game. Other examples of counterintuitive sponsorship include Coca Cola and McDonalds being sponsors of the Olympic Games and beer companies sponsoring alcohol recovery programs. These previous two cases represent the scope of the two extremes in gaming; most cases generally fall somewhere in between the two.

In the article “From Apathy to Ambivalence,” Lorenzon and Russell (2012) explain how gamers tend to be more accepting towards brand placement in videogames when there is a lack of overtly persuasive cues and the general congruency between the brand being placed and the game itself (Lorenzon & Russell, 2012). This ambivalence is found to be “more common than univalent or apathetic views” (Lorenzon & Russell, 2012) and indicates that the level of involvement and acceptance are higher than some other forms of advertisement that attempt to trigger explicit memory.

On the topic of explicit memory, Yang et al. (2006) looked at video game playing across different college students and how they reacted to different forms of advertising with regards to

implicit and explicit memory. The students played two sports computer games and were then tested with a word-association task. The results indicated that “college students had low levels of explicit memory (recognition test) for the brands, but they showed stronger implicit memory (word-fragment test) for the brand names placed in the video games” (Yang et al., 2006). Due to this, it is possible to infer that games with a high focus on brands (such as those in pure advergames) will score higher on explicit memory as opposed to games that have more moderate brand repetition (sports games with brands in the background for example).

Several other researchers have looked at the effects of product placement on audiences and have shown that this is an effective technique for brand recall. Jean-Marc Lehu and Etienne Bressoud (2007) looked at the effect of viewing a DVD that incorporated brand placement and its effect on brand recall. What they found was that through a home viewing of a movie, brand recall was improved. They also found that this recall is improved when a movie is chosen due to a preferred director or when the viewer enjoyed the movie itself. This is congruent with studies that indicate a positive relationship between mood and brand recall. When a respondent is in a positive mood they are more likely to learn brand names than when they are in a bad mood (Lee & Sternthal, 1999). If someone is watching a movie/TV show (or possibly playing a game) that they enjoy then their positive mood will be more conducive to them remembering the brands that are presented in the movie or television show.

Based on this research, it is possible that the enjoyment of a DVD movie and its effect on the viewer are similar to that of a gamer and a preferred game. With that in mind we propose that brand recall and attitude towards the brand will be positively correlated with the level of enjoyment of the gaming experience.

### **A Profile of Gamers**

Just like with many hobbies and pastimes, there are often commonalities in terms of character traits that lead people to have a propensity for a particular interest. With an understanding of the personality traits that converge with regards to gaming, it is possible to profile the type of person that would be interested in gaming and learn about their motivations.

### **Gender Differences**

Before delving into the distinctive characteristics of gamers with regards to character and personality traits; it may be interesting to look at gender differences between men and women



and how they may play a role in gaming motivations and enjoyment. Studies have suggested that there are in fact distinct differences between the way that men and women game and the ways in which they derive enjoyment from the games. These differences can often contribute to the types of games (genres, accessibility, audience etc.) that they choose. Men are more likely to choose games that contain a violent component while women are more interested in the social aspect of gaming (Phan, Jardina and Hoyle, 2012). Women focused more on “Social, Puzzle/Card, Music/Dance, Educational/Edutainment, and Simulation genres” while men were more interested in “Strategy, Role Playing, Action, and Fighting” games. Men were also more likely to treat videogames as a “primary hobby” (Phan, Jardina and Hoyle, 2012) as opposed to women who found it to be less important than others (such as television for example).

Popcap Games is an affiliate of Electronic Arts which is the fifth largest videogame developer and publisher (Wilson, 2013) with gross revenues of 3.797 billion dollars (EA, 2014). They are well known for many mobile and social games such as “Plants vs. Zombies” and “Farmville” and published a report in 2010 detailing the play statistics of its gamers showing that the majority of users were women (55%) having an average age of 43 years old (Info Solutions Group, 2010).

The gender differences referred to previously with regards to preferences of games have strong marketing implications since the types of products that are most appropriate will differ based on the gender of the gamer who is most likely to play. Considering that the majority of games that have a social aspect are either on mobile devices (clash of clans for example) or are a part of social media networks (Farmville, Baker’s Story etc.) there are specific marketing implications for this; mainly that the types of products would be more gender specific for women. On the other hand, violent, strategy-driven and roleplaying games are more likely to be console games and male-oriented advertisements would be more suitable.

This particular distinction is relevant to what was mentioned before with regards to mood and brand recall. Brand recall is most effective when in a positive mood (Lee & Sternthal 1999); if the gamer is playing the type of game that they enjoy, then they will likely be in a better mood. Based on this information it is possible to conclude that women will likely be less receptive to the violent stimulus than men will be. Due to these theoretical implications, we can propose that men’s responses to the violent treatment with regards to brand recall and attitude towards the



brand will be more positive than that of women. This will hold true with regards to both the internal attribution brand failure scenario as well as the external brand attribution.

### **Excessive Gaming**

One of the most commonly publicized and ever-growing concerns within the gaming community is the prevalence and increase of excessive gaming. In trying to understand why this addiction occurs, researchers have been attempting to develop an understanding of what the underlying character traits may be for those who suffer from these afflictions. It has been found that narcissistic personality traits have been positively correlated with the inclination to play games. This can contribute to game addiction while self-control has been negatively correlated (Kim, Eun Joo, et al., 2008). Many people choose videogames as an escape from reality and have difficulty detaching themselves from their game world. The results are fairly intuitive since videogames are often used as a sense of escape for the player and creating an avatar in their likeness (or their ideal self-image) can be seen as a form of narcissism. A lack of self-control will result in the excessive playtimes and subsequent social implications.

Due to the increased prevalence of brand placement in popular media (videogames included), heavy gamers are more likely to be exposed to said brand placements than casual gamers or those that game rarely. With this in mind, people with an addiction to gaming are those that generally spend the most amount of time playing games and are in turn often exposed to these brand placements. Research has shown that as the amount of brand placement repetition increases, the amount of recall does as well but does not influence brand attitude (Cauberghe & De Pelsmacker, 2010). However, further repetition indicated that brand recall did not increase past a certain point but rather brand attitude decreased over time after initially being positive (Cauberghe & De Pelsmacker, 2010). This indicates that the brand recall will decrease over time for gamers; the effect is significant to a certain point but afterwards the gamer likely begins to no longer pay attention to the placements.

Since gamers who spend a large portion of their time playing videogames are more likely to be exposed to greater levels of brand placement than those who are not habitual gamers, they are more likely to exhibit either indifference or negative feelings towards the brand being presented. They have grown conditioned to ignore advertisements and brand placements and are no longer as easily distracted as those who play less often. On the other hand, gamers who are less familiar

with brand placement in videogames are more likely to be affected by the brand placement itself. It is safe to assume that brand recall will be negatively correlated with the frequency of play time of the subject. Conversely, it is assumed that attitude towards the brand will exhibit an inverted U-shape when compared to the frequency of play time; highest in the middle and lowest on the lower and higher ends of frequency.

### **Gamers and the Big Five Personality Traits**

As mentioned, there are often common characteristics with respect to gamers and their motivations as well as propensity to enjoy videogames. There have been many studies that have looked at classifying these different personality traits and many different scales have been developed. For this study, we will be using the commonly used “Big Five Personality Traits” scale (Goldberg & Lewis, 1993). These personality traits are some of the most widely accepted in research and will work well for our purposes.

A study done by deGraft-Johnson, Wang, Sutherland and Norman (2013) looked at these traits and correlations between videogame genre preferences (fighting, racing, dancing and first-person shooters). They found that “conscientiousness was negatively correlated with perceived ease of first-person shooter games” (deGraft-Johnson, Wang, Sutherland & Norman, 2013). This would indicate that less conscientious people are more likely to perform better at first person shooter games (such as the one in our experiment). This can be related to the positive affect that the gamer will likely experience since they will be more successful at the game itself and will in turn be more likely to feel positively towards the brand and remember it in a positive light.

Another study looked at the big five traits and correlated them with one’s capacity to forgive. Hafnidar (2013) looked at the traits of different subjects and found that agreeableness, extraversion and conscientiousness were significantly positively correlated to forgiveness (of self and others). This indicates that there are certain character traits that would lead people to be more likely to forgive the business following a service failure. One interesting conclusion is that people who play FPS games like the one in our experiment are likely not to be conscientious and therefore inherently less likely to be forgiving according to the aforementioned study.

We will be administering the big five personality traits questionnaire as part of the experiment and will then look at correlations and connections between individual character trait differences

as well as the reaction of the gamers with respect to the game itself and their interpretation of the service failure scenario.

### **Violence in Videogames**

There has been a considerable amount of research that has looked at exposure to violence and its effect on brand memory with regards to affect and arousal. A recent study done by Jeong, Lee and Woo (2015) found that “violence cues affect both arousal and negative affect, and in turn the negative affect changes attitude toward brands negatively and increases the degree of state aggression. Trait aggression enhances presence, and the spatial presence strongly affects brand memory” (Jeung, Lee and Woo, 2015). Since the attitude towards the brand will be negatively impacted by the aggression that the game causes, dealing with actual brand failure will likely be exasperated by the already negative affect inherent in the respondent. Due to this, we propose investigating how the presence of aggression will impact a brand failure and whether or not internal/external attribution has an effect.

There is still considerable debate as to whether or not violent videogames actually cause aggressive behaviour within the individual playing them. Based on a meta-analytic review performed by Anderson and Bushman (2001), there are aggressive behaviours that result from the playing of violent video games. They go on to explain that violent videogames increase physiological arousal and “aggression-related thoughts and feelings” and also “decrease[s] prosocial behaviour.” In a similar study that looked at both sides of the effects of violent video games on participants, Bartlett, Anderson and Swing (2008) look at both the positive and negative effects of violence in videogames and yet again confirm aggressive feelings, thoughts and behaviour as well as “physiological arousal, and desensitization, whereas positive outcomes include various types of learning.” This study established a causal relationship between violent video game exposure and several negative outcomes as well as a few positive ones. Due to many conflicting ideologies, viewpoints and studies, we would like to express that we are not associating “aggressive” videogames with aggressive behaviour (towards the brand or otherwise) per se. These are two very different things and should not be confused. Rather, we are looking at whether or not those aggressive videogames result in increased negativity towards the brand failure.

Meryl Paula Gardner has created a framework that looks at the role of mood as a moderator in her article “Mood states and Consumer Behaviour: A Critical Review” (Gardner, 1985). In her study, she looked at several different established studies and examined the effects of mood; first, broadly with regards to negative and positive valence and then more specifically in terms of emotions and dispositions (sad, elated, neutral, angry etc.). What she found was that subjects in “induced positive/negative mood conditions rated [stimuli] more/less favourably than those in a control mood condition” and that “mood conditions appeared to influence evaluations of neutral [stimuli] more than assessments of pleasant or unpleasant slides” (Gardner, 1985). This finding provides evidence that the aggressive tendencies elicited by violent videogames will affect the attitude towards the brand being featured in the game. Due to the brand actually failing in the subsequent brand failure scenario, the effect is expected to be amplified since there will be more of a natural tendency for negative feelings towards the brand based on the experience described in the scenario.

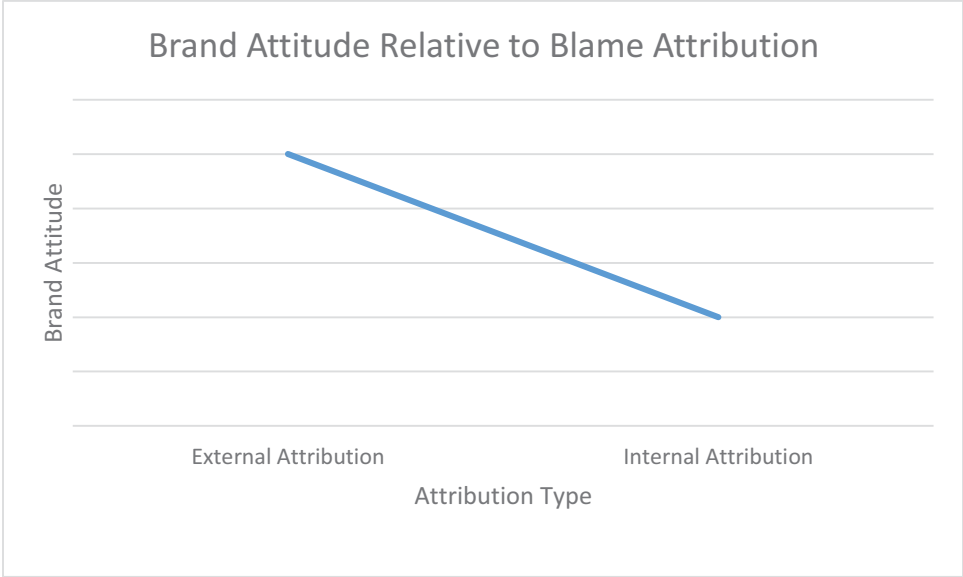
Another important element is the concept of attribution of blame (internal vs. external). Studies have shown that attribution of blame is related to aggression and frustration, especially when the justification is illegitimate (Kulik and Brown, 1978). In their study, they found that “aggression increased in accord with attributions of blame, and that more blame was attributed to another in response to inadequately justified thwartings than to adequately justified thwartings” (Kulik and Brown, 1978). This will be an integral part of our experiment and will be examined in order to link the predisposition of the gamer towards the brand failure based on aggressive gameplay. Based on this information, it can be deduced that attitude towards the brand will be lower when the respondent is exposed to the internal attribution brand failure scenario. On the other hand, attitude towards the brand will be higher when the respondent is exposed to the external attribution brand failure scenario.

Finally, looking at this experiment as a whole, one overarching question that can be asked is whether or not it is possible for a brand placement to have an overall negative effect on the gamer’s impression of the brand itself rather than a positive one. This is very important to marketers since it shows that the risks associated with product placement can be greater than just the loss of money for the placement itself. If gamers feel more negatively towards the brand than

if it were never advertised in the first place then it shows that product placement done badly can be detrimental to the company itself.

According to previously mentioned research, the most unfavourable evaluations of the brand will occur when a respondent is exposed to the violent videogame experience coupled with the brand failure scenario associated with internal attribution and service recovery failure (HVHF). Brand attitude and recall should be highest during the low violence treatment of the videogame and the positive service recovery (LVLV). Due to a dearth of research, it is impossible to hypothesise exactly which between the high-violence/strong service recovery and low-violence/weak service recovery will result in the higher brand impression. This leads us to our comprehensive set of hypotheses:

***H1: Respondents who are exposed to the high-violence videogame experience will have a more negative level of brand attitude than those exposed to the low-violence videogame experience.***



***H2: Respondents who are exposed to the high-violence videogame experience will score lower on brand recall than those exposed to the low-violence videogame experience.***



***H3: Female respondents' reactions for desire for revenge, anger and blame attribution will be more negative than male respondents' with respect to blame attribution and violence level***

## Methodology

### Procedure

This was a two by two experiment with two control conditions representing a control for having played the game or not. We decided to have a control group in order to see the effects of the videogame brand placement as opposed to simply the brand failure scenario. Candidates received a consent form and were asked to read it and fill it out. The consent form is a modified version of the one available on the Concordia University website (Ethics Procedures, n.d.) and is tailored to this specific experiment. After they completed and signed the form, they began the first part of the experiment. Participants were asked several prescreening questions pertaining to their familiarity with the game itself and their general abilities with regards to videogames. The questions regarded hours played per week, videogame preferences and their familiarity with the game.

### Part 1

There were four parts to the experiment. The first part began with the subject watching a gameplay video of our modified version of the game "Half-life 2." Before the videogame is actually played, the respondent was informed that we were looking for interpretations of and opinions on the gameplay and the design. The game featured several modifications in the form of brand logos being placed throughout the levels being viewed. This game was chosen since its engine is (relatively) easily modified in order to achieve our desired end product with respect to the level design and degree of brand exposure. This game is also played from a first person perspective which will help immerse the gamer in the experience more so than most other types of games.

The respondents were exposed to one of two scenarios: an "aggressive" or a "non-aggressive" one. They were in the form of a shootout battle with several enemies for the high violence treatment while the low violence one was a more story-based section of the game where you do not even have a weapon. Both scenarios feature the same brand being exposed (Wolf Pizza, a fictitious brand that is not possibly familiar to the subject) throughout the scenario. The brand was placed in areas where it is absolutely certain that the gamer will see them and the video will ensure that.

After having watched the gameplay video, the participants received the first part of the questionnaire that included the questions regarding the subject's evaluation of the game and their state of mind while watching the video. There was also a control situation where the respondents were not exposed to the video game scenario and began directly with the brand failure scenario. This condition was especially important for identifying whether or not the videogame scenario even had an effect on the participants and their interpretations. If there was no significant discrepancy between the control group and the other conditions then it would be safe to assume that the brand placement had no effect.

### **Part 2**

After having completed their run-through of the game, the subjects were given a shopping scenario that they had to read based around the brand that was presented in the game itself. The shopping scenario involved ordering food from a local restaurant (the same that was placed in the game footage) and the restaurant failing to come through on their promise. There were two versions of this scenario; failure was attributed to the company itself (internal attribution) while the other was attributed to an external factor (external attribution). In the internal failure attribution the restaurant had lost their order and provided no explanation other than their own incompetence. For the external attribution scenario the driver was caught in a snow storm and a resultant traffic jam where he could not have been on time due to reasons that were clearly outside of his control.

### **Part 3**

In the third part of the experiment, subjects were asked questions about their impression of the brand. The first set of questions answered was regarding the level of aggression that the respondent had towards the restaurant that had failed them. The questionnaire measures three underlying elements in particular: blame attribution, the level of anger of the subject and their desire for revenge. All of these elements will create a complete picture for the level of aggression felt by the respondent.

The second variable that was measured was brand recall. It was done by asking several qualitative questions with regards to the subject's ability to remember and identify Wolf Pizza.



Considering that this is a logo that does not actually exist, the only way they would be able to remember it is through the experiment itself. The third questionnaire that the respondent had needed to fill in was to measure attitude towards the brand. The scale involves six questions and is based on the works of Spears and Singh (2004).

#### **Part 4**

The final stage of the experiment was in the form of a questionnaire that asks about individual personality differences among respondents. These questions are demographic and help gain a more complete understanding of the respondents. After responding to the demographic questions, the respondents were thanked for their participation and the experiment was completed.

## **Measurement**

### **Independent Variables**

#### **Level of Aggression in the Gaming Experience**

The independent variable that was manipulated in the first part of the experiment was the degree of violence in the gaming experience. The level of violence was regulated by exposing the respondent to one of two videogame experiences. Throughout the game, participants were exposed to the same (fictitious) brand throughout the footage. The brand is integrated directly into the game in order for the product placement to be as organic as possible. They were also always placed in sections where it was impossible for the gamer not to see them.

The first scenario is a non-violent section where the subject watches gameplay of a particular part of the game where the protagonist interacts with different characters and does not actually engage in anything of a violent nature. The aggressive manipulation involves a part of the game where the character needs to fight different enemies and has to kill them in order to progress throughout the footage. The difference between the two treatments is quite obvious, considering the large difference in the amount of onscreen violence throughout the gaming experience. This is all done while keeping the core mechanics and style the same. Despite the noticeable difference in the gameplay itself, the duration of the level is the same and they receive the same amount and type of information beforehand.

#### **Brand Failure Scenario – Blame Attribution**

In the second section, the manipulation in question is the form of blame attribution (external or internal). In one of the manipulations, the fault for the failure is attributed to the company's incompetence. In order to properly associate blame, the company makes this abundantly clear and offer limited post-failure excuses, apologies and solutions. On the other hand, the second part is externally attributed and will be clear that the company could not help but fail which is clear to the client who had suffered through the failure. In the control scenario, the respondent never actually sees the game footage but rather only responds to the failure scenario. The scenarios are included in appendix D as well as a copy of the logo used in the footage (appendix E).

## **Individual Traits**

We are using the big five character traits scale (Goldberg & Lewis, 1993) in order to establish different personality types amongst the different participants. There are several variations available but we used an adapted version of the survey in order to have a clearer and more easily understood questionnaire (Big Five Personality Test, 2015). We also included demographic questions regarding age, gender, education, marital status, employment etc.

## **Dependent Variables:**

### **Affect Towards the Brand**

Research suggests that exposure to violent media (videogames, movies, pictures etc.) will encourage aggressive behaviour or anger (such as feelings of frustration towards others) in those experiencing it (Anderson et. Al, 2001). Coupled with situations where a particular brand fails, a subsequent service failure (or success) will be said to lead to a higher (lower) level of anger and overall negative affect towards the brand. We measured anger using four items (outraged/resentful/angry/annoyed by unjust behaviour etc.) on 7 point scales; 1 being strongly agree and 7 strongly disagree.

Our first dependent variables are based on the user's reaction to the videogame experience after the first manipulation; high or low violence videogame footage. This variable was established using scales from other studies. Not only was anger itself measured but so was desire for revenge and blame attribution. These measures have allowed us to gain a more complete understanding of the level of discontent and aggression of the participant towards the brand. All of these measures were based on a framework used in the study by Gregoire, Laufer and Tripp (2010).

### **Level of Enjoyment of the Gaming Experience**

There are several different scales that can be used to gauge the level of enjoyment of the gaming experience but the one that was chosen was the Intrinsic Motivation Inventory (IMI) scale. There were previous studies done by Lyons et. Al. and Ryan, Rigby and Przybylski (2006) which looked at the level of enjoyment experienced during a videogame which provided different forms of measurement but were found to be not as appropriate as the measures we chose. For this particular experiment, a variation of the scale designed by McAuley, Duncan and

Tammen (1989) was used in order to properly and reliably gauge the level of enjoyment of each of the participants.

This particular scale measures more than just the dimension of interest-enjoyment but also measures perceived competence, effort-importance and tension-pressure. It would be interesting to see if there are correlations between multiple dimensions and how they relate to the hypotheses and relevant research.

The whole scale has been split up into two parts since some of the questions can in fact apply to those who have not played the game and will be inserted near the end of the questionnaire after the questions regarding the subject's impression towards Wolf Pizza.

### **Attitude Toward the Brand**

This construct refers to the general appreciation or discontent towards the brand in question and is a very important measure for this study. The chosen scale to measure this variable is based on the work done by Spears and Singh (2004) where they look at brand attitude and purchase intention. We performed a reliability test on the scale and it was found to be highly reliable (Cronbach's Alpha = 0.925, N= 4). The scale is as follows:

Please describe your overall feelings about Wolf Pizza:

1. Unappealing/appealing:

*(Highly unappealing) 1.....2.....3.....4.....5 (Highly appealing)*

2. Bad/good:

*(Very bad) 1.....2.....3.....4.....5 (Very good)*

3. Unfavourable/favourable:

*(Highly unfavourable) 1.....2.....3.....4.....5 (Highly favourable)*

4. Unlikable/likable:

*(Very unlikable) 1.....2.....3.....4.....5 (Very likable)*

## **Brand Recall**

As much as the attitude towards a brand is important, the brand itself needs to be recognized and remembered by prospective clients. This is why it is necessary to measure brand recognition by the respondents of the study. The following questions were generally adapted from a scale based on the work of Woo Gon Kim and Hong-Bumm Kim (2004) which measures brand awareness for fast food restaurants. Their questions were adapted to the scenarios presented in this study and are found in appendix F.

## Results and Discussion

Our original sample size started with 360 respondents but three were removed after having failed at least one of our attention check questions giving a total of 357. There were 57 respondents in the HVHF treatment, 87 respondents for HVLF, 48 for LVHF, 55 for LVLF, 52 for NVHF and 58 for NVLF. There was an issue with the random sorting of respondents causing some groups to have a larger sample than others. On average, the respondents played 11.81 hours of videogames a week (with a range of 60 hours and a standard deviation of 10), the median (and mode) age group was between 23 and 30 years of age and 57.1% of respondents were male (42.9% being female). 80.6% of respondents claimed to order takeout at least once a month while 45.2% of them order at least once a week. Most respondents completed high school (81.7%) and 44.4% of the sample has completed at least a bachelor's degree (12.8% for postgraduate completion).

The population for this study was recruited through the site "CrowdFlower" which enabled us to pay respondents to answer the questionnaire in a quick and organized manner. Respondents were mainly from North America but there were several that were from overseas.

## Manipulation Checks

### Service Failure and Recovery Manipulation Check

The manipulation check for verifying whether or not the scenario elicited a higher level of blame attribution was done with the blame attribution scores from the brand affect scale (Gregoire, Laufer and Tripp, 2010). In order to properly verify the manipulation, we used the two control groups to make sure that they were not affected by the video itself. As expected, an ANOVA revealed that participants in the internal attribution condition (HF) perceived the restaurant to be responsible for the service failure ( $M_{\text{int-attr}} = 5.3718$ ,  $SD=1.37$ ) compared to participants in the external attribution (LF) condition ( $M_{\text{ext-attr}} = 3.5172$ ,  $SD=1.29$ ,  $F(1,108)=53.24$ ,  $p < .001$ ). There is a considerable difference in terms of the failure attribution. Cronbach's Alpha for this scale was 0.886 indicating that the scale is in fact reliable. This shows that there is a relationship between the attribution and sentiment towards the service and the brand itself allowing us to assume that the internal and external attribution scenarios did their jobs.

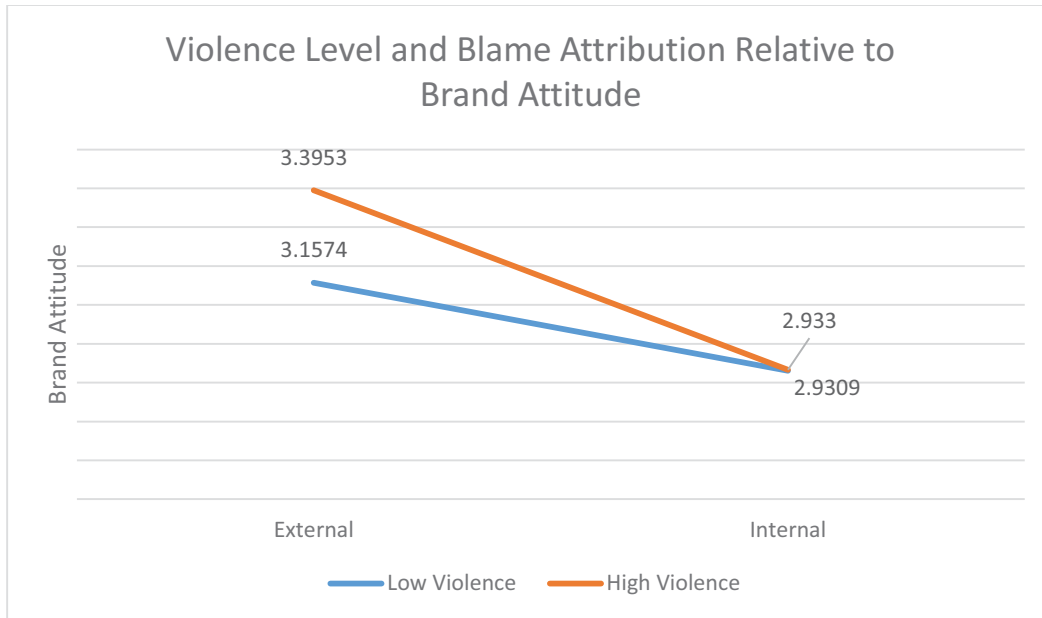
### **Videogame Aggression Check**

In order to verify this manipulation and that it does in fact solicit a higher level of aggression in participants, we used the anger measure as a manipulation check. The ANOVA results revealed a statistically significant difference in anger between the two manipulations such that participants in the high violence condition ( $M=4.61$ ,  $SD=1.59$ ) reported a higher level of anger than those in the low violence condition ( $M= 4.07$ ,  $SD=1.84$ ,  $F(1, 241) = 6.05$ ,  $p<.01$ ). Although the difference may not be as noticeable as with failure attribution, it is still indicative of a proper manipulation. This result suggests that the violence level manipulation was successful and had a reliability score of 0.895, indicating that the scale is in fact quite reliable.

As well as that comparison a more objective contrast was made by observing the game footage itself. The high violence video contains 182 gun shots, 9 explosions, 11 melee attacks with a crowbar and 2 instances that enemies are killed by a thrown circular saw blade. In the low violence video, there are absolutely no incidences of violence and you are simply walking around a city and office building while speaking with characters in the game.

### **Brand Attitude in Relation to Violence and Failure Level**

In order to test our hypotheses as to whether or not there was a connection between the different violence levels and brand failure scenarios, we performed an ANOVA on brand attitude and how they are affected by them. The main factor with respect to brand attitude is the attribution of failure ( $F = 12.035$ ,  $p < 0.001$ ) and not so much the degree of violence present in the videogame ( $F = 2.199$ ,  $p = 0.139$ ). This makes sense since the interpretation of the brand in question will be more greatly affected by the real-life experience (evoked by the brand-failure scenario) that the subject was exposed to as opposed to an indirect impression from the videogame. All of the internal attribution failure scenarios have lower levels of brand attitude than the external attribution failure ones.



It is now clearer which combination yields the highest and lowest attitude towards the brand. The high violence and external attribution category has the most positive attitude towards the brand followed by the low violence and external attribution cell while on the lower half of the data you find the low violence and external attribution as well as high violence and internal failure categories (in descending order). Once compared to our initial hypotheses, it is possible to conclude that **H1 is not supported**.

Another interesting finding with respect to attribution as well as violence was that respondents' reactions to the service failure were different with respect to the level of violence of the videogame footage. It was found that when the level of violence is low there will be a stronger brand attitude in the external attribution situation than the internal attribution. The opposite can be said about the higher level of violence with internal attribution. Although the level of violence did not directly affect the brand attitude, when combined with the type of attribution it does. This is in line with our expectations.

One of the findings that we were particularly curious about was whether or not the brand being placed in the videogame can adversely affect brand attitude to the point where it will be lower than if it had never been placed in the game at all. What we found (with a high level of significance) was that it in fact can. Within the internal attribution scenarios, the mean brand attitude was lower for the high and low violence categories (2.9330 and 2.9309 respectively)



than it was for the control group where its mean was rating 3.0196 ( $F = 3.374$ ,  $df=5$   $p=0.005$ ). The same cannot be said about the external attribution scenario which had a lower mean in the control group (3.15) than either the high (3.3953) or low (3.1574) violence scenarios. This is consistent with our previously mentioned propositions.

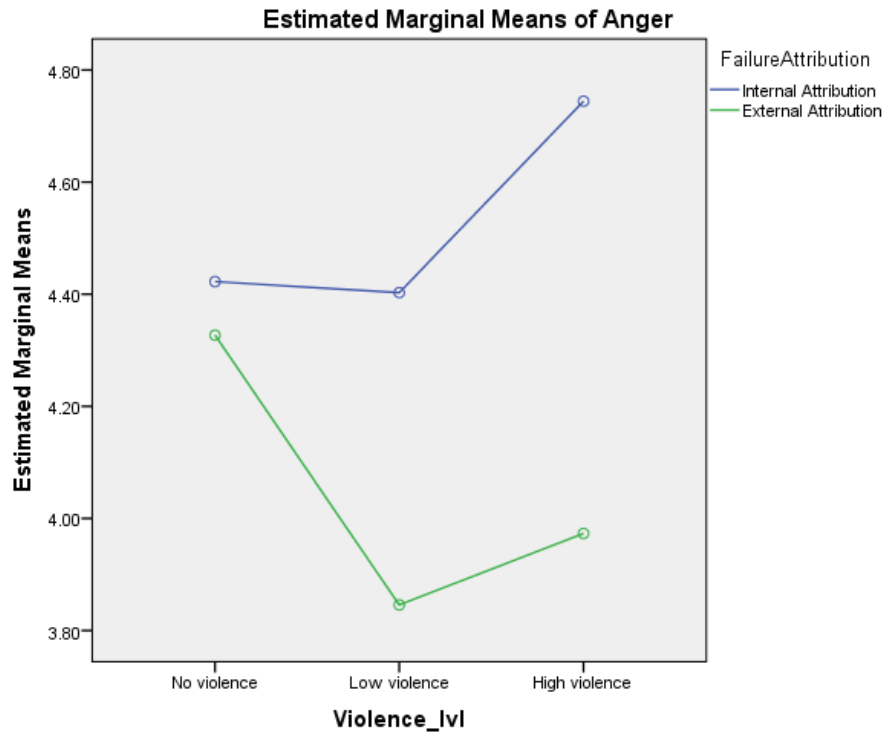
### **Failure and Violence Levels Relative to Desire for Revenge**

We first performed a reliability analysis on the independent variables within the model in order to verify that they were appropriate measures. After running the reliability test on desire for revenge, anger and blame attribution, we can see that Cronbach's Alpha measure is appropriately high in all cases (above 0.886). In only 3 cases did the removal of a question result in a higher Cronbach's Alpha and the difference was very marginal in all cases. This analysis concluded that all of the measures exhibit an acceptable level of reliability, are appropriate and should be included in the analysis.

Our first notable test for interaction was among the violence and failure levels relative to desire for revenge. Based on our assumptions and research, we had expected the violence level to cause an increase in the desire for revenge due to negative affect elicited by the gaming experience in the participants. However, what we found was that it did not have a significant effect ( $F=1.062$ ,  $DF=2$ ,  $P=0.3347$ ) and its interaction with failure attribution (which was in fact highly significant) caused its significance level to decrease ( $F=.275$ ,  $DF=2$ ,  $P=0.759$ ).

### **Failure Attribution and Violence levels relative to Anger**

We repeated the same procedure with anger instead of desire for revenge and found that there was an interaction effect between violence and failure attribution (the sig. level increases when they interact as opposed to simply violence level). The interaction itself was still relatively insignificant ( $F=1.555$ ,  $DF=2$ ,  $P=0.213$ ) but it is likely that with a larger sample size it would approach significant levels. At the very least, it helped tip us off as to other possible interactions. The graph of the interaction is as follows:



As can be seen, anger seems to be lowest in the low violence category for each of the respective levels of attribution. The difference in the slopes of the graphs signifies that the difference in anger between no violence and low violence in the internal attribution scenario is almost non-existent while the difference is quite noticeable in the external attribution. It is reversed when looking at low violence and high violence; the increase in anger levels is much greater in the internal attribution than the external.

### Brand Recall

We will next take a first look at brand recall and violence/failure level. For the purpose of this research, in order to properly qualify a participant as having correctly identified the Wolf Pizza logo, they need to have correctly identified the logo from the videogame as well as accurately name said logo in the brand recall section of the survey. The data was split into two categories based on the two main independent variables that were manipulated (violence level and failure attribution). The breakdown of the results is as follows:

Violence level Compared with Correct Recall					
		Correct recall			Total
		No	Yes	%	
Violence level no control	High violence	130	14	10%	144
	Low violence	78	25	24%	103
Total		208	39	16%	247

As can be observed in the table, participants are more likely to remember the brand correctly when being exposed to the low violence scenario (identifying both the logo and name of the brand) than those in the high violence scenario. A chi-square test shows that the data indeed exhibits an appropriate goodness of fit ( $\chi^2 = 9.560$ ,  $DF=1$   $p=0.002$ ). Despite the smaller sample size, there were more participants who remembered the brand within the lower violence category as opposed to the higher one.

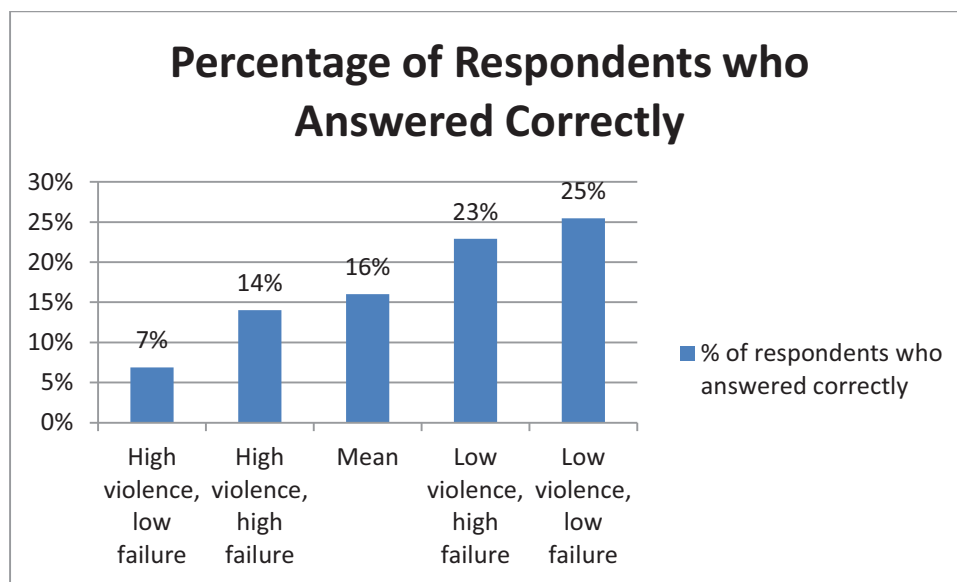
With regards to the failure level, it is not conclusive whether or not internal or external failure attribution has an effect on the correct recall of the logo and its brand name. Looking at the figures, there is only a 4% difference in ability to recall (favouring internal attribution) which does not offer enough support to conclude that there is an effect. This is further supported by the Chi-square test, indicating that there is little significance in the relationship ( $\chi^2 = 0.393$ ,  $df = 1$ ).

Failure level Compared with Correct Recall					
		Correct recall			Total
		No	Yes	%	
Failure level no control	Internal failure	86	19	18%	105
	Low failure	122	20	14%	142
Total		208	39	16%	247

We can also compare the two by two factorial breakdown:

Violence/failure level and Correct answer and name					
		Correct answer and name			Total
		No	Yes	%	
Violence and failure no control	High violence, internal failure	49	8	14%	57
	High violence, external failure	81	6	7%	87
	Low violence, internal failure	37	11	23%	48
	Low violence, external failure	41	14	25%	55
Total		208	39	16%	247

This further shows that the lower violence treatment results in higher levels of correct retention. The effect is fairly clear with roughly double the number of participants correctly recognizing the brand in the survey.



It is easy to see from the graph that recall was higher in the low violence groups than the mean and both of the high violence groups. With this in mind, it is possible to conclude that **H2 is fully supported**. Based on this analysis, we are capable of concluding that the level of failure does not affect brand recall in a significant way while the level of violence does.

As a final analysis, we performed a logistic regression of brand recall with violence and failure level as predictors. As would be expected, we found that violence level does in fact predict the likelihood of the brand being recalled (coefficient of .712 with a significance level of .037).

After running the preceding analyses, it is clear that there is a difference between the ability of people to recall a brand and their subsequent interpretation of it (brand attitude). The main manipulation factor with respect to brand recall was found to be violence level (negatively correlated) while brand attitude was more directly related to the failure scenario. This indicates that the presence (or absence) of violence in a videogame will not likely directly affect one's attitude towards the brand being advertised but rather their ability to remember it.

## Gender Contrasts

### Gender and Brand Recall

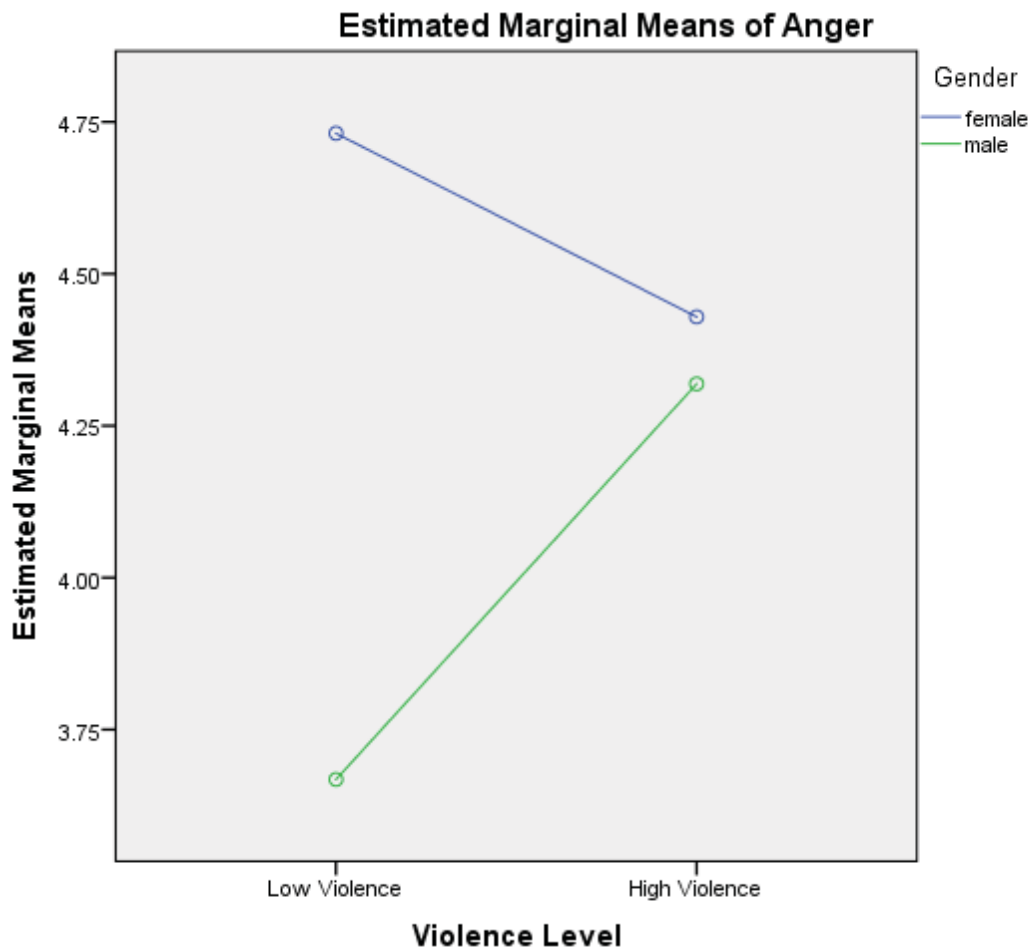
Based on previous research, it was found that the gender of the participant is likely to have an effect on brand recall with respect to the type of game footage that they watch and how they interpret it (women are expected to be more receptive to nonviolent games while men to more violent ones). After exploring the data, it was found that there was a moderately significant connection between gender and brand recall but not with respect to the game violence level of the gaming scenario; women in general tended to remember the brand better regardless of violence level. The breakdown is as follows:

Gender and Brand Recall						
		What is your gender?				Total
		Female	%	Male	%	
Correct	no	81	79%	120	87%	201
answer and	Yes	21	21%	18	13%	39
name						
Total		102	100%	138	100%	240

As can be seen from the previous data, women are more likely to accurately remember the brand in both the high and low violence cases. There is a moderately significant relationship between gender and brand recall ( $\chi^2 = 2.453$ ,  $df = 1$ ,  $p=0.083$ ). There was no significant relationship between brand attitude and gender.

### Gender Relative to Anger and Desire for Revenge

Similar to the analysis done in the previous section, we looked at anger and desire for revenge as dependent variables but this time with gender taken into account. The results were surprising to say the least; we found that gender was a significant predictor with regards to both desire for revenge and anger. With respect to anger, it had a high level of significance and interacted moderately significantly with violence level as well as failure attribution. The graph of the pertinent information is as follows:



After running an F-test on the interaction effect between gender and violence levels, we were able to conclude that the relationship was highly significant ( $F(1,240) = 5.914, p=0.16$ ). In all cases, women exhibited a higher level of anger as a response to the stimuli. One interesting thing to note is that men and women react differently to the high violence manipulations; women

became less angry while men became angrier. This result was found to be significant ( $F(1,232) = 6.372, p=0.12$ ) and definitely worth noting.

Another interesting finding was that men and women differed significantly in terms of their anger level with respect to failure attribution. The gender interaction has a significant gender contrast such that women are angrier with internally attributed failures than men are. An F-test was performed and showed that there is a significant relationship ( $F(1,232) = 12.848, p < 0.001$ ). This hints that there is indeed an underlying difference between the genders and how they react to whether or not the failure is the fault of the company or outside sources.

Along with the anger variable, we looked at the desire for revenge of the participants and found that gender was a significant predictor but it did not interact with any of the other independent variables. On average, women scored higher in desire for revenge than men with a mean score of 5.3529 compared to 4.5971 for men ( $F(1,239) = 11.751, p < 0.001$ ). Although gender does not significantly interact with the other aforementioned independent variables, it still significantly predicts desire for revenge. We also tested for interaction effects between violence level and blame attribution and found that there was no significance between the two of them ( $B=.232, p=.205$ ).

### **Participant Affect**

As mentioned in the literature review, affect during similar consumption experiences (watching a DVD) has been found to have an impact on brand attitude and brand recall. In order to test this, we looked at the different dimensions for enjoyment used in the experiment and compared them to both brand recall and attitude. The results were that there is no direct connection between the interest/enjoyment dimension and attitude towards the brand showing that in this case, affect will not have a direct impact on people's attitude towards the brand.

We ran the same analysis comparing the different dimensions of enjoyment with brand recall and found that it did not have a significant connection to whether or not people are able to recall the brand itself. This is an interesting point that shows that the enjoyment level did not lead to a more positive sentiment towards the brand nor did it aid in recall. The level of significance for the recall is much higher than for brand attitude leading us to believe that with a larger sample

size, it would possibly approach a moderately significant relationship. One possibility as to why there is no feeling of enjoyment could be the fact that the participants are simply watching the game as opposed to playing it. Watching game footage is not quite the same as actually having an interactive experience that is provided with actual gameplay; especially since a videogame is meant to be played and not watched. This notion will be elaborated upon later.

One last result worth noting was that the average amount of hours of videogames played per week by respondents had no bearing on any of the dependent variables in question. After analyzing from several different angles, it was found that this variable did not affect our constructs; at least not within the context of this study.



## Conclusions

### Brand Recall and Attitude

There are several important conclusions to be taken away from this research. With regards to brand recall, it is surprising to note that the actual level of enjoyment exhibited by the respondent did not prove to have an effect on their ability to remember the advertised brand. This is contradictory to the literature and something that was somewhat of a surprise, especially when one looks at the violence levels and how they are linked with brand recall. Interestingly enough, women tended to have a better memory than men across the board.

As violence levels increased, brand recall decreased; the difference was quite significant and can possibly be attributed to several things. Recall tends to be connected with affect in a positive way; if you are in a better mood then you will be more inclined to remember something than if you are in a more negative mood. The higher violence level may have resulted in greater hostility (aggression level) in the participant and in turn caused the lower level of retention. The affect of the participants was predicted to have a bearing on the brand recall.

One thing that should be taken into consideration when looking at the brand recall scenario is that the experience of the game itself can have an effect on the participant's ability to recall the brand. The amount of focus required in the viewing of the game likely has an effect on the ability to recall peripheral queues from the background. In the higher violence manipulation, the game is more focused on the action itself and less conducive to observing the environment.

Although that may be the case, the purpose of this experiment is to compare games with a high and low level of violence and within the context of gameplay, this difference holds appropriately. Although the gaming experiences could have been more similar in terms of the intensity of the gameplay itself, the difference well reflects the actual gaming experience that a player is likely to have. The hypotheses related to these variables in general are at least partially supported and do a good job of showing that the increase in the presence of violence in a videogame experience has a negative effect on one's ability to recall advertised brands in that videogame.

Another possible reason for the lower level of brand retention could be attributed to the gaming experience itself. Despite the brand being exposed for the same amount of time in both videos, the focus was heavier on the action in the more violent video while it was less concentrated in

the low violence one. At first, it may seem that this skews the results but within the context of the industry that we are focusing on it more accurately reflects the difference in violent and nonviolent games. Since we are looking to apply this to the games themselves, it is important to reflect the nature of the experience in as organic a way as possible.

Service failure attribution had no significant effect on brand recall. This is somewhat counterintuitive since one would assume that it would affect the mood of the participant. Although it did have an impact on brand attitude, the recall of the brand itself was unaffected indicating that a participant's ability to recall a brand does not necessarily relate to their sentiment towards that brand.

As would be expected, brand attitude was strongly affected by the brand failure attribution. It is very logical that a consumer would feel more negatively towards the brand when the blame is on them as opposed to an outside force that could not be avoided. That being said, the lowest levels of brand attitude were when the failure attribution was internal. It was also shown that when failure attribution is internal, brand attitude is lower for respondents who were exposed to the videogame footage than the control group. This supports the proposition that it is possible to lose more than just your marketing investment when you have a service failure that is your fault.

### **Interaction Effects**

After cleaning the data and preparing it for further analysis, we found that there were several particularly salient interactions; particularly amongst gender, violence level and failure attribution. Along with that, it was found that the attribution of failure affects women and men differently with respect to anger. Women react relatively stronger to an internal attribution of failure than men. At first glance, this may seem surprising but once we look back at the supporting literature it becomes more illuminated. On average, men and women tend to enjoy different types of videogames in terms of genre and level of engagement. The differences are often tied in with the level of violence (men prefer action and strategy as opposed to women who prefer more social games) indicating that this may be reflected in their interpretation of the gaming experience. This interaction effect could be related to the fact that men tend to prefer playing first person shooter videogames (S, 2016) and is likely to be one of the leading causes of this discrepancy. If someone is less interested in the gaming experience then they will likely be angrier when the brand fails them.

Of particular note in this interaction is the difference in anger level within the lower violence level. Although there was a difference in the levels of anger in all three cases, the difference was most pronounced in the low violence manipulation where women became less angry and men more so. This is a good indication that men and women have different reactions to that manipulation. It is possible that women find it to be boring and are less angered as a result while men get worked up and more agitated. This is something that would be interesting to expand upon but is somewhat outside the scope of this study. Although it is not as significant in terms of interaction effects, desire for revenge was also significantly predicted by gender. There was a strong significance level with regards to gender and it led in the same direction as anger where women tended to score higher with respect to desire for revenge.

One possible explanation for this are the different methods of problem-solving employed by men and women. Women tend to approach problems in a more emotional way than men. This can mainly be attributed to a difference in the size of our deep limbic system that is primarily related to emotions (The limbic system, 2016). Not only this, but the system (which is larger in women) “stores highly charged emotional memories” causing the previous failure to be more impactful in women than men. Along with this, some social and emotional problems such as negative emotions, irritability and clinical depression are linked with this particular area of the brain. Anger and the related desire for revenge are fairly strong emotions and when coupled with women’s greater capacity to recall the brand, it is understandable that they will have a more negative interpretation of the company and the service that had recently failed them.

## Managerial Implications

The implications are fairly clear from the outcome of the tests. It is clearly more beneficial to implement brand placements into games that tend to be on the lower end of the spectrum with regards to violence. Although brand recall is not necessarily correlated with enjoyment or brand attitude, it is still strongly correlated with the level of aggression that is instilled by the videogame experience itself. Although this game may tend to favour female gamers (due to them preferring more social and less violent games), there are many different male-centric videogames that could be applicable such as sports games, role-playing games (they tend to be less violent) and simulation games.

One thing that is of particular note in this study is that the mediums of videogames and films (movies or TV) have different success factors with regards to product placement. This is important since we need to realize that the same rules do not apply across platforms simply because they both have a screen and similar content. Although we only touched on one genre of video game in this study, it would be interesting to see which ones and which are most similar. It is possible that narrative-driven games will have more similarities than first person shooters like the one we used since the visual style and presentation are quite different due to the first person perspective which is rarely implemented in films and television.

The level of violence has been shown to not compensate for the brand failure itself. It may seem intuitive but the service itself cannot be easily remedied by advertisement in videogames if there is a failure that is either the fault of the company or even one that is inevitable. This was shown in our comparison of the two service failure scenarios and how violence level did not have a significant effect on brand attitude while failure attribution did. To compound this, if a brand fails and the game containing the product placement is nonviolent, then the consumer will strongly remember the brand with a negative attitude towards it. This advertising can cost more than just the money to implement it but customers will also feel negatively towards it.

One of the main findings was that there is a clear difference between how men and women approach the failure scenario and the placement. Advertisers need to be more careful about how they do their product placements since violence level, failure level and gender interact with regards to anger and desire for revenge. Companies need to be more careful when advertising to women than to men since (according to our results) they are generally more judgemental towards

the possibility of a brand failure. Coupled with their greater ability to recall the brand, women who are displeased with the brand exhibit a greater propensity for revenge than men do. This can lead to more adverse consequences for the company which is trying to have them think positively about the brand.

We can infer from the data that one of the most appropriate applications of these guidelines would be within mobile videogames. These games already tend to be less violent (partially due to the audience and the technical limitations of the phones themselves) and are accessible by a larger audience than traditional videogames. There is also a larger portion of the audience that are women in mobile gaming (Myth Busting, 2015) creating a platform that is more conducive when looking at the fact that the advertised products are often other apps. If advertisers were to include other appropriate products then the audience would likely be more receptive to them.

One important finding that should be pointed out is the fact that brand placement in videogames has the potential to leave prospective consumers with a worse impression of the brand than if they had never played the game at all. For that reason it is important to preach caution with brand placement. Although in many cases it can be highly beneficial to the brand it is like a double-edged sword in a sense that can ultimately hurt the brand as well.

## Limitations and Further Research

Due to the inherent limitations of this study, there are several avenues that were not explored. One element that could be expanded upon within this study is the genre of the videogame and the amount of players experiencing it at one point in time. In this study we only looked at the first person shooter; other genres could possibly yield different results. Different genres could garner different guidelines for successful product placements. This would require a much larger sample size depending on the amount of genres to be tested and was impossible due to time and financial restrictions.

Another limitation that was present in the study was that there was no control group for the videogame experience alone. It would have been interesting to see people's reaction when they were not presented with the brand failure scenario. It is possible that people would have reacted differently to the questions since the videogame itself would have been the only thing that they were focusing on. This other control group could have provided more insight but was not feasible within the scope of this experiment.

The brands themselves could have been manipulated in order to see which types of products/services would work best. Different industries or brands with different images (more or less congruent with the game itself) could have yielded different results. We could have also looked at the familiarity of the brand and whether or not that has an effect on brand attitude. It would be difficult to test this without giving a hint to the respondent as to the intention but it is still possible. This would require a quite distinct modification of the study but would give insight as to which brands are best to place in videogames: familiar or unfamiliar ones.

A small variation that could be made to the study is the introduction of a temporal element. There could very well be different reactions to the product failure if there was a delay between when the failure is brought to the attention of the consumer and when that consumer is asked to react to it as well as a delay after watching the footage. Varying the order of the stimuli could have an effect as well. Often people's emotions will dull when upset about something after time goes by which can lead to distinctive differences in terms of reactions. One of the moderating factors could be gender due to how they often differ in problem-solving. Another factor could be the personality of the participant themselves. The temporal element was not implemented due to lack of time and funds.

The most notable limitation of this study is the fact that respondents were not actually playing the game but were rather watching gameplay footage of it. There were several reasons as to why this was done, the main ones being financial and time limitations. We were unable to have a modified version of the game available to an adequate number of respondents and the cost to implement it would have been far beyond our budget. Another reason as to why we did not have respondents play the game was to keep the experience consistent for all respondents regardless of their gaming abilities. In doing this, we were able to have the same exposure time of the brand for both manipulations and have a consistent experience for each of the respondents.

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## Appendix

### Appendix A – First recorded case of Product Placement



Die Woche Nr. 40, Berlin 4. Oktober 1902



## Appendix B – Product Placement in Burnout Paradise



Burnout Paradise - <http://www.theguardian.com/technology/2014/jul/03/six-of-the-best-product-placement-video-games>

## Appendix C – Product Placement in Fight Night: Round 3



Burger King - <http://www.g4tv.com/thefeed/blog/post/705015/the-worst-product-placement-in-gaming-history/>



## Appendix D – Brand Failure Scenarios

### **Scenario 1 – Internal Attribution**

*Wolf Pizza is a local Italian restaurant that has been in business for over seven years. Their entire menu is available for take-out and delivery but their most popular dishes are the pizzas. They are located about 15 minutes away from your home and serve many different dishes of Italian food. They offer authentic Italian recipes and their menu includes: Pizza, paninis, risotto, arancinis, pasta, home-made desserts, salads and appetisers.*

*After placing an order for two large pizzas, you were told that the delivery would take 30-45 minutes. After waiting for one hour and fifteen minutes the delivery man shows up with your food. When asked why it took so long he explains that it was a very busy night and that your order was forgotten amongst the confusion. He explains that there was nothing that he could do to help the situation and lets you know that you could refer to the manager if you would like to place a complaint.*

### **Scenario 2 – External Attribution**

*Wolf Pizza is a local Italian restaurant that has been in business for over seven years. Their entire menu is available for take-out and delivery but their most popular dishes are the pizzas. They are located about 15 minutes away from your home and serve many different dishes of Italian food. They offer authentic Italian recipes and their menu includes: Pizza, paninis, risotto, arancinis, pasta, home-made desserts, salads and appetisers.*

*After placing an order for two large pizzas you were told that the delivery would take 30-45 minutes. After waiting for one hour and fifteen minutes the delivery man shows up with your food. When asked why it took so long to deliver the food, he explains that the weather conditions have been very bad and there was an accident blocking his route. You realize that it has been snowing heavily and that the streets are full of snow. The delivery person apologizes and explains that he should have taken a better route.*

Appendix E – Wolf Pizza Logo Found in Videogame Manipulation

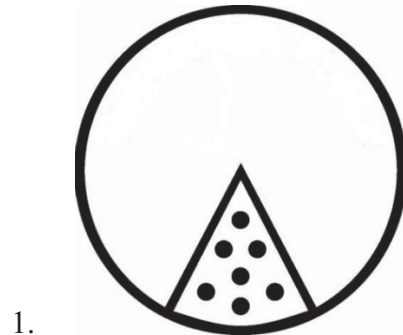


## Appendix F – Brand Recall Questions

A. Write down the name of an Italian restaurant that comes first to mind:

\_\_\_\_\_

B. Do you recognize any of these logos?



C. What is the brand name of the logo found in the previous question?

\_\_\_\_\_

D. Of the following seven restaurants, please select the restaurant name(s) you are not familiar with:

1. McDonald's
2. TGI Friday's
3. Wolf Pizza
4. Burger King

## Appendix G – Consent Form

### John Molson School of Business

INFORMED CONSENT FORM (for Individual Participant Consent)

I, \_\_\_\_\_, understand that I have been asked to participate in a project being conducted by Alexander Belhassen from Concordia University supervised by Dr. Onur Bodur who can be reached at alex\_belhassen@hotmail.com.

I have been informed that the purpose of the project is analyzing perceptions with respect to certain situations in videogames.

I understand that my participation will involve playing a videogame and having to answer questions afterwards.

I understand that there are no further purposes of the project about which I have not been informed.

I understand that participation is voluntary and I have been informed that I may withdraw at any time without explanation or negative consequences to me. I also understand that I may refuse to answer any question that I feel invades my privacy.

I understand that my participation in this project is (*pick appropriate word*):

CONFIDENTIAL (i.e., the student consultant will know, but will not disclose my identity)

I understand that the results of this project may be published online or in print form. However, my identity will not be disclosed and my contributions will remain confidential if I so choose. The identity of the organization will also be confidential and an institutional representative will review the report prior to publishing to ensure a favourable harm-benefits balance (benefits to the greater community versus harm to the organization). The institutional representative may, at that time, require that some of the findings be revised before giving consent to publish; s/he may also determine that publication of the report NOT be made available in any form.

The only person who will have access to your responses will be the experimenter (Alex Belhassen). Upon request, the information provided by yourself will be destroyed. If not all data

will be destroyed in two years' time. All data will be stored in a secured spot and will not be shared with others.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT.  
I, \_\_\_\_\_, AGREE TO PARTICIPATE IN THE PROJECT  
UNDER THE CONDITIONS DESCRIBED ABOVE.

I Agree

I Do Not Agree