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# Product Placement in the Video Game Industry – An Empirical Study on Players’ Preferences and Game Design

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# 1. Introduction

The gaming industry has constantly evolved over time and has now become one of the most relevant media touchpoints through which companies engage in marketing efforts, due to its growing popularity and overall technological advancement. Among the different advertising tools, product placement has been consistently chosen by marketers due to its comparable lower costs and the degree of immersion and interactivity the player displays while playing with the brand.

In this study, we examine the extent to which specific game characteristics and player characteristics influence the success of product placement strategies. As such, this study will analyze existing literary contributions that relate to the established factors influencing players' perceptions as well as provide additional contributions, highlighting two distinct aspects: the product characteristics of video games that inherently make them an effective medium for product placement, as well as the variables that directly affect the outcome of a product placement strategy.

In the second chapter, I will carry out a general overview of the industry to understand its current state and its main growth factors. This section will go over different aspects that characterize the industry, ranging from its first development stages to the latest trends. For instance, the ever-growing popularity of E-Sports and the marketing opportunities that come with tournaments, or the rapid growth of mobile games and their parallel development of business revenue models.

In the third chapter, a theoretical framework will be introduced by defining product placement and highlighting the purpose and expected results from a theoretical point of view. This overview will be further developed by analyzing and defining the concept of brand associations and brand awareness, as well as brand attitude. In addition, I will discuss a brief history of product placement in the gaming industry, highlighting the focus of this paper. Specifically, how product placement evolved over time, starting from physical arcade machines to virtual reality, and therefore retrace the evolution from more basic aspects to extremely enhanced immersion. Moreover, existing literature on industry-specific product placement will be introduced to understand what factors affect the results of product placement in video game media and to what extent,

according to previously conducted studies. Indeed, the purpose of this paper is to add more to the variables at play by providing a critical analysis of the game genre preference as a moderating effect.

In the fourth chapter, I will analyze the data and show the results of the study I conducted on game design choices concerning product placement insertion and how the latter are perceived from players. The aim will be to understand which placement choices act more on purchase intention and whether the player's preference to a specific genre impacts the other variables in play. Moreover, I will analyze the limits of my research and propose new opportunities for further development on the topic of connecting in-game advertising and the video game industry.

## 2. The videogame industry in 2023

### 2.1 The Current State

The video game industry has experienced remarkable growth and development over the years. From its humble beginnings in the 1970s with games like Pong and Space Invaders, the industry has evolved into a global powerhouse. In 2023 and the coming years, it is expected to continue its upward trajectory, fueled by advancements in technology and changes in consumer preferences. However, it is important to note that the gaming industry experienced a peak increase in spending and engagement in 2020 due to the COVID-19 pandemic, but consequently slightly interrupted its growth in 2021 due to its after-effects (Wijman, 2021). Still, the introduction of new gaming platforms, such as virtual reality and augmented reality, has opened up exciting possibilities for immersive gameplay experiences. Indeed, the industry's expansion into other sectors, such as education, healthcare, and sports, has widened its reach and diversified its offerings.

This growth has been greatly facilitated by the increasing number of players worldwide, which is estimated to be 3.09 worldwide, and expected to grow to 3.32 by the end of 2024 (Howarth, 2023). With such a large and diverse player base, the industry has been able to attract investment from major companies and generate significant revenue. According to several reports, the worldwide gaming market is currently estimated to reach 210 billion USD by 2025. This outstanding industry-wide revenue has skyrocketed in the last decade, with a compound annual growth rate of 15.6%, making it the most profitable entertainment industry by far (Porter, 2022). Concerning regional markets, the most prominent market is by far China by both the number of active players and expected compound annual growth rate, estimated to be a consistent 9.6% from 2022 to 2027, whereas other regions fluctuate around a solid 7-8% (Statista, 2022).

## 2.2 A Brief History of the Industry

To better understand how this relatively new and complex industry became so relevant in such a short period of time, it is important to note the major technological steps it underwent in the last 50 years. The first game ever released was “Tennis for Two”, developed by physicist William Higinbotham. It was a simple tennis game played on an oscilloscope display. Later, in the early 1970s, the arcade game "Pong" by Atari introduced video gaming to a wider audience, paving the way for the industry's commercial success (Wardyga, 2023). This shift in popularity was also due to the launch of the first prototype of the home console by Atari, after the Odyssey by Magnavox, the Atari 2600. It was in this period that some of the most iconic games in history were first released, such as “PacMan”, “Tetris”, and “Super Mario Bros” (Wardyga, 2023).

The second phase of the videogame industry began in the 1980s and ranged up until the introduction of the internet, which was characterized by the so-called console wars (Harris, 2014). It all started between Nintendo and Sega, two of the most notable video game-producing companies. On one hand, the Nintendo Entertainment System (NES) and the Super Nintendo Entertainment System (SNES) solidified Nintendo's dominance in the competitive market. On the other hand, however, Sega launched an objectively superior hardware, the Genesis. The company also managed to challenge the incumbent by leveraging its iconic character Sonic and memorable advertising campaigns (Harris, 2014). With the introduction of this new flagship character, which perfectly embodied a renewed and fast-paced approach to gaming, Sega managed to identify itself as Nintendo's “rebellious” counterpart. This marketing strategy was most effective in the American market due to the Japanese market being completely saturated by Nintendo.

The 1990s were characterized by the shift from 2D to 3D gaming, driven by advancements in computer graphics and processing power, and the subsequent introduction to the internet. Although there existed precedents to 3D gaming, such as Battlezone by Atari, a first attempt at a first-person-shooter simulating depth with the

aid of three-dimensional vector graphics, it wasn't until the second half of the '90s that 3D videogames became the standard for the industry (Wolf, 2012). The shift to 3D brought a renewed interest in consumers, being now able to experience immersion in more dynamic environments, more realistic gameplay, and expanded storytelling opportunities. In turn, more advanced game genres took hold, such as open-world exploration, first-person-shooters, and sports games (Arsenault et al., 2013). This new technology was introduced to players by Sony and Nintendo with two of the most iconic consoles in history: the Sony PlayStation in 1994 and the Nintendo 64 in 1996. In this evolved and renewed market, both companies quickly found their key to success. Sony managed to offer optimal licensing deals for third-party producers, making its competitive advantage the vast library offered and the positioning of the PlayStation. According to Sony, this new technology was meant to be an adult cutting-edge entertainment platform, and not another toy to play with (Wolf, 2012). Nintendo, on the other hand, leveraged their iconic game universes Mario and Legend of Zelda to create long-lasting popular sagas directly linked to their brand in the consumer's mind.

The widespread adoption of the internet opened the third phase of the video game industry: online gaming. In 2002, Microsoft launched Xbox Live during the E3 convention as an online service that would connect gamers all over the world with the throughput of a broadband connection and hard disk drive storage space. During this period, the number of players worldwide grew remarkably parallel to the technological availability of points of access to the Internet and broadband connections installed in households. Indeed, new games entirely based on multiplayer cooperation and competition started to grow in popularity, such as GT Interactive's Quake in 1996 and Counter-Strike in 1999, which would later come to play a pivotal role in the rise of Esports (Scholz, 2019). Moreover, the internet improved social gaming experiences, enabling connection with friends through messaging and voice chats and the ability to interact cross-platform, slowly breaking the barriers of physical distance. Years later, in 2006 Sony followed in the footsteps of Microsoft launching their own online gaming service called PlayStation Network. It is important to note that Xbox Live and PSN users could not play with one another, and the services allowed online gaming exclusively within their own network. Parallel to first-person-shooters such as Counter-



Strike, a new game genre was introduced: massive multiplayer online role-playing games. This new genre, coined by Ultima Online's creator Richard Garriot in 1997 (Achterbosch et al, 2008), quickly became extremely popular in 2004 with the release of Blizzard's groundbreaking World of Warcraft. MMORPGs were mostly based on a monthly subscription-type service, allowing the player to create her or his own character and interact with every other player on that specific server within the game's immersive world. Clearly, MMORPGs had an increasing level of immersion compared to other games at that time. Their inherent ability to engage players on a deep and immersive level and the degree of personalization of the character automatically translated into a more long-lasting game experience that drew players back for more (Kelly, 2004). In turn, this resulted in an extremely profitable service, due to the level of commitment of players and availability of microtransactions to achieve unique personalization options.

In the second half of the 2000s, with increasing technological advancement and the advent of smartphones, a new era of the gaming industry began centered around mobile gaming. However, it was not until the last decade that mobile gaming became one of the most relevant branches within the industry (Kowert & Quandt, 2021). Mobile gaming provided a renewed game experience to players: an accessible and casual game experience, often characterized by arcade-based addictive games such as *Candy Crush Saga*. The intrinsic accessibility of mobile platforms generated a notable shift in players' demographics, both due to the non-commitment level of the titles and to the intuitiveness and simplicity of commands, often characterized by just pressing two buttons on the device. According to studies, there has been a consistent increase in adults over the age of 45 picking up mobile games (Feijoo et al., 2012). Also, with mobile gaming, the business model based on microtransactions and IAP (in-app purchases) became the standard for most of the titles (Civelek et al, 2018).

### 2.3 Latest Growth Factors and New Trends in the Industry

Nowadays, the gaming industry is still expanding with no sign of abating, and it is considered extremely relevant both in terms of economic contribution and social

influence. Several characterizing elements drive this continuous growth forward and, similarly, business opportunities for companies to pursue. Moreover, growth is shifting from the traditional markets, such as the US and China, to other regions such as Turkey, Pakistan, and India. This phenomenon is mostly due to higher investments in the industry and the growing popularity of Esports, as well as overall accessibility to better quality band access and hardware, as shown in the GamingInTurkey report (2020).

### 2.3.1 Technological Advancement

Hardware and software technology advancement is definitely a major growth factor, considering in the last decade only society underwent groundbreaking innovations that changed our daily lives. The latest improvements in Augmented Reality (AR) and Virtual Reality (VR) have noticeably impacted interaction and involvement in the gaming experience (Dani, 2019). Being able to interact with an enriched environment while being more immersed in the game world makes the experience more appealing to gamers. The success of this improved technology is clearly reflected in its numbers. Indeed, according to Dani (2019), the market revenue has increased by 3000% from 2015 to 2019 and it is ever-expanding, with a projected revenue of USD 31.12 billion at the end of 2023 only considering the gaming market (Statista, 2022). However, there are still barriers to VR and AR inclusion in games, such as the costs of hardware and the potential of experiencing health problems, such as blurred vision and mild addictions. Still, there are applications of this technology in other professional fields. For example, many companies are now engaging and investing in virtual reality specifically designed to improve healthcare, rehabilitation, and medical professional training (Tao, 2021).

The peak of virtual reality is the metaverse, which according to Porter et al. (2022) is defined as a “shared, persistent, three-dimensional virtual realm where users interact with objects, the environment, and each other through digital representations of themselves or avatars.” Some companies have already adopted the concept of metaverse in their games, such as Epic Games’ Fortnite. Fortnite players can connect with each other and use in-game currency (V-Bucks) to be spent in its open-world

universe. Epic Games has also recently heavily invested in the expansion of its metaverse through Hadean (a metaverse infrastructure builder) for 30M \$ USD.

Parallel to VR and AR is the development of the concept known as cloud gaming, which would allow players to engage in any game, regardless of system requirements to be played on any client (Mariano & Koo, 2015). Cloud gaming actively breaks the barriers of hardware costs, especially considering graphics requirements, which hinders many players from purchasing new titles. For example, NVIDIA provides cloud gaming services to different platforms through a software called GeForce NOW. Popular gaming platform Steam is currently running a limited cloud gaming option in Beta testing using NVIDIA's service, allowing players to play very few games on a virtual PC. Consequently, cloud gaming would increase the purchasing decisions of consumers and directly impact any microtransactions or in-game advertising related to the games played.

The latest advancement in the industry is the ever-growing integration of Artificial Intelligence (AI) in gaming experience and development. AI has been part of gaming since its early beginnings when computers were programmed to progressively get better at playing chess or tic-tac-toe against human players in the early 50s (Sousa, 2022). However, AI algorithms can now create intelligent non-player characters that exhibit lifelike behavior and adapt to the player's actions, providing a more immersive and dynamic gaming experience. Furthermore, AI technology is also utilized in monitoring and optimizing the learning experience of players. By monitoring the attention level and mental states of participants, AI can understand the effectiveness and attractiveness of different game sessions, allowing for continuous improvement in the learning process (Chen et al, 2022).

### 2.3.2 Rise of Mobile Gaming

In this “Decade of Disruption” (Palandrani, 2022) we experienced the shift from desktop or console to mobile platforms as smartphones are nowadays powerful hardware engines that are able to run 5G technology and requirements-heavy games. Ernst&Young predicts that, in 2025, mobile gaming will account for more than half of

the entire gaming market revenue (Porter, 2022) for 116 billion \$ USD out of 211 billion \$ USD. Consequently, the entire culture of gaming has shifted, including gaming communities, game design, and market structure as well (Fung, 2017). According to a (2023) Statista market insight, the most prominent market in mobile gaming is currently Asia-Pacific and its key players are China, Japan, and South Korea, accounting for slightly less than 90% of the Asian market.

The reasons for the shift towards mobile gaming are several, according to market research conducted by Precedence Research (2023). First of all, the accessibility and ease of use of hardware compared to consoles or gaming PCs. Smartphones are now more available and affordable than 15 years ago and can easily run most of the content present on platform stores. Consequently to increased accessibility, mobile gaming drastically increased in audience and therefore shaped the gaming culture as well, having to provide more casual options to players. Indeed, mobile games are usually designed for more sporadic and nonchalant gameplay, making them appealing to people who may not have the time or inclination to engage in longer gaming sessions on consoles or PCs.

Mobile gaming also influenced business decisions towards the so-called “freemium” revenue model, which specifically offers games for free on the store while heavily leveraging in-game purchases and microtransactions. The model is based on the concept of attracting new customers with free purchases, and later providing in-game advertising and optional DLCs or other personalized content (Nieborg, 2016). This model has proved to be quite successful, quickly becoming the face of mobile gaming.

### 2.3.3 Esports

Among the latest trends in the industry, the incredible rise in the popularity of Esports definitely plays a major role. Esports is now a vital part of gaming culture itself, influencing how people engage and perceive video games, compared to a decade ago in which only very few gamers were aware of Esports content. To understand the growth potential of this market, the global revenue for Esports worldwide in 2020 was 996 million USD. After the COVID-19 pandemic in 2022 (which resulted to be beneficial for the video game industry due to safety lockdown measures), it was valued

at 1,384 million USD, and is expected to grow considerably according to market trends with an estimated value of 1,866 million USD in 2025 (Statista, 2023).

However, there is still the debate concerning whether eSports are considered sports. Although the International Olympic Committee pushes to integrate “virtuality” and “simulation” within their events, they agreed that eSports are not ultimately Olympic sports (Parry & Giesbrecht, 2023). This decision was taken in light of the separation of eSports into *virtual sports* and *gaming*, mainly based on the content of the video game, in which only the former would be potentially integrated into Olympic-related events. Apart from the debate, researchers have nonetheless identified that the eSports market is one of the key growth factors of the traditional sports market (Block & Haack, 2021).

This partially untapped potential still provides countless opportunities for companies to engage players and acquire new customers. Indeed, increased investments, new potential revenue streams, cross-promotion, and other new marketing options are the keys to increasing global reach and exploring new business opportunities.

#### 2.3.4 Evolving Marketing and the Evolution of Product Placement

The first building block of new marketing is certainly the adoption of big data. Big data plays a crucial role in the video game industry, ranging from the collection of player analytics to the personalization of in-game advertising and much more. The amount of data collected helps companies create better games, improve user experience, and make better data-informed decisions, and this is true for every step of product creation, meaning from game developers to end users. For example, understanding players’ preferences through player insights can inform design decisions about which features or content is more engaging, or even help identify churn patterns and reasons for players to leave the game (Bertens et al, 2017). Consequently, big data yields predictive analytics to forecast player behavior or what concerns in-game purchases or trends.

Another key component of this new and evolved marketing in the industry is community engagement. This aspect translates to influencer marketing, player support and feedback, and tournaments and events organization. Gamers want to be part of something bigger and they want to feel connected through experiences in and out of the game (O’Connor, 2015). For instance, many video game production companies

involve loyal communities in what's called the beta testing phase: here, producers release a pre-release version to a few selected groups (employees, dedicated testers, and the public) in order to catch any bugs, glitches, and overall problems of the game before the launch date. Also, after the game launch, an integral part of the gaming community is represented by the *modding* community (Unger, 2012). *Modding* is referred to as the art of adjusting or revising elements within a video game, which includes its content, code, or assets. Many companies now leverage the enthusiasm and passion of these communities as they realize their co-creation value. Indeed, openly publishing the tools to edit their game through different software platforms generally leads to an extended product life of games, commercial success, and a wider community (Poretski & Arazi, 2017).

Moreover, an additional core element is the need for an increasing degree of interaction and immersion. This phenomenon is reflected by the type of media that has risen in the last decade, such as virtual reality. Indeed, as players continue to seek ever-growing immersion in their favorite titles, established marketing techniques need to be adapted. In the last decade, the focus on interactive marketing has been expressed mainly by social media and influencer marketing, live streaming platforms such as Twitch.tv, and in-game experiential marketing, highlighting the central focus of the player as a co-creator of value the second he/she interacts (Hamilton et al, 2022).

### 3. Literature Review

#### 3.1 Theoretical Basis of Product Placement

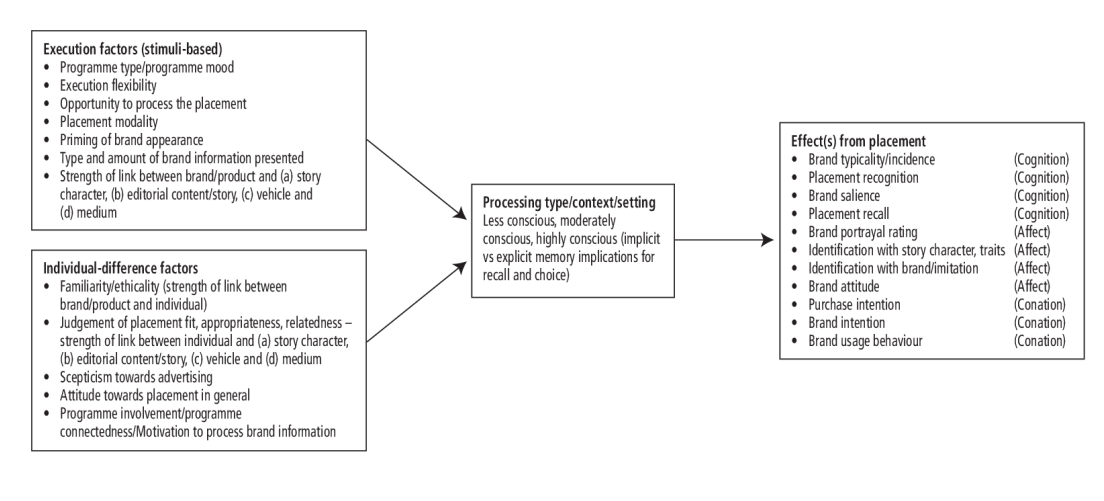
Product placement is a paid planned product message embedded in entertaining content, such as movies, TV shows, and video games, aimed at influencing and persuading the user (Naderer et al, 2017). The goal of product placement strategies is to ultimately increase the purchasing intention of consumers by leveraging different perceptions concerning the placed brand.

##### 3.1.1 Hierarchy of Effects

According to the framework proposed by Balasubramanian (2006), the effectiveness of a product placement strategy stems from several variables assigned to two different sources, namely Execution Factors and Individual-Difference factors, which are moderated by the depth of placement processing. Figure 1 below visualizes this concept:

**Figure 1**

*Framework for the analysis of product placement effects, proposed by Balasubramanian et al. (2006, p. 117)*



On the right-hand side, the effectiveness of the placement is measured in three different dimensions: cognition, affect, and conation. This distinction was first proposed by Lavidge & Steiner (1961) and has consistently been the theoretical basis to understand

the success of placement techniques and advertising in general. Indeed, the consumer explores his/her decision-making journey by being subject to three different distinct effects. Firstly, a cognitive component, which is related to gaining awareness and information on the product, such as its existence in the market, its core features, and its aesthetic characteristics. Secondly, an affecting component, by which the advertisement shapes the consumers' emotions and feelings related to that product. Thirdly, the conative (or motivational) component, which relates to the stimulation and desire towards a particular product or service advertised.

### 3.1.2 Brand Awareness, Brand Associations, and Brand Attitude

It is important to understand that product placement as an advertising technique strongly leverages the first two effects, namely cognition, and affection, compared to the motivational dimension. As a matter of fact, two major marketing concepts directly linked to these two dimensions are brand awareness and brand attitude.

Brand awareness is the consumer's ability to recognize or recall the brand to such an extent as to make a purchase (Kotler & Keller, 2016). It is the level of familiarity that a brand enjoys among its target audience. Also, brand awareness is an asset affecting consumers' perception and behavior according to Aaker (2014). Therefore, brand awareness is a measure of how well consumers can identify and recall a specific brand when exposed to aspects of it, may those be its logo, core product lines, name, color patterns, or other distinctive elements (Rossiter, 2014). An increased level of brand awareness as a result of a successful product placement strategy will therefore lead to an increase in the likeliness that consumers will consider that brand top-of-mind when making purchasing decisions. Indeed, several studies (Bernarto et al, 2020), confirm how brand awareness plays a crucial role in shaping consumer behavior, building customer loyalty, and achieving key brand associations.

Brand associations represent traits, characteristics, values, and feelings connected to the brand in the mind of the consumer, which can be positive, negative, or factual. According to Kotler and Keller (2016) and Praxmarer & Gierl (2009), negative associations impact more significantly than positive associations. Therefore, in a product placement strategy, brands need to be aware of the potential associations that may instinctually arise from a particular content genre, media outlet, or narrative



composition. In video game media, for instance, the personality characteristics associated with the main character using a particular branded object may ultimately be associated with the brand itself in the mind of the consumer, making it also “funny, resourceful, and charming”.

The collection of all brand associations individuals make with the brand contributes to their brand attitude, which is the next inevitable step in the decision-making journey. Indeed, brand attitude can be defined as the consumer’s overall evaluation of the brand (Faircloth et al, 2001), or as the general appreciation of the brand by a consumer (Mitchell & Olson, 1988). Positive brand attitudes generally stem from positive experiences, both in terms of satisfactory high-quality products and meeting customers’ expectations. In the gaming world, this can easily translate to a memorable and enjoyable gaming experience while being exposed to the advertised brand. In turn, this leads to a general feeling of trust and engagement towards the brand (Faircloth et al, 2001).

### 3.1.3 Mere Exposure Effect

In an essay about effective frequency, Krugman (1972) argued that 3 is the necessary amount of exposure in terms of psychological response. To be more specific, the first exposure would capture curiosity, the second would activate recognition, and the third would lead to the decision stage. This concept can be easily translated in terms of media advertising, leveraging the so-called Mere Exposure Effect. The Mere Exposure Effect is a phenomenon by which individuals tend to develop a preference for something only due to being familiar with it, or at least reducing negative effect towards that specific object (Harmon-Jones & Allen, 2001; Zajonc, 1968).

This concept suggests that consumers being exposed to a branded product placement may develop a positive attitude towards that brand regardless of the context of that placement. At the same time, marketers need to understand that there exists a peak frequency of exposure after which a “saturation” effect comes into play. Once this frequency is reached, the attitude towards the stimulus cannot increase any longer, rather it may decrease (Zajonc et al., 1972). Another crucial moderator of the strength of the mere exposure effect is cognitive involvement. This aspect is generally assumed to be quite limited when it comes to media consumption and product placement

exposure, as viewers are often only peripherally captured by the branded placement. However, video games are a medium that thrives on immersion and action-taking. In this case, the consumer is repeatedly involved in any moment leading to generally more impactful exposures.

#### 3.1.4 Product Placement Paradox and Placement Fit

Although being subject to the mere exposure effect can increase favorability towards the object and brand advertised, marketers involved in product placement strategies in media are also faced with the so-called “product placement paradox” (Homer, 2009). This phenomenon arises from the subtle line that product placement strategies need to balance between the branded object being too overt (in terms of centrality to the scene or narrative relevance) and it being too hidden or going unnoticed. The first outcome would lead to the viewer/consumer to feel “forced” into being advertised, leading to a generally negative feeling toward the brand, whereas the second outcome would simply result in the placement being irrelevant and ineffective (Gillespie et al., 2018). Indeed, less favorable brand evaluations are often related to marketers’ obvious attempts to persuade, ruining the media consumption experience for consumers (Cowley & Barron, 2008).

To account for this, the proposed solution is to obtain the so-called product placement fit. According to the model proposed by Gillespie et al. (2018), a more successful product placement is achieved when both cognitive narrative fit and affective narrative fit are in place. In detail, this scenario refers to a product placement that is in line with both the narrative structure of the media consumed and the emotion it elicits. In turn, a good fit will lead to a more enjoyable narrative consumption, preparing the consumer for a likely more successful exposure. This is true for any type of media, ranging from movies to video games, and it translates to several aspects of the enhancement of media consumption, may that be increased realism, immersion, or the development of personal connections with the story (Russell & Puto, 1999).

## 3.2 Product Placement in the video game industry

### 3.2.1 Evolution of Product Placement

Product placements existed since the beginning of the video games era but have greatly changed to keep up with ever-evolving user needs and preferences.

#### *Earliest Instances: from movies to video games*

Academic interest concerning product placement in video games developed in the 1980s. This marketing method was already flourishing in movies and TV shows, such as Zemeckis's *Back to the Future* which featured several brands for instance Nike, Pepsi, and others. However, it was not until the release of Spielberg's movie *E.T.* in 1982, in which Reese's Pieces candy was featured, that the phenomenon started to become the central focus of academic marketing literature. According to studies, parent company Hershey's experienced a notable increase in sales thanks to the placement in the movie, at around 66% (Gupta & Gould, 1997). Soon, product placement techniques started to quickly develop in other media outlets, especially in video games. Video games embodied the perfect media for marketing: an interactive nature in which players actively engage with the virtual world. Moreover, their inherent targeting characteristics to reach specific audiences and their ever-growing market growth would only amplify the results of placements. Indeed, branded products and logos would enhance realism in the game (Van der Waldt et al., 2007), however, the technological level of the 80s did not allow for product placements to be integrated in video games as well as in movies. For this reason, developers and publishers created advergames, in which the branded product would become the plot of the game made exclusively for advertising purposes (Shkil, 2021).

#### *Advergames (AG)*

During the late 80s and 90s, companies started developing the so-called advergames. They are defined by Smith et al. (2014, p.98) as "a digital game specifically designed for the primary purpose of advertising and promotion of an organization's product, service or brand played via the Internet or on a compatible medium via a games disc or digital download". The purpose of advergames is to increase brand and product awareness, attitude, and boost engagement through the positive experience of playing

(Hernandez and Chapa, 2010). Consequently, as their goal is to simply communicate a brand message, their design is generally simple, and they usually are downloadable and free of charge (Bellman et al., 2014). An early example of an advergaming is *Ford Simulator*, launched in 1987, in which players could experience driving Ford vehicles in a virtual environment limited by the technology level of the late 80s. Among the most famous and iconic examples is *Pepsiman*, a video game launched in 1999 by PlayStation in which the main character, *Pepsiman*, had to navigate various obstacles to deliver Pepsi to thirsty people. Another representative case is *Chex Quest*: developed by American breakfast cereal brand Chex, this early instance of first-person-shooter allowed consumers to fight off alien invaders using an arsenal of Chex-themed weapons. In this case, the game was a free addition included in Chex cereal boxes. Compared to earlier examples, now advergaming have shifted towards mobile platforms, as they better embrace advergaming's type of gameplay and allow firms to reach a wider and more casual audience.

#### *In-Game Advertising (IGA)*

The other face of the coin in terms of product placement in video games is in-game advertising methods. IGA places branded products within a gaming environment, but differently from advergaming, the placed brand is generally not central to the plot and not a core feature of the game (Terlutter & Capella, 2013). Extensive research has shown the positive results that IGA has on brand attitude, awareness, and purchase intention (Cicchirillo, 2019). Contrarily to advergaming, IGA is intended to take a less "blatant" approach to promoting a brand, instead of being depicted as part of the game world. IGA can take many forms, but the main distinction when it comes to product placement is whether the branded product is an interactable object and/or provides gameplay relevance, or it is simply a background immersion object whose goal is to add realism to the world.

#### *IGA: Mobile Gaming*

In-game advertising for mobile games often translates into the freemium revenue model, meaning that the purchase of the game for users is free and the revenues are gained mostly through in-app additional content, enhanced gameplay, or providing the game as an advertising platform for third parties. Indeed, in-game advertising for

mobile games is even more relevant than console games: the limits provided by the screen size, the different gaming habits, and the demographic differences of players play a central role in determining a successful marketing strategy. There is no one-size-fits-all placement, as there lies a fine line between a successful placement and something that simply disrupts the gameplay leading to lower click-through rates. For mobile games specifically, there are several ad placement types, such as banner ads, video ads, reward ads, and playable ads, and they all play different roles (AppSamurai, 2023).

### 3.2.2 Previous Studies and Variables Explored

Video games are inherently different from other channels when it comes to product placements. They allow more potential exposure time and interactivity, as the branded object will be present in the game due to being part of a specific scene. However, contrary to movies and TV, the player actively plays the game. Indeed, his/her focus is completely aligned with the game, which is different from passively watching TV in the background while doing some other light activity. Many factors influence a successful product placement strategy in a video game, and extensive research has been conducted regarding how these aspects affect the outcome. Still, many implications are yet unanswered as the relationship between marketing and gaming is ever-evolving.

#### *Congruence, Relevance, Integration*

A much-discussed aspect of product placement in the video game industry is the modality of integration in this dynamic and interactive media. Although it shares several points with more passive media such as movies and social media visual content, some characteristics take on a different angle compared to traditional media. Aliagas et al. (2021) define the concept of *congruence* as the way the brands are depicted in the video game according to their genre and aesthetics. Lee and Faber (2007) see it as “the extent to which the product category of the embedded brand is related to the content of the game”. This aspect can refer to both the relevance and fit between the game world and the branded object, as well as all the practical graphical integration of inserting the ad into the game.

The first aspect of relevance refers to the narrative fit, the connection to the game world, and, for example, whether a specific placement feels natural and contextually

appropriate to the game. Narrative fit, or plot connection (Russell, 2002), is a characteristic shared with traditional media, but is nonetheless important. Here the branded object gains narrative meaning, being an integral part of the story that the player is living. A higher level of plot connection contributes to making the story, or that particular segment of it, (and therefore, the brand) more memorable. Relevance means also that in a real-world-based game, such as *Grand Theft Auto*, everyday products and services may be easier to place (for example, in in-game billboards and shops) in terms of potential success rather than in a high-fantasy MMORPG game.

Integration is the secondary dimension, yet extremely crucial as well. A good integration highlights the difference between a prominent yet well-accepted memorable placement and something that stands out and disrupts the gaming experience (Williams, 2019). Integration refers to the ability to present the branded object naturally, according to the game's aesthetics and mechanics (in the case of an interactive placement). The goal of a good integration is to prevent the player from severing the connection with the brand in-game, and it plays a parallel role to prominence in determining a perfect balance between subtle and overt advertising.

### *Prominence*

The prominence of product placement refers to several aspects of exposure during gameplay. In detail, it concerns the relative size of the branded object in the scene, the number of repetitions, the duration of the exposure in each repetition, the centrality to the scene, and the modality of the placement (Russel, 2002; Gupta & Lord, 1998).

Prominent placements allow for an increased level of brand recall and memorability according to several studies. This effect is particularly true when the video game requires a lower level of attentional resources (Kahneman, 1973; Lull et al., 2018). Indeed, Nelson (2002) found that gamers had an easier recollection of the brands shown on billboards while playing a racing game if those brands were placed in prominent spots rather than in the background. Williams (2019) discovered that the focal point of the action of the game is where placed brands are most recalled after weeks of playing the game, and wherever the action is in the game, that is the best spot to insert the branded object.

On the other hand, when talking about movies and TV shows or other “passive” media consumption (Mrug et al., 2015), Cowley and Barron (2013) argue that generally more prominent placements lead to negative results in brand attitude when the consumer is watching a TV that he/she likes, whereas the outcome is positive in the case of a disliked program. However, the positive brand attitude outcome is only true if the placement is not preceded by a persuasive-intent prime. Also, subtler product placements that lack prominence are less likely to lead to negative outcomes, as the “risk” and “reward” of disrupting media consumption is reduced.

### *Interactivity*

Interactivity is what diversifies common media and video games. Defined as the degree to which consumers can edit and modify the form, structure, and content of an environment in real-time (Steuer, 1992), interactivity is referred to in video games as the ability to control the game world and change the course of events in the narrative story. For example, in the game *Death Stranding 2*, a player could use their character to drink a *Monster* beverage from a stack of cans in a private room. This action would give the character an actual effect, potentially changing the in-game course of events, by means of a temporary stamina boost (a mechanical effect that implies what drinking the energetic beverage would give you in the real world). Non-interactive ads, on the other hand, are often background-placed objects, such as sponsored posters placed along the perimeter of a football field in a *FIFA* video game. Interactivity gives the consumer the ability to participate and connect with the branded product (Nelson et al., 2004), shifting the attention focus completely on the advertisement while maintaining immersion within the game. Moreover, research shows that interactivity in branded products leads to positive outcomes when it comes to game experience (Wu et al. 2008).

### *Emotional Component, Interest, and Memory*

The key component and unique characteristic that video games bring as a channel for product placement strategies is the enhanced immersion and realism that a branded product can potentially provide to a game world. In turn, enhanced immersion leads the player to have a stronger emotional connection to the game. For instance, any racing game nowadays depicts dozens of different branded cars that players love which

inherently makes the game more realistic compared to unbranded made-up options. Indeed, realism is often an explicit/implicit goal for game designers, as it is an aspect often attributed to a higher perceived immersion by players (Lin & Peng, 2015) and higher game enjoyment (Wu et al., 2008). Clearly, the term realism refers to the concept of narrative realism relative to the fictional world: in a fantasy setting, the fictional branded content needs to be coherent with the fictional fantasy world and narrative (De Pelsmacker et al., 2019).

As we have already discussed, prominent placements inherently lead to a higher level of recall. However, it is important to understand how the memory of the consumer works and how product placements act on effectiveness measures through memory and learning. Firstly, we need to distinguish between implicit and explicit memory. Explicit memory is the conscious recalling of past events, often involving intentional retrieval, whereas implicit memory refers to how past episodes influence present situations without intentional retrieval (Schott et al., 2005). Thus, explicit memory affects brand recognition and recall, as well as the recollection of in-game moments linked to brands (Kantowitz et al., 2005). On the other hand, implicit memory affects the learning process through low physical effort and degree of attention, and it still has effects on brand awareness, attitude, and purchase intention without intentional retrieval of information (Babin et al., 2021).

An important aspect strongly linked to memory is interest. People intuitively agree that interest facilitates memory, as we generally remember more of what we are interested in (Fastricht et al., 2017). Indeed, many studies confirm this statement, as revised by Hidi (2001). Therefore, assuming gamers generally play games that they are interested in, it is intuitive that memory is facilitated in terms of overall placement effectiveness.

### *Game Genre*

Game genre categorization is a deeply discussed topic in academic research on video games. Due to their nature and vast differentiation, many studies have been conducted to ascertain the most accurate categorization based on different characteristics. Clearly, each game can have several definitions based on which aspect of it is analyzed. These 12 characteristics, called Facets (Lee et al., 2014), are: gameplay, style, purpose, target, audience, presentation, artistic style, temporal aspect, point-of-view, theme, setting,



mood/affect, and type of ending. However, for the purpose of our research, we will focus on the gameplay facet, as it is considered the most fundamental facet of the scheme developed by Lee et al. (2014).

According to some, gameplay could be defined as the array of several “Game Bricks” that describe the rules and set of possible actions of a video game, paired with “Meta Bricks”, which are the recurring elements in games and generally coincide with the goal and purpose of the challenges (Djaouti et al., 2008). Others, like Guardiola (2019), take a more general approach to the definition: gameplay is the actions to overcome the challenge and it “emerges from the emotionally charged interaction between the player and the game components.” (p. 2). In any case, the definition of the term is quite broad and yet intensely discussed.

Based on gameplay, the game genres proposed by Lee et al. (2014) are:

- Action: Games with a heavy emphasis on a series of actions performed by the player in order to meet a certain set of objectives (e.g., Super Mario Bros., Marvel’s Spider-Man)
- Action/Adventure: Games which are set in a world for the player to explore and complete a certain set of objectives through a series of actions (e.g., The Witcher, The Legend of Zelda: Breath of the Wild)
- Driving/Racing: Games involving driving various types of vehicles to beat other characters (e.g., Mario Kart, Need for Speed)
- Fighting: Games involving the player to control a game character to engage in a combat against an opponent (e.g., Street Fighter, Mortal Kombat)
- Puzzle: Games with an objective of figuring out the solution of obstacles to progress, often time-constrained (e.g., Tetris)
- RPG: Games that focus on the narrative story and the character development within it (e.g., Final Fantasy)
- Shooter: Games involving shooting at and usually eliminating targets, characters, objects (e.g., Call of Duty, DOOM)
- Simulation: Games featuring simulations of everyday lives, professions, and lifestyle (e.g., The Sims, Microsoft Flight Simulator, Euro Truck Simulator 3)

- Sports: Games featuring simulations of sports (e.g., FIFA 2024, NBA2K24)
- Strategy: Games characterized by players' strategic decisions and interventions to bring the desired outcome (e.g., Europa Universalis IV, Starcraft)

### 3.3 Ethical considerations

Many consumers believe that product placements are an excessive commercialization of the media and a disruption to the consumption of the content (Williams et al., 2011). However, research shows that individuals tend to like product placements unless there are too many or too overt. Indeed, they need to have a purpose that enhances the story, whether that is a narrative purpose, realism-enhancement purpose, or context-creating purpose (Panda, 2004). Moreover, regarding movies and video games specifically, the consumer cannot simply switch channels and avoid the placement, rather he/she is forced to the exposure (Hartmann & Beiersdorf, 2013). Thus, many regulations are put in place in order to ensure fair practices circa product placement advertising.

The main concerns regarding the ethical aspect of product placement advertising tend to be directed towards implicit placements, which are generally perceived as less ethical, and towards different age groups, such as children. This is particularly true when it comes to morally controversial products, such as cigarettes, alcohol brands, or pharmaceutical products (Williams et al., 2011). The exposure of persuasive messages in video games to children is processed differently, due to their cognitive development and consumer competence, particularly under the age of 12 (Uribe & Fuentes-García, 2015).

However, concerning adults, the moral aspect of product placements is viewed differently from individual to individual. Some are critical of the practice and note its negative connotations, while many others are ethically indifferent to it.

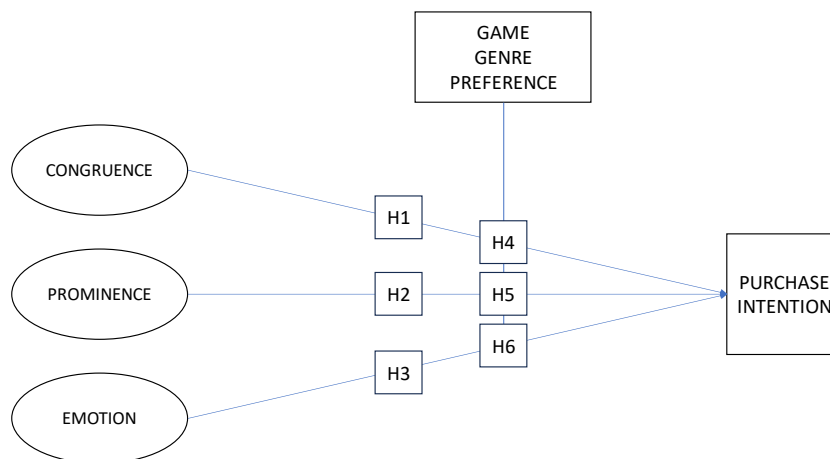
## 4. Empirical Study

### 4.1 Methods

#### 4.1.1 Study Framework and Variables

For this research, I employed quantitative methods. A quantitative study is defined as one that explains phenomena by collecting numerical data analyzed using mathematically based methods (Creswell, 1997). A quantitative research method fits the purpose of this study, as I am trying to find patterns to generalize results to the wider population.

After reviewing the current literature about the interaction between product placement and the video game industry, this study aims at providing a deeper understanding of the role of players' genre preferences on product placement choices by game designers.



Thus, the research questions are:

*H1: An increased level of perceived congruence leads to a higher purchase intention.*

*H2: An increased level of perceived prominence leads to a higher purchase intention.*

*H3: An increased level of perceived emotional connection leads to a higher purchase intention.*

*H4: Game genre preference has a significant moderating effect on the interaction between congruence and purchase intention.*

*H5: Game genre preference has a significant moderating effect on the interaction between prominence and purchase intention.*

*H6: Game genre preference has a significant moderating effect on the interaction between emotion and purchase intention.*

## INDEPENDENT VARIABLES

The 3 independent variables are Congruence, Prominence, and Emotion. These product placement design choices represent the most notable elements within games, according to academic literature. In detail, they cover several aspects of the exposure to branded products within games:

### Congruence

- Object relevance to the game world

Defines how well the branded product fits into the game from a narrative and thematic standpoint according to the player.

- Object integration

Defines how well the branded object is integrated into the game from an aesthetic and game mechanics standpoint according to the player.

- Object gameplay effect

Defines the degree to which a player could feasibly interact with the branded object as well as its impact in the game in terms of gameplay, according to the player.

### Prominence

- Object frequency of exposure

Defines the perceived frequency to which the branded object is displayed in the game.

- Object duration of exposure

Defines the perceived duration of exposures of the branded object within the game.

- Object prominence

Defines the degree of perceived prominence and centrality that the branded object had when it was displayed on screen.

### Emotion

- Immersion enhancement

Defines the degree of perceived enhancement of the player's immersion in the game due to the branded object.

- Curiosity enhancement

Defines the degree of eagerness of the player to interact and spend time with the branded object within the game.

- Memorable experience

Defines the degree of recall of moments in the game related to the branded object, as well as the overall level of re-playability of the game.

The aim is to understand if these variables influence the purchase intention of the players (dependent variable), and if the game genre preference has any positive or negative effect on these interactions.

### DEPENDENT VARIABLE

#### Purchase Intention

The degree to which a player will consider purchasing the brand portrayed in the game.

### MODERATING VARIABLE

#### Game genre preference

Game genres have been earlier defined as several different categories: Action, Action/Adventure, Driving/Racing, Fighting, Puzzle, RPG, Shooter, Simulation,

Sports, and Strategy. According to the nature of their gameplay and the reason behind playing a specific genre, the players have been split into 2 main categories. These categories, and the respective values of the categorical variable, are gameplay-driven and story-driven.

#### 4.1.2 Data Collection and Respondents

The collection of data was carried out through an online self-administered survey generated on Google Forms during December 2023. The survey was composed of 5 main sections: demographic information (age, gender, gaming habits, genre preference), interaction and immersion perception, exposure perception, emotional connection, and purchase intention. In the beginning, the participants were given a brief introduction to the concept of product placement and an explanation as to the academic nature of the questionnaire, including a paragraph including full compliance with the privacy policy regarding the collection of personal information. In any case, no personal data was required to complete the survey.

This method of data collection was chosen as it provides fast responses, and it is useful for representing such a large population. Moreover, the flexibility and inexpensiveness of an online survey were needed to ensure it was distributed to and reached more respondents. Finally, the ensured anonymity allowed for more candid and valid data.

The survey was distributed through several channels. Mainly, the social media platform Reddit, which is popular among the international gaming communities. Within Reddit, the questionnaire was posted on several gaming-related “subreddits” (which are social groups within the platform that share similar interests), to ensure that respondents would match the target of the study population and thus have some degree of gaming experience, needed to answer most of the questions. Also, a fraction of the answers was collected through other channels, such as WhatsApp, Facebook, and other online social platforms.

The population sample reached by the survey was 162 respondents, of which almost all of them had firsthand gaming experience. As age, gender, and gaming habits were not a determinant factor in the research process, they were collected as an informational control variable. According to the tests run on SPSS Software, namely Kaiser-Meyer-

Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity, the sample shows adequacy (KMO = 0.905), and the significance for Bartlett's sphericity is met (Sign. p-value < 0.001).

Test di KMO e Bartlett		
Misura di Kaiser-Meyer-Olkin di adeguatezza del campionamento.		,905
Test della sfericità di Bartlett	Appross. Chi-quadrato	2530,090
	gl	496
	Sign.	<,001

Specifically, the sample consisted of almost  $\frac{3}{4}$  males, then  $\frac{1}{4}$  females, and the remaining respondents selected either a third gender option or decided not to disclose that information.

#### GENDER

Male	116	71,6%
Female	40	24,7%
Nonbinary	2	1,2%
Prefer not to say	4	2,5%
<b>Total</b>	<b>162</b>	<b>100,0%</b>

The age distribution was quite large, as the youngest responder selected 15 and the oldest 63. However, most of the participants were included in the range of 20-30 years old. Indeed, the mean was 26,03 and the median 25. The sample was then grouped into clusters as follows:

#### AGE

Mean	26,030864	
Median	25	
<18	18	11,1%
18-24	57	35,2%
24-30	55	34,0%
30-36	19	11,7%
>36	13	8,0%
<b>Total</b>	<b>162</b>	<b>100,0%</b>

For what concerns gaming habits, the prevailing option was daily players (59,3%) followed by weekly players (25,9%). Only 2 respondents (1,2%) selected "I do not play videogames" but were still included in the sample as they may have had product

placement exposure while spectating a friend playing or in any other way. Indeed, the only surveys eliminated from the sample were those participants who stated that they had never experienced product placements in the game they played. Those participants were automatically redirected to the ending page of the questionnaire and were not part of the hypothesis-testing process.

### GAMING HABITS

I play video games daily	96	59,3%
I play video games weekly	42	25,9%
I play video games monthly	18	11,1%
I play video games rarely	4	2,5%
I do not play video games	2	1,2%
<b>Total</b>	<b>162</b>	<b>100,0%</b>

### PRODUCT PLACEMENT EXPOSURE

[Perceived]

Yes	118	72,8%
No	44	27,2%
<b>Total</b>	<b>162</b>	<b>100,0%</b>

To clean up the data and prepare it for further analysis, I generated the binary variable “Type”, which split the players in either gameplay-driven or story-driven.

## 4.2 Results and Discussion

Initially, I tested the reliability of the item scales of the questionnaire through their Cronbach Alpha value. All items proved reliable, with scores of Alpha > 0.850 (Appendix 7.1).

Then, I tested the database for validity using the Pearson product-moment validity test, thus correlating each item questionnaire score with the total score and evaluating correlations and significance with the Pearson Correlation critical values table. Once the correlation matrix was generated, every item displayed both an  $r > 0.208$  ( $r = 0.208$  is the critical value for  $N = 150$  for a 2-tailed test, with 0.01 significance) and a significance < 0.001.

To assess the significance of H1, H2, and H3, so to understand if congruence, prominence, and emotion had a direct effect on purchase intention, I ran a multiple



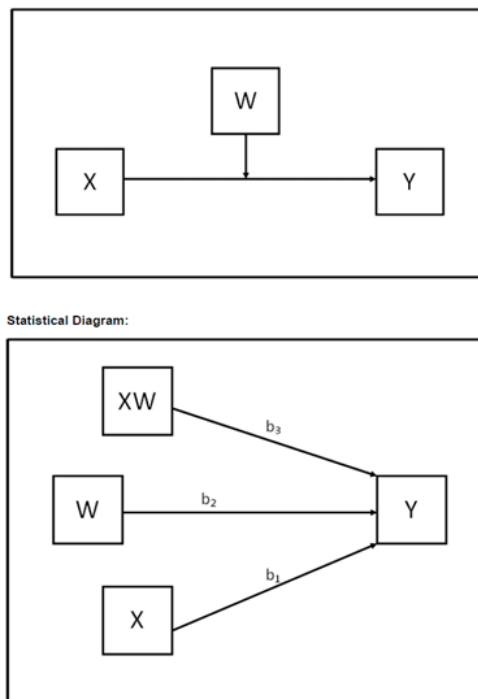
regression model using SPSS Statistical Software. From the model summary table in Appendix 7.2, the model shows an overall strong fit and predicting quality of the regressors, with an  $R = 0.824$  and the coefficient of determination Adjusted  $R^2 = 0.679$ .

The ANOVA table F value = 79.119 has a significance  $<0.001$ , highlighting that congruence, prominence, and emotion statistically significantly predict the dependent variable. In detail, from the coefficients table we can observe the following:

- Congruence has a positive and direct statistically significant effect on purchase intention, with a coefficient of  $\beta = 0.545$  and  $t = 5.749$  ( $p < 0.001$ )
- Prominence is not statistically significant, with a  $\beta = 0.000$  and  $t = -0.002$
- Emotion has a positive and direct statistically significant effect on purchase intention, with a coefficient of  $\beta = 0.454$  and  $t = 5.390$  ( $p < 0.001$ )

Therefore, the hypotheses called H1 and H3 are accepted, whereas H2 was rejected.

To test for the hypotheses called H4, H5, and H6, that is to understand whether the game genre preference has a moderating effect on H1, H2, and H3, I ran a regression analysis by applying Model 1 developed by Andrew F. Hayes. This model was retrieved through an SPSS Statistical Software extension. In detail, the statistical concept of the model is as follows:



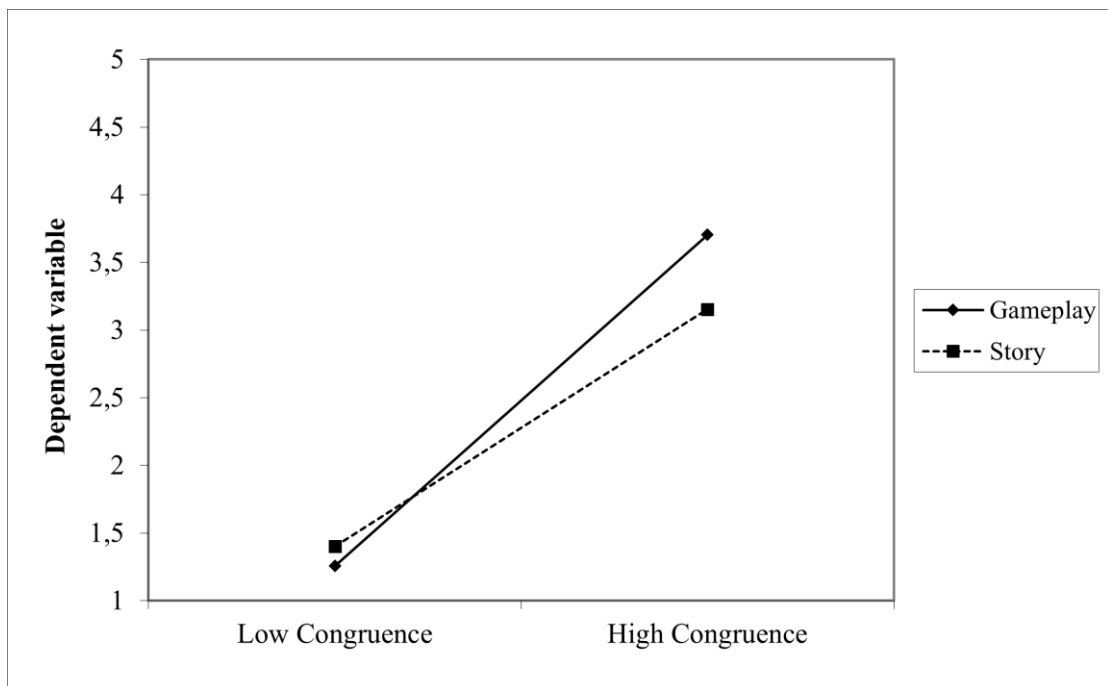
**Figure 2**

*Andrew F. Hayes' Model 1 template for PROCESS for SPSS and SAS (Hayes, 2013)*

Given an independent variable X, a dependent variable Y, and a moderator variable W, the model depicts the interactions between X, W, and Y by means of understanding if and how much the effect of X on Y changes with the introduction of W.

The moderator Game Genre Preference (W in the model) was redefined as “Type” and, as previously mentioned, this new variable was a binary (categorical) variable with 2 values: 0 meant that the player was “gameplay-driven” and 1 meant that the player was “story-driven”.

The results of this additional regression analysis show that a statistically significant moderating effect was visible only for the independent variable X = CONGRUENCE. Thus, the hypothesis defined H4 is accepted while H5 and H6 are rejected, as they are not statistically significant. In detail, Appendix 7.3, shows how the interaction between the moderator Type and Congruence is significant ( $p\text{-value} = 0.040 < 0.050$ ) supported by a parallel increase in  $R^2$  ( $R^2\text{-chng} = 0.12$ ). However, the strength of the interaction is more significant for gameplay-driven players, as we can see from the coefficients of the effects: specifically, 1.224 for Type = 0 (gameplay-driven) and 0.876 for Type = 1 (story-driven). These effects are shown in the graph below:



The graphical representation shows that for gameplay-driven players, a higher level of perceived congruence is more impactful on purchase intention than for story-driven players.

## 5. Conclusions

### 5.1 Managerial Implications

The aim of this paper was to understand if there is any direct significant effect of product placement design choices on purchase intention in video games. From the analysis carried out, we can see how the variables defined as congruence and emotion indeed show such an effect. In detail, an increase in perceived congruence and perceived emotional connection to the branded object integrated into the game leads to an increase in purchase intention. Moreover, the type of player had a significant moderating effect on the interaction between congruence and purchase intention.

The implications of these findings suggest that several aspects can improve the success of a product placement strategy. Firstly, closer attention should be paid to the congruence between the branded product and the game. This would ensure that the object integrates more seamlessly with the game's theme, narrative, and aesthetics. Also, for gameplay-focused games such as sports games, racing games, or FPS games,

it is more important for marketers to integrate the branded object with a high level of perceived congruence than in story-focus games, such as RPGs. This means that marketers need a customized approach for different segments of players highlighted through market research. A tailored product placement strategy based on different player profiles could maximize the effectiveness of advertising efforts.

Secondly, branded objects should be integrated to generate emotional connections. The placement needs to have a purpose in the story beyond something that you barely recognize in the background. This aspect can be achieved either by being part of a storytelling element or by being part of the gameplay and having the player interact with it, thus creating a more memorable experience.

## 5.2 Limitations of the study and further research

The experimental research presents both methodological and analytical limitations due to external factors and time and financial restrictions.

Although a self-conducted survey is a traditional approach to experimental studies, this research aimed at collecting perceived data on past experiences of the respondent, which can inherently be subject to several response biases. For example, the results of individual surveys may not accurately reflect the true attitudes or perceptions of participants. Also, respondents may provide answers that they generally consider more socially desirable.

To further understand the theoretical and practical implications of these findings, researchers should employ more innovative and integrated methods. For instance, the use of an eye-tracking mechanism would provide better data concerning the degree of prominence and how it affects the player's attention. Furthermore, a controlled experiment that provides the same game experience with different product placements would generate more precise results, as the effect of many underlying variables would be greatly reduced.

The channels employed for the data collection and sample method also represent a limitation. Although Reddit is a widely recognized social media platform among people in the gaming world, the United States accounts for most of the online traffic on the platform, at about 48% (Bianchi, 2024). Consequently, the sample selected may not

account for cultural differences between individuals in their attitude toward the practice of product placement.

To conclude, further research is necessary to better understand the interactions between video game design choices and marketing strategies' success, especially when it comes to product placements. With the ever-growing success of the industry and the rise of data-driven AI and the integration of VR, the possibilities are endless, specifically concerning placements of brands that ensure a higher level of congruence and emotional connection.

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## 6.2 Sitography

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## 7. Appendix

### 7.1 Reliability Tests

Congruence scale

<b>Statistiche di affidabilità</b>	
Alpha di Cronbach	N. di elementi
,870	10

Prominence scale

<b>Statistiche di affidabilità</b>	
Alpha di Cronbach	N. di elementi
,825	10

Emotional scale

<b>Statistiche di affidabilità</b>	
Alpha di Cronbach	N. di elementi
,924	9

Purchase intention

<b>Statistiche di affidabilità</b>	
Alpha di Cronbach	N. di elementi
,896	3



## 7.2 Multiple regression model – H1, H2, H3

### Descriptive statistics

#### Statistica descrittiva

	Media	Deviazione std.	N
PurchaseIntention	2,3879	1,27703	116
Congruence	2,9397	1,06354	116
Prominence	3,2457	,91722	116
Emotional	2,2845	1,21445	116

### Model summary

#### Riepilogo del modello

Modello	R	R-quadrato	R-quadrato adattato	Errore std. della stima	Modifica R-quadrato	Statistiche delle modifiche			Sign. Modifica F
						Modifica F	gl1	gl2	
1	,824 <sup>a</sup>	,679	,671	,73268	,679	79,119	3	112	<,001

a. Predittori: (costante), Emotional, Prominence, Congruence

### Coefficients and significance

#### Coefficienti<sup>a</sup>

Modello		Coefficienti non standardizzati		Coefficienti standardizzati		Sign.	95,0% Intervallo di confidenza per B	
		B	Errore standard	Beta	t		Limite inferiore	Limite superiore
1	(Costante)	-,252	,277		-,911	,364	-,802	,297
	Congruence	,545	,095	,454	5,749	<,001	,357	,733
	Prominence	,000	,082	,000	-,002	,998	-,164	,163
	Emotional	,454	,084	,432	5,390	<,001	,287	,621

a. Variabile dipendente: PurchaseIntention

## Correlations

		<b>Correlazioni</b>			
		PurchaseIntention	Congruence	Prominence	Emotional
Correlazione di Pearson	PurchaseIntention	1,000	,770	,352	,764
	Congruence	,770	1,000	,383	,730
	Prominence	,352	,383	1,000	,413
	Emotional	,764	,730	,413	1,000
Sign. (a una coda)	PurchaseIntention	.	<,001	<,001	<,001
	Congruence	,000	.	,000	,000
	Prominence	,000	,000	.	,000
	Emotional	,000	,000	,000	.
N	PurchaseIntention	116	116	116	116
	Congruence	116	116	116	116
	Prominence	116	116	116	116
	Emotional	116	116	116	116

## 7.3 Moderation regression analysis - Model 1 A. F. Hayes

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
 Documentation available in Hayes (2022). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*

Model : 1  
 Y : PUINT  
 X : CON  
 W : Type

Sample  
 Size: 118

\*\*\*\*\*

OUTCOME VARIABLE:  
 PUINT

Model Summary

	R	R-sq	MSE	F	df1	df2
p	,826	,682	,481	81,320	3,000	114,000
,000						

Model

	coeff	se	t	p	LLCI	ULCI
constant	2,481	,116	21,385	,000	2,251	2,710
CON	1,224	,125	9,780	,000	,976	1,471
Type	-,203	,151	-1,347	,181	-,503	,096
Int_1	-,348	,168	-2,075	,040	-,680	-,016

Product terms key:

Int\_1 : CON x Type

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	,012	4,307	1,000	114,000	,040

-----

Focal predict: CON (X)  
 Mod var: Type (W)

Conditional effects of the focal predictor at values of the moderator(s):

	Type	Effect	se	t	p	LLCI
ULCI	,000	1,224	,125	9,780	,000	,976
1,471	1,000	,876	,111	7,856	,000	,655
1,097						

## 7.4 Questionnaire

<b>INTRODUCTION AND GENRE PREFERENCE</b>					
Age					
Gender					
How often do you play video games?					
Have you ever experienced product placement in a game you have played?					
I prefer playing the following game genres					
<b>CONGRUENCE</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
In the game I've played, the object advertised felt natural and contextually appropriate	1	2	3	4	5
The object or brand advertised aligned seamlessly with the game's storyline, enhancing the narrative experience	1	2	3	4	5
The object or brand advertised aligned seamlessly with the game's storyline, enhancing the narrative experience	1	2	3	4	5
The object or brand advertised in the game felt highly relevant to the game world, complementing the in-game context and enriching the gaming experience	1	2	3	4	5
The object advertised in the game did not disrupt my gaming experience or make me feel like I was being advertised to	1	2	3	4	5
The interactive elements of the object advertised felt in perfect harmony with the game's mechanics	1	2	3	4	5
The object advertised maintained a consistent visual style with the game's aesthetic	1	2	3	4	5
Engaging with the object within the game provided me with benefits or advantages	1	2	3	4	5

(e.g., in-game rewards, enhanced gameplay).					
I could extensively interact with the advertised objects (e.g., I could perform various actions or engage with them)	1	2	3	4	5
The interaction with the object in the game was intuitive, and I easily understood how to engage with them	1	2	3	4	5

<b>PROMINENCE</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
I often noticed the advertised object during my gameplay sessions	1	2	3	4	5
I often interacted with the advertised object during my gameplay sessions	1	2	3	4	5
I frequently encountered different product placements related to the same brand during the same gameplay sessions	1	2	3	4	5
I often noticed the object advertised during loading screens, in-game menus, and other moments aside from actual gameplay	1	2	3	4	5
Whenever the product or brand was shown, it was visible for an extended period of time	1	2	3	4	5
Whenever the product or brand was shown, it was interactable for an extended period of time	1	2	3	4	5
I felt that the duration of exposure for branded objects in the game was substantial, making them hard to ignore	1	2	3	4	5
The object advertised had a central and integral role in a specific scene or moment in the game	1	2	3	4	5
The object advertised was often incorporated into key scenes or moments that stood out during my gameplay (narrative cinematics, highlights replays...)	1	2	3	4	5
The object advertised had a distinctive or eye-catching design, or stood out in any way from the background	1	2	3	4	5

<b>EMOTION</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
The object or brand advertised enhanced the emotional connection I felt to the game world or its characters	1	2	3	4	5
The object advertised within the game created a sense of immersion that enhanced my game experience.	1	2	3	4	5
The object or brand advertised provided more realism to my gameplay	1	2	3	4	5
Encountering the product or brand within the game evoked curiosity or interest	1	2	3	4	5
During my gameplay, I was eager to interact with the branded product	1	2	3	4	5
I felt I was drawn to interact more with the object because it was part of the gameplay (e.g., a quest-related object, a character-related object, a lore-related object, and so on)	1	2	3	4	5
I remember specific gameplay moments related to the product or brand advertised	1	2	3	4	5
I would like to replay these moments to see if things play out differently or to simply enjoy them again	1	2	3	4	5
I found it more exciting to play a game with recognizable branded objects that I've encountered in my day-to-day life	1	2	3	4	5

<b>PURCHASE INTENTION</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
Based on my experience, I am more inclined to explore the in-game featured product or brand	1	2	3	4	5
The next time I will encounter the advertised brand, I will consider it a valid option	1	2	3	4	5
Based on my experience, I will consider purchasing the brand the next time I need similar products	1	2	3	4	5