

**Transmedia Branding:  
An Experimental Study of the Effect of Gamification  
on Brand Image**

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# Abstract

While brand extension strategy has been discussed by marketing scholars for over two decades, transmedia brand extension born from Transmedia Storytelling, an advanced concept generated from the media studies, has just started appearing in the academic world. Transmedia branding, conceptualized recently by the USC Annenberg Innovation Lab, briefly summarized the recent trend of the media industry as well as branding strategies taken by a few leading companies. The concept is brand new to the business world as it is to the marketing and branding studies. This thesis aims at conducting an empirical study to provide the direct evidence for explaining the link between traditional branding studies and transmedia branding, as well as the effectiveness of transmedia branding strategy to transmedia brands and other brands, by utilizing the derived TS strategy of gamification. The results of the study show that transmedia brand extension products do generate a reciprocal spillover effect back to the transmedia brand and the gamified real brand, proving that the collaborative transmedia branding strategy that creates a brand synergy effect is helpful to both the transmedia brand and the traditional brands, especially to those old brands that are planning to change their brand images inside consumers' minds.

# 1. Introduction

A brand-extension strategy is a marketing strategy that takes an established brand into a new related or unrelated product category, in order to capitalize on the equity of the core brand name (Chung and Lavack, 1996; Zimmer and Bhat, 2004). It is a common practice born out of the hope of leveraging trust and lowering introduction costs (McCarthy et al, 2001; Meyvis and Janiszewski, 2004), since marketing directors are unwilling to take risks on a new brand when an already successful brand could potentially work in a new category. The popularity of brand extensions has been the source of research since Boush et al. (1987), and Aaker and Keller (1990).

Previous studies have proved that brand extensions produce feedback effects that may enhance or diminish the equity of the parent brand (Swaminathan et al, 2001). That is to say, the feedback impact of the extension could be positive if it reinforces or enhances the image of the parent brand (Tauber, 1988), or negative if the new associations damage consumers' attitudes towards the parent brand (Ries and Trout, 1986). People were mostly concerned about the negative impact of this strategy (Keller, 2003), and what made it worse was the risk of damage to the parent brand even if the extension was successful (Farquhar, 1989). This happens because the extension redefines the existing parent brand category by creating new associations that lead to the modification of the schema or the brand meaning

(Keller and Sood, 2003). Another possibility is that a successful brand extension indirectly dilutes a parent brand's equity by conceptually separating the parent and extension categories and by improving the customer evaluation of a "counter-extension" (Kumar, 2005) as the consumers may consider them to be competing brands. It has been proved that the stronger the familiarity of the brand extension among the consumers, the more likely the feedback effect would be negative, and the more the equity of the parent brand would be diluted (Dwivedi et al, 2005).

But for the entertainment industry, brand extension strategy could be a very different thing, for this specific industry involves more of intangible assets than tangible ones, thus the extension of entertainment brands usually does not have the negative feedback effects generated by fit, attitude, brand image, etc., (quality may be relevant even for the entertainment brands. For example, the satisfaction of the customers with the game system, the quality of a toy or figure, the story of a movie). In fact, most of the entertainment brands consist of a typical story with a group of unique characters, a very detailed chronicle setting and a long-lasting timeline. These brands first appear in one form of media to the public, get well-known and then extend to other forms of media. This is described as "Transmedia Storytelling" (TS), originally defined by Jenkins (2003) in the media studies. Under the guidance of Jenkins' concepts on TS, the brands, usually known as entertainment franchises or content brands (they are actually created by utilizing TS), are to



be called “Transmedia Brands” (Tenderich, 2014) in this thesis.

In this type of brand extension, the symbol of a character, a core story or a narrative world, occupies the most importance of all, which is something that the brands in other industries do not have. With this very different nature of this typical industry, the questions come to me in the broad brand extension study: What is exactly a transmedia brand? What is the additional value of a brand extension product from a transmedia brand? What would happen to the traditional brands if they utilize TS in their own strategies?

The first two questions are the major concern of the entertainment companies, for they need evidence to decide whether or not to carry out TS extension as the strategy for future projects or business expansion, or what exact type of media would be the most suitable form for the next extension product. In fact, we can see lots of examples of brand extensions using the transmedia brands by entertainment companies such as Disneyland by Disney, comic superhero movies by Marvel, Star Wars toys and action figures by Lucasfilm originally (acquired by Disney in 2012). Of course in Japan, there exist the Hello Kitty goods and Harmony Land by Sunrio, and extremely popular animation and movie titles extended to games by Bandai Namco Group. Companies from other industries, especially the automobile manufacturers, also have noticed the second question and the rise of this comparatively new but enormous market, and are gradually trying to link themselves more positively to entertainment for new business opportunities.

But these strategic decisions have not yet been conceptualized by any brand extension literature, and no one has actually explained how these companies decided on the brand extension and why they have been successful.

This research has its focus on the tremendously growing digital entertainment market, along with the dynamic trend of today's business world. By looking both academically and empirically into the brand extension strategies and the value creation process of entertainment companies, the author is determined to find out the dominant factors to the success of transmedia brand extension projects, and thus provide the reference for managers of both entertainment companies and companies of other industries to consider their new branding strategy development.

So far, there has been very limited literature on the subject of TS itself, and few researches on the well examined market value of TS have been found on any scholarly journals in the world. This paper aims to more specifically conceptualize the new term “Transmedia Branding”, the specific style of brand and brand extension in the entertainment industry, by reviewing Jenkins (2003)’ “Transmedia Storytelling” and Tenderich (2014)’s “Transmedia Branding”. At the same time, the relationship among parent brand, Transmedia brand and brand extension products is examined by generating an original model from the combination of the two concepts of brand extension and TS, or transmedia branding. Furthermore, by utilizing the concepts and theories of gamification, a derived strategy of TS, from the

media studies, the author would like to examine empirically the effect that a transmedia brand extension produces to the transmedia brand as well as the real existing brands involved in a brand extension product, so as to see whether TS or transmedia branding can be the most advanced universal strategy for all brands and companies for the purpose of increasing brand value or changing brand image.

## **2. Literature Review**

### **2.1 Associated Network Theory**

Associated Network Theory describes how information is stored in, and retrieved from the long-term memory. Kardes (1999) explained this theory by saying: “Each concept, idea, or piece of information stored in memory is represented as a node and each node or idea is connected to other nodes by links referred to as associations. Together, all the nodes and all the associations between the nodes form a complex associative network, in which all pieces of general knowledge are interrelated with other pieces. Ideas that are closely related are connected directly by a single association. Ideas that are less closely related are connected by a series of associations between many related concepts.”

This is to say, the information stored in one’s memory within a node is recalled when the node is activated upon receiving new related information, for example, watching an advertisement, or a trial of a movie. According to Keller (1993), recall of linked information occurs when the activation spreads from one node to another related one. Herr et al (2001) stated that the activation level from one node to the other linked nodes depends on how strong the association lies in-between. The stronger the association network is weaved, the more likely people can recall the related memory of information.

Keller (1993) explained that the nodes can represent information about

different brands. Taking brand extension studies as an example, if a brand extension product occupies one node in a consumer's mind while the parent brand occupies another, and the consumer has the information that these two things are somehow linked with each other, the activation of the extension product node can lead to the activation of the parent brand node. The resulting retrieval of the parent will produce a positive spillover effect (Balachander and Ghose, 2003). The reverse activation is also theoretically possible. The theoretical basic model is expressed in Figure 2.1.

Associated Network Theory is critical for this research, for it provides the important theoretical basis for the explanation of spillover effects and consumer evaluations of fit, quality and brand classifications, etc. through cognitive mechanism.

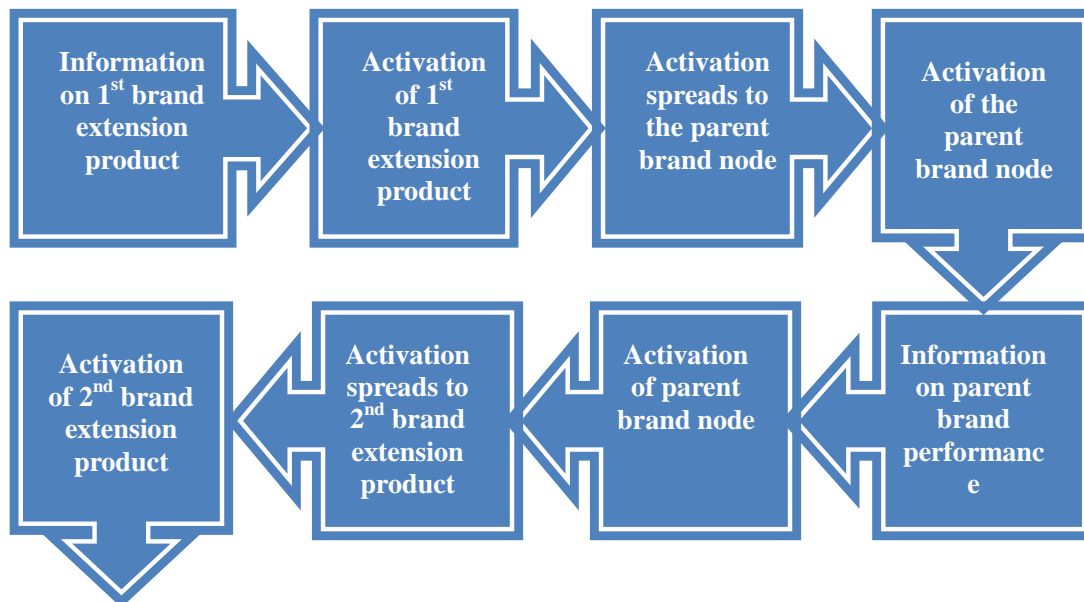


Figure 2.1 Associated Network Theory Activation Model

## 2.2 Brand Extension Research

These days, manufacturers and service providers are confronted with a serious dilemma: whether they should work on new projects or develop new products. Companies have to achieve continuous success by constant introduction of new products with the much upgraded technologies, but the cost of introducing new products or new brands has also grown substantially while the success is not guaranteed (Carter, 2007). In Taylor and Bearden (2003)'s words, "it has been estimated that almost half of all new products introduced fail within five years". As the counter-measure of this issue, brand extension was first implemented by well-known manufacturers and then studied by marketing researchers. One of the representatives of the brand extension studies, Swaminathan et al (2001) noted that:

"As competitive pressures mount, brand marketers seek ways to achieve growth while reducing the cost of new product introductions and the risk of new product failure. One popular brand strategy is to attach an existing brand name to a new product introduced into a different product category, that is, brand extension. Such a strategy is often seen as beneficial because of the reduced new product introduction costs and the increased chance of success."

With the two objectives of leveraging trust and reducing introduction costs, the very first strategic concept introduced by the manufacturers was called line extension, with the aim of reducing the risks associated with new products. This was observed by the very first researchers who noted that "a

line extension can improve the chances of success by leveraging the favorable associations related to the parent brand”, and “a strong brand name can substantially reduce the risk of introducing a product in a new market by providing consumers the familiarity of and knowledge about an established brand” (Aaker and Keller, 1990). The favorable impact from line extension to the parent brand is doubted by a number of researchers (Ries and Trout, 1986; Farquhar, 1989; Keller, 2003; Kumar, 2005; Dwivedi et al., 2005), for studies show that extension could possibly excel over the image of the parent brand and “counter-extension” could be generated (Kumar, 2005).

So the point is, there is always a mutual influence between the parent brand and the brand extension products. According to previous works of brand extension researchers, in many of the cases, the impact from the parent brand to the brand extension is favorable, but the reverse impact could somehow fail to act as a positive one, as stated in the previous paragraph. What’s more, the consumer behavior out there in the market environment is also a big factor to the result of brand extension. With this notion, the study of brand extension has been further divided into spillover advertising effect and brand extension evaluation.

### **2.2.1 Spillover Advertising Effect**

The spillover advertising effect was introduced for explaining the interaction between the parent brand and the brand extensions.

Balanchander and Ghose (2003) defined spillover advertising effect as “relevant when a brand name is used on two or more products that are separately advertised” and “the impact of Product A’s (B’s) advertising on the utility to the consumer of Product B (A)”. This definition clearly suggests that spillover effect could be bidirectional, and that the effect from parent brand advertisement to the line extension or brand extension is called “forward spillover effect”, while the reverse one is called “reciprocal spillover effect” (Balanchander and Ghose, 2003).

Banlanchander and Ghose (2003) used the concept of reciprocal spillover effect from the advertising of a brand extension product to examine the existing strategic argument for brand extensions that extensions would favorably affect the image of the parent brand and thereby influence its choice. They found that there exists a significant reciprocal effect which can increase the choice probability of the parent more than is possible with the parent’s own advertising, so they suggested that firms should favor the line or brand extension with a greater allocation of the advertising budget than otherwise. Banlanchander and Ghose (2003) also concluded that forward spillover effect is not as significant as reciprocal spillover effect.

Carter (2007) reviewed all four existing works over spillover effects including Banlanchander and Ghose (2003) and three others before the concept was introduced (Erdem, 1998; Swaminathan et al, 2001; Erdem and Sun, 2002), arguing that these works had limited number of brand categories



and did not consistently use field experiments. By designing experiments using theories of Associated Network (how information is stored in and retrieved from the long-term memory), Information Economics (customers' perspective of reducing purchase risks), Competitive Cross Elasticity (changes of quantity demanded of a good due to the change of another one) and Cannibalization, Carter (2007) found out that marketing activity on the line or brand extension has both positive and negative impacts simultaneously and can exhibit either a net positive or a net negative impact on the parent brand, depending on the degree of fit between the two products. Carter also noted that similarity and concept consistency between the brands are the decisive factors for favorable reciprocal spillover effect.

### **2.2.2 Brand Extension Evaluation**

Brand extension evaluation takes the point of view of the consumers and tried to figure out what are the distinctive characteristics of brand extensions that largely influence the shopping attitude of the buyers towards brand extension products. Prior researches have demonstrated that consumers' evaluations of these brand extensions depend primarily on two factors: the perceived quality of the parent brand and the perceived fit between the parent brand and the extension category (Aaker and Keller, 1990; Bottomley and Holden, 2001). Concerning the importance of fit, there are arguments saying that a good fit between brand and the extension category has been widely

considered a necessary condition for favorable consumer reactions (Völckner and Sattler, 2006), while other studies have cast doubt on this assumption saying extension evaluations can be increased directly by favorably regarded brand names (Bottomley and Holden, 2001; Klink and Smith, 2001), especially in competitive market environments (Milberg et al, 2010).

Based on the well-established researches over consumers' evaluations of brand extensions, Meyvis et al (2012) proposed that the relative importance of quality and fit is influenced by two key features of a typical shopping environment: the presence of visual information and the availability of comparison brands. In particular, they proved that adding pictures and enabling brand comparisons shift consumers' preference from extensions of better-fitting brands to extensions of higher-quality brands, for usually brand extension studies did not include comparisons or visuals, and most studies presented respondents with extensions that were to be evaluated either in isolation or in the context of other extensions of the same brand. Therefore, they believed that, given that decision environments vary in the marketplace, researchers examining the potential success of a brand extension should consider the nature of the consumer decision context in their studies, while managers should enhance consumers' extension evaluations by communicating more effectively in addition to predicting consumers' reactions to extension.

Focusing on the topic of the importance of fit to successful brand

extensions, early brand researchers embraced cognitive categorization perspectives of “Fit as Similarity” (the associations between the parent category and the extension category) (Aaker and Keller, 1990; Boush and Loken, 1991; Dawar, 1996; Herr et al, 1996), and “Fit as Relevance” (the associations between the parent brand and the extension category) (Park et al, 1991; Broniarczyk and Alba, 1994). The very recent research conducted by Spiggle et al (2012) introduced “brand extension authenticity” (BEA) as a new determinant of brand extension success and a complement to fit. Defined as “ a consumer’s sense that a brand extension is a legitimate, culturally consistent extension of the parent brand”, BEA has taken culture and consumer relationships into account, demonstrating that it is important for predicting brand extension success and enhancing brand value through four dimensions of maintaining brand standards and style, honoring brand heritage, preserving brand essence and avoiding brand exploitation, thus guiding managers to conduct market segmentation according to strong or weak self-brand connections inside consumers, and distinguish authentic brands from inauthentic ones for different strategies (Spiggle et al, 2012).

Other studies have shed insight on the impacts of different brand categories and consumers’ thinking habit on the elasticity of products. Researchers have found that consumers are more likely to extend brands with prestige concepts into distant product categories than brands with functional concepts, which cause functional brands to be more elastic among consumers

(Park et al, 1991). Monga and John (2010) discovered that holistic thinkers provide more favorable responses to distant extensions of both prestige and functional brands, while analytic thinkers are reluctant to consume distant products of functional brands. Monga and Gürhan-canli (2012) took another perspective from mating mind-sets (consumer decision influenced by companions) and found that males' attitude towards brand extensions is largely influenced by the mating mind-sets, so that managers can use special events (Valentine's Day, etc.) to raise males' favorable responses toward both prestige and functional brand extensions, while launching brand extensions using a sub-brand architecture instead of a direct brand architecture can boost evaluations for female consumers.

## **2.3 Transmedia Storytelling (TS)**

### **2.3.1 Definition of TS**

The term "transmedia" was first used by Kinder (1991), referring to the deliberate employment of intermediality in the design of commercial story worlds for children. Such commercial cross-media franchising, branding, and merchandising practices were pioneered by Disney and have now moved into the Hollywood mainstream (Wasko, 2003).

Jenkins (2003) later described how increases in the complexity that audiences expect from their entertainment in the feasibility of sharing digital assets across multiple media forms and the entertainment industry's rapid

growth and eagerness for wildly profitable multi-media franchises, fostered the establishment of a new type of entertainment. Therefore, he introduced the concept of TS. In another work of Jenkins, he defined the term as the following: “A transmedia story unfolds across multiple media platforms with each new text making a distinctive and valuable contribution to the whole.” (Jenkins, 2006)

Based on Jenkins’ concept, Scolari (2009) described TS as “a particular narrative structure that expands through both different languages (verbal, iconic, etc.) and media (cinema, comics, television, video games, etc.).”

In the ideal form of TS, “each medium does what it does best – so that a story might be introduced in a film, expanded through television, novels, and comics, and its world might be explored and experienced through game play. Each franchise entry needs to be self-contained enough to enable autonomous consumption. That is, you don’t need to have seen the film to enjoy the game and vice-versa” (Jenkins, 2003). Jenkins later summarized this as: “at the most basic level, Transmedia Stories are stories told across multiple media. At the present time, the most significant stories tend to flow across multiple media platforms” (Jenkins et al., 2006).

### **2.3.2 Characteristics of TS**

Long (2007) distinguished TS from the term “Adaptation” by saying “retelling a story in a different media type is adaptation, while using multiple

media types to craft a single story is transmediation". He argued that the adaptation of an original work, such as Jackson's Lord of the Rings Trilogy films, cannot reflect the component "distinctive" in Jenkins' definition towards TS, which can be seen in a transmediation, for instance, Wachowskis' Enter the Matrix video game, since it contributed an original chapter to the Matrix story (Long, 2007).

In his research, Long (2007) stated that TS needs to have three basic characteristics to successfully attract the audience: negative capability (the art of building strategic gaps into a narrative to evoke a delicious sense of uncertainty, mystery or doubt among the audience), migratory cues (a signal towards another medium – the means through which various narratives paths are marked by an author and located by a user through activation patterns) and six classes of Hermeneutic Codes (the elements in a text that introduce, further, and conclude the mysterious elements running throughout the text, including culture, character, chronology, geography, environment and ontology).

With these guiding principles for creating a TS story in mind, it is safe to argue that the main difference between TS and ordinary storytelling methods is that "a transmedia story is often the story of a world" instead of a single character. In addition, Jenkins' definition emphasizes "a distinct and valuable contribution" from one extension of TS to the whole narrative franchise (Long, 2007).

### 2.3.3 TS Production

TS is practically favorable among entertainment creators, for it creates a unique product that cannot be put in traditional market competition and is deeply accepted by a specific group of customers who cannot be easily taken away by other products. As Jenkins put it, “a good transmedia franchise attracts a wider audience by pitching the content differently in the different media. If each work offers fresh experiences, then a crossover market will expand the potential gross within any individual media” (Jenkins, 2003). In this context, The Matrix and Harry Potter are not just names of movies or narrative sagas for young readers; they’re heavyweight narrative brands that express themselves in different media, languages and business areas (Scolari, 2009). The process of developing digital narrative products in the entertainment industry is called “TS production” by Long (2007).

TS has its supporter base because of its characteristics. In a transmedia product, “the viewer/user/player (VUP) transforms the story via his or her own natural cognitive psychological abilities, and enables the Artwork to surpass medium. It is in transmedial play that the ultimate story agency, and decentralized authorship can be realized. Thus the VUP becomes the true producer of the Artwork” (Dinehart, 2008). That is to say, TS not only tells a story to the people interested in the content written by someone, but also creates a platform for the users to place their own imagination on it for

further creations, which can be widely seen in the form of interactive games. In this way, the TS worlds become the audiences' own worlds in their minds and thus cannot be removed easily, which ensures the strategic success of TS production.

The Business potentials of TS come from the nature of TS products and mass customer base (audiences at the same time). Transmedia storytelling practices may expand the potential market for a property by creating different points of entry for different audience segments (Jenkins, 2007), assuring TS to be an excellent way for corporations to extend their base and target different groups (Scolari, 2009).

## **2.4 Transmedia Branding**

### **2.4.1 Brand Fiction**

Taking narratives into branding is not absolutely a new strategy in our business world recently. Companies have long considered situating a brand inside a fictional narrative as a way to leave a deeper impression in people's minds. This was defined by Scolari (2009) as "brand fiction", namely the very first attempt to utilize transmedia elements for business significance.

Traditional TV commercials using scenarios or melodramas to demonstrate specific features of a product can be a good example of brand fiction. Scolari (2009) describes this as "in these narrative worlds, women can wash better, men can drive faster, and children can be happier if they use a



certain ‘magic’ product”. Another alternative brand marketers have taken is the so-called “embedded marketing technique” or “product placement” (Galician, 2004; Segrave, 2004; Lehu, 2007; Scolari, 2009), which stands for the strategy to place a product from a certain brand inside a soap drama, a movie or other types of fictional narratives to naturally show the functions of that product without solely commercial demonstrations. Although it is suggested that product placement is effective for targeting a specific segment of potential customers through more relevant content (Van der Walldt, Nunes & Stroebel, 2008), more researchers see this technique as a controversial one, for large numbers of customers find product placement annoying and distracting, and consumer groups have been urging the government to ban this subtle form of advertising (Ong, 2008). It is suggested that prominent and poor placements can negatively affect brand attitude, thus this strategy needs careful consideration on “positioning” (Ong, 2008) and “expressiveness” (Cowley & Barron, 2008).

#### **2.4.2 Rise of Transmedia Branding**

People are annoyed with commercials before or in TV programs, promotion events in supermarkets and department stores, and countless advertising emails they receive every day. Many consumers view these and other marketing events as a “necessary evil” that they have to tolerate in order to gain access to subsidized news and entertainment, and “whenever

possible, they look for ways to ignore these messages”(Tenderich, 2014).

On the other hand, marketers promoting their products and services find themselves struggling about the advertisement ideas, and in many cases also unsatisfied with the results afterwards. They adopted the most creative idea to attract potential customers, spent enormous amounts of money just to ensure their messages are received. However, “50% of all advertising is wasted, but we don’t know which 50%” (Tenderich, 2014). The core issue about traditional marketing techniques in today’s society is described by Searls & Weinberger (2001) as: “There is no market for your messages.” For people who have no interest in the messages companies deliver, or when companies turn people away by using these pieces of “annoying” information, it is meaningless, or even harmful to their business operations no matter how much money they spend, how big cost they have.

Searls & Weinberger (2001) also argued that “markets are conversations”. Tenderich (2014) made an explanation to this argument with the following words:

“This is a reference to a time that predates mass marketing when people gathered in physical places to discuss products with vendors and, more importantly, with other people like themselves. More important than the messages proclaimed by vendors was this engaging dialog.”

“The core problem of mass advertising is that it cannot cater to this type of individualized discussion. These impersonal, non-relevant messages lead

consumers to tune out or, worse, become irate.”

These words remind the author of the period when Sony’s Walkman first got into the market. According to “Sony History”<sup>1</sup>, the company arranged a huge and creative market campaign for the product launch, which included product demonstrations in front of the Sony Building in Tokyo, different types of advertisements in every available media channel, and a bus tour for the press to try the fascinating features of this new product with detailed explanations. Unfortunately, these marketing events failed to help the company set off a rush-to-buy boom, and at same time, cost it a lot of money, which made the situation worse. The marketing department of Sony had no choice but to make a last attempt. Sony equipped its young employees with Walkmans, asked them to dress like fashionistas, and ordered them to stay at the hot places in Tokyo where young people gathered the most as well as in the trains. This operation turned out to be incredibly successful, since the stylish Sony employees who pretended to be just “passing-by”s attracted the eyes of so many youngsters. These trendsetters initiated talks to the “stranger” wearing the Walkman, asked for a try and then rushed to the stores selling the new gadgets. Moreover, the trendsetters no doubt included some of the idols and stars who posed their photos of using Walkman in magazines and talked about their experience with the product on TV shows. These moves also boosted the awareness of Walkman and the later on

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<sup>1</sup>Translated and summarized from the original Japanese article on Sony’s homepage.  
<http://www.sony.co.jp/SonyInfo/CorporateInfo/History/SonyHistory/2-06.html#block4>

Walkman Hot.

Coming back to the core issue of traditional branding, it is actually easy to know what usually people think about marketing or advertising when taking a look at the advertisements from the consumers' perspective. Facing thousands of advertisements coming from everywhere, every channel, any moment of their everyday life, people feel forced to receive information that has nothing to do with them. When forced, human beings gain pressure, which makes them tired and even more reluctant to hear from others. The vicious circle of ineffective marketing comes from the human nature. Talking about human nature, it is also understandable that marketers or corporate managers are anxious about letting people know their products as fast as possible to attract potential buyers. But in this modern world where people are blindly pushing messages to others and continuously receiving messages from those they never know in real life, why don't we change our way of thinking about marketing to engage more personal conversations with our potential customers, deliver something interesting by people and let them come to us, or even let the customers participate in the product development process and figure out their own marketing campaigns for us?

All these may be achieved by utilizing TS in forming the brands. Transmedia Storytelling, as Scolari (2009) pointed out, "introduced a mutation" to brand fiction, and changed the branding perspective from

“brands as narrative worlds” to “narrative worlds as brands”. That is to say, when TS is added to the business strategy of branding, something different is formed from this combination, in contrast with the former thought of marketers trying to add brands to the digital narratives. Instead of rigidly attempting to leave deep impression of the icon-and-logo-based traditional brands inside customers’ minds through other narratives, brands and franchises based on TS have their own brand-related narrative worlds or characters, thus attracting people to spontaneously view these stories and leaving a stronger impression in viewers’ memories. Buckner & Rutledge (2011) explained this when they made the preliminary step for what they called “Transmedia Marketing through Storytelling”:

“There is a new consumer brain, thanks to a participatory culture with on-demand information. The networked world has unleashed our basic human drive to connect. Individuals have new expectations about how they relate to everything—people, products, organizations, and society. In the new consumer brain, media is experiential, relationships are fundamental, and collaboration is essential. Transmedia storytelling creates a meaningful relationship with your audience with participatory elements that transform pre-customers into customers, fans and brand advocates.”

“It’s one part psychology, one part new media technology, and two parts story.” (See figure 2.4.2)



Figure 2.4.2 the new consumer brain according to digital media development  
(Buckner & Rutledge, 2011)

Buckner & Rutledge (2011) also came up with three reasons from both the psychological and financial perspectives as to why companies and marketers should utilize transmedia storytelling for branding and marketing: “1. Persuasion: Transmedia stories are the most fundamental and immersive form of communication, engaging our brains at the intuitive, sensory and executive levels; 2. Audience Connection: Transmedia strategies create many points of entry that reach and link multiple demographics and target different user needs to effectively expand the customer base; 3. Financial Impact: Transmedia storytelling redefines ROI, extends brand self-life, and creates value added IP assets and ancillary revenue streams.” With these reasons, they suggested that TS can help marketers easily achieve capabilities that

brand fiction can hardly guarantee: “1) deliver a clear and memorable message that engages the brain at all levels; 2) use the distinct properties of different media distribution channels to reach and engage different audience segments with different points of entry; and 3) create mutually-reinforcing channels as you tap into the power of audience participation.” (Buckner & Rutledge, 2011)

Tenderich (2014) expressed similar opinion about the significance of TS to branding by emphasizing narrative and engagement based on Jenkins’ new era media theory: “If old branding models were based on tight control over the circulation and messaging, such controls are no longer practical or desirable in a world where, if it doesn’t spread, it’s dead.” With this idea, he suggested that “in this atmosphere, organizations need to embrace new engagement strategies that increase the range of possible and permissible meanings associated with brands, that open up valid channels of communication with all stakeholders, and that play out across the full range of possible communication channels” (Tenderich, 2014).

Before 2013, a number of concepts had emerged from this cutting-edge topic of Transmedia Storytelling’s application on branding such as “Narrative Branding”<sup>2</sup> (Ringer, 2004), “content marketing”, “content branding”, “Transmedia Marketing through Storytelling” (Buckner & Rutledge, 2011),

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<sup>2</sup>Extracted from the website run by Randall Ringer, the founder and CEO of Verse Group. Although the term “Narrative Branding” has been used by many different authors without proper copyright citations, Ringer declares the ad mark of the concept in his bibliography. “Narrative Branding” is said to be written up and introduced in Kotler & Keller’s Marketing Management, 14th Edition. Please find more information on this site: <http://narrativebranding.wordpress.com/about/>

etc., but the most advanced and systematic conceptualization is done by the USC Annenberg Innovation Lab, led by Burghardt Tenderich, an associate professor at Annenberg School for Communication and Journalism, University of Southern California, with Henry Jenkins. The team was the first to academically argue and formally publish the concept of “transmedia branding”<sup>3</sup>, which is described as “a new method of cross-channel communication” emerging “in the midst of a period of profound and ongoing media transformation that will rewrite the rules around branding and strategic communication” (Tenderich, 2014). The concept was developed under the guidelines of TS and with the direct support from the TS founder Henry Jenkins.

Tenderich (2014) argued that “with content playing an increasingly central role in communication”, concepts including transmedia branding and others “provide new ways of developing and establishing brand personality, while turning communication into a participatory process that brings the brand to life”, based on his emphasis on engagement from attractive stories.

Based on Jenkins’ definition on TS, transmedia branding is defined as “a communication process in which information about a brand is packaged into an integrated narrative, which is dispersed in unique contributions across multiple media channels for the purpose of creating an interactive and engaging brand experience” (Tenderich, 2014).

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<sup>3</sup>The phrase “transmedia branding” has already been mentioned in previous works of Jenkins (2006) and Long (2007), but none of them had done the thorough conceptualization of it.



### 2.4.3 Characteristics of Transmedia Branding

Tenderich (2014)'s concept of transmedia branding communicative framework relies largely on “collective intelligence, participatory audience techniques and spreadable content”. By focusing transmedia innovation on these elements, transmedia branding strategy can enhance the effectiveness and reach of brands by:

**“Promoting Participation as a Brand Value:** Transmedia storytelling's focus on meaningful participation as a core brand value incites the type of consumer and employee engagement that deepen brand loyalty.

**Harnessing Collective Intelligence to Deepen and Evolve the Brand:** As brand fans participate more actively, transmedia storytelling techniques allow an organization to use this collective intelligence to co-create, expand, and sustain communication together. Working collectively, they deepen, enrich, and even map the details of the brand's ‘storyworld’ across media and from many different perspectives. This collective intelligence also helps a brand track and responds more quickly and effectively to a highly fragmented and ever-changing media landscape.

**Generating Spreadability:** One of Henry Jenkins' latest concepts is that of ‘spreadability’, an alternative to ‘viral’ marketing and communication. Spreadability stresses the active choice of individuals and networks to pass along content they find socially meaningful, while the viral analogy describes

media circulation ‘in which people become unknowing carriers of powerful and contagious ideas which they bring back to their homes and work place, infecting their friends and family’ (Nieman Journalism Lab, 2010). Transmedia collective intelligence and participatory techniques can greatly help the spreadability of brand messages.” (Tenderich, 2014)

Tenderich (2014) also indicated that “perfect illustrations” of successful transmedia branding strategy, which foster “engagement between brands and their target markets”, appeared to share a common set of “building blocks”, in other words “design elements” or characteristics including “narratives, participation, and brands”. Figure 2.4.3 is presented by the USC Annenberg Innovation Lab (Tenderich, 2014) to show these notions, along with the dominant elements that enable them.

Transmedia Branding Design Elements		
<b>Narratives</b>	<b>Participation</b>	<b>Brands</b>
Memes	Culture	Protagonists
Media	Communities	Markets

Figure 2.4.3 Design Elements of Transmedia Branding (Tenderich, 2014)

#### 2.4.3.1 Narratives

Tenderich (2014) found it the most significant element to distinguish transmedia branding from the traditional branding behaviors. He explained the importance of narratives to modern branding by saying: “People appear to be innately interested in stories. High-quality stories can be created and

shared by almost anyone, quickly and broadly” (Tenderich, 2014). Moreover, he argued that the notions of narratives and media are “inextricably” linked, for “a narrative cannot exist – would not be heard, seen, read or experienced – outside a medium” (Tenderich, 2014). For the purpose of transmedia branding, the word “media” here refers to “a broad variety of communication channels”, or broadly speaking, any existing type of media that is accessible to the crowd, ranging from “interpersonal interactions to pictures, music, art, letters, books, billboards, objects, and certainly traditional mass media as well as social media” (Tenderich, 2014).

The “narratives” notion is deeply rooted in “spreadability”, just like its dependence on media. In the media context of “if it doesn’t spread, it’s dead” (Jenkins, 2009), stories getting retold by either the author or someone else are “stories people find easy to understand, meaningful and emotionally engaging” (Tenderich, 2014). Transmedia branding strategy helps companies to “tap into the apparently primitive draw to good stories and the expanded access to tools that allow people to create and share them” (Tenderich, 2014). Tenderich (2014) also argued that it is “ultimately an exercise in engaging storytelling”, with a very basic and vital goal for people to get interested in the story and pass the story along. Otherwise, the strategy will be a failure. One of the very vivid examples of this is a meme (Tenderich, 2014), which stands for images, ideas and other contents imitated and transmitted from an original well-known one, like a street graffiti of a political campaign poster.

Tenderich (2014) emphasized that no narrative combination of more than one medium qualifies his definition for transmedia branding: “On their journey from and to different groups of people, the story bits frequently move across channels and, as people may add, delete or change content, may become altered in the process.” What’s more, the Internet is not a precondition for transmedia branding, due to the fact that “transmedia narratives have existed for as long as humans have communicated” (Tenderich, 2014).

#### **2.4.3.2 Participation**

“The narrative seeds reasons for the audience ‘to care’. Once people are intrigued they gravitate to the story and actively seek ways to participate. Completing call to actions such as Facebook liking a post, emailing a video to a friend, tweeting a signup link, commenting, submitting user-generated content or passively watching a video on a sponsored YouTube channel are forms of participation. The nature of transmedia branding allows for the audience to participate as much or as little as they want and only with content that they find interesting.” (Tenderich, 2014)

Tenderich (2014) believes that participation is at the central position of the transmedia branding process. By introducing audience/user participation in the branding strategy, transmedia branding is able to turn the “necessary evil” into “precious treasure”. Although other researchers have expressed very similar opinions beforehand (Scolari, 2009; Buckner & Rutledge, 2011),

Tenderich (2014) explained why he thought so by the previous paragraph. His idea makes sense, since we clearly know how people react negatively towards the traditional one-direction brand messages. Moreover, his words suggests that participation is not a section automatically brought out by transmedia narratives, but something equally important to the transmedia branding strategy with the narratives, or even more important sometimes. Participation covers “a wide spectrum of activities, ranging from passing on conversations to leaving comments on blogs or articles to generating new content, parodies and additional storylines” (Tenderich, 2014), and these actions are those that have brought people to the narratives, and linked them together on people’s own will. Tenderich (2014) clarified more about his own definition on participation of transmedia branding by these words: “In addition to creating, changing and spreading content, effective participation relies on additional notions: culture, community and policy.”

Tenderich (2014) argued that taking consumer culture into account is vital to the participation strategy of transmedia branding, for “creating spreadable content first requires a deep understanding of target audiences and their cultures”. In his opinion, brands need to read and consider popular culture in order to target the right people and engage target audiences/users successfully in their branding processes. Popular culture is in “constant flux” and involves “generational, ethnic, geographic and religious dimensions”, and these dimensions “weigh heavily” in how people react to brand communication

(Tenderich, 2014).

When companies understand culture better, they can then foster “brand communities” that provide the spaces for users to communicate with the companies and other users, and let them feel that they are not just consumers, but also parts of the brands. Tenderich (2014) raised the example of Harley-Davidson, which was a dying brand transformed into world leading motorcycle brand by its fan communities around the globe. It is rather easy to find all kinds of fan communities either online or in reality, but most companies underestimated the functions of these communities, and most erroneously closed the opportunities for company-community communications.

Lastly, the impact of policy on how widely and freely opinions and content are shared cannot be ignored. As Tenderich (2014) puts it, “Policy regulates many aspects of public life, such as the right of free assembly, copyright law or net neutrality.” It is obvious that less restrictive policies either from the nation or from the company encourages participation, as people are allowed to freely “gather, speak, change, create and spread content” (Tenderich, 2014).

#### **2.4.3.3 Brands**

The foundation that transmedia branding puts its innovative blocks on is the brand. Brand is the basis for branding as well as transmedia branding. Without a brand, no matter how good the narrative is, it is nothing more than

a narrative. All brands are created for the purpose of achieving success in the marketplace, and they all have some kind of icon. What is new about Tenderich (2014)'s transmedia branding is that a transmedia brand requires a protagonist main character, and might even benefit from secondary characters to be expressed in the form of a narrative. In this sense, “individuals themselves can turn into transmedia brands” (Tenderich, 2014), as long as these individuals exist, and their life stories are told and recreated.

Tenderich (2014) argued that many of the entertainment franchises and brands that are made into multiple forms automatically fall into the range of transmedia branding. However, most products or services in the market that people purchase “do not come with a ready-made story they want to share” (Tenderich, 2014). Since a narrative is central to transmedia branding, these companies selling traditional goods and services are presented with two options: “create a story or join a story. Whichever route they choose, in order to be consistent it is essential that the story – topic, tone, characters, etc. – is in alignment with the way a brand speaks and behaves” (Tenderich, 2014). To support his viewpoint, Tenderich (2014) gave two examples: shower gel company Old Spice deriving a storyline from its old CM, and Air New Zealand collaborating with the Lord of the Rings.

#### **2.4.4 TS Production &Transmedia Branding**

However, since there exist different annotations to the subject of branding

with TS, it is necessary to make the distinction between the two major concepts of “TS production” and “transmedia branding”. Long (2007), the first to elaborate and formulate the rightest TS production, distinguished his idea from transmedia branding of “distinctive and valuable contribution” in Jenkins’ words, arguing that as an ideal process for product generation in the entertainment industry, TS production contributes to a single, overarching story through narrative cohesion and canon, while transmedia branding sets separate storylines or timelines for separate media products, emphasizing the franchise names rather than the original story. He suggested that perhaps “the truest form of transmedia storytelling” is more likely to overlap with Dena (2007)’s concept of “transfiction”, which indicates that transmedia narratives from TS productions follow a single timeline and have their opening chapter told in an animation, its second chapter told in a game and its third chapter experienced in a feature film, while transmedia branding allows recreations of the same stories, and other creators to take the franchise characters to different directions in different products, including toys, action figures, theme goods and licensing (Long, 2007).

Scolari (2009) took a different approach from the semiotic perspective, defining that transmedia brands, like the Matrix, 24 (Fox TV series) or Harry Potter, are “founded on a set of characters, topics and an aesthetic style that define the fictional world of the brand”, and “narrative worlds are brands”. He suggested that no matter which form the extension takes or which timeline



the extension follows, the “hierarchy of values” including the characters, topics and an aesthetic style is the “distinctive attribute” of a TS brand that can be “translated into different languages and media” and “the movable’ set of properties that can be applied to different forms of expression” (Scolari, 2009). Scolari (2009) also noted that “in fan fiction, even consumers can participate in the expansion of the fictional world by applying this set of attributes to create new situations and characters”, so as the most advanced form of “brand fiction”, there should not be such distinction between TS production and transmedia branding.

Tenderich (2014), on the other hand, hardly mentioned a word about TS production, but he did express his thoughts on how different tranmedia branding is from pure TS. He suggested that the most important argument for tranmedia branding is to achieve success in the marketplace, and all the other elements that make tranmedia branding different from either traditional branding or pure narrative have to serve this purpose, which means to achieve higher brand awareness and better consumer-brand engagement. Furthermore, Tenderich (2014) claimed that even though many transmedia entertainment franchises naturally fall into the area of transmedia branding, transmedia branding should be the kind of strategy that every company should adopt for survival in the current and future marketplace, rather than a specific policy taken by entertainment companies in the entertainment industry.

In order to thoroughly distinguish transmedia branding from TS production, the author utilizes the framework modeling method to establish the conceptual models of both notions for visualization and a better comparison of the differences.

Under the guidance of the Associated Network Theory, the author employs the spillover effects theory and brand extension evaluation theory in an attempt to express the whole value creation and consumer responses of a specific transmedia brand extension to the transmedia brand, and to the parent brand, as well as the same criteria of the parent brand to the transmedia brand and the extension product. There are two different models of the examination process established with the help of the academic conceptual formulations of the above mentioned researchers and authors.

#### **2.4.4.1 TS Production Model**

The TS Production Model, following Long (2007)'s descriptions, can be described in Figure 2.4.4.1. In this model, the three major components are the parent brand, the transmedia franchise brand and the medial brand extension products of several forms of media, for instance novel, comic, animation, drama, movie and game. The brand generated by the TS production cannot be called a transmedia brand, because the reason that this transmedial content franchise does not really work as the brand concept in the marketing studies, but rather just as a name of the franchise.

The brand extension products from the TS production process follow one single story timeline, and each one of the extensions contributes a distinctive episode to the timeline. The extensions interact with each other, leading the audience to the end of the story. The consumers can go into the story world at any point of the extension, and emotionally respond to the product, producing a reciprocal spillover effect back to the transmedia franchise brand. The transmedia franchise brand then spills back to the parent brand, and then the consumers can decide whether to search more information about the story or the characters in other extension products of the same franchise. As for well-established parent brands, there will also be a forward spillover effect towards the transmedia brand and related brand extension, attracting fan audiences to go into the story world.

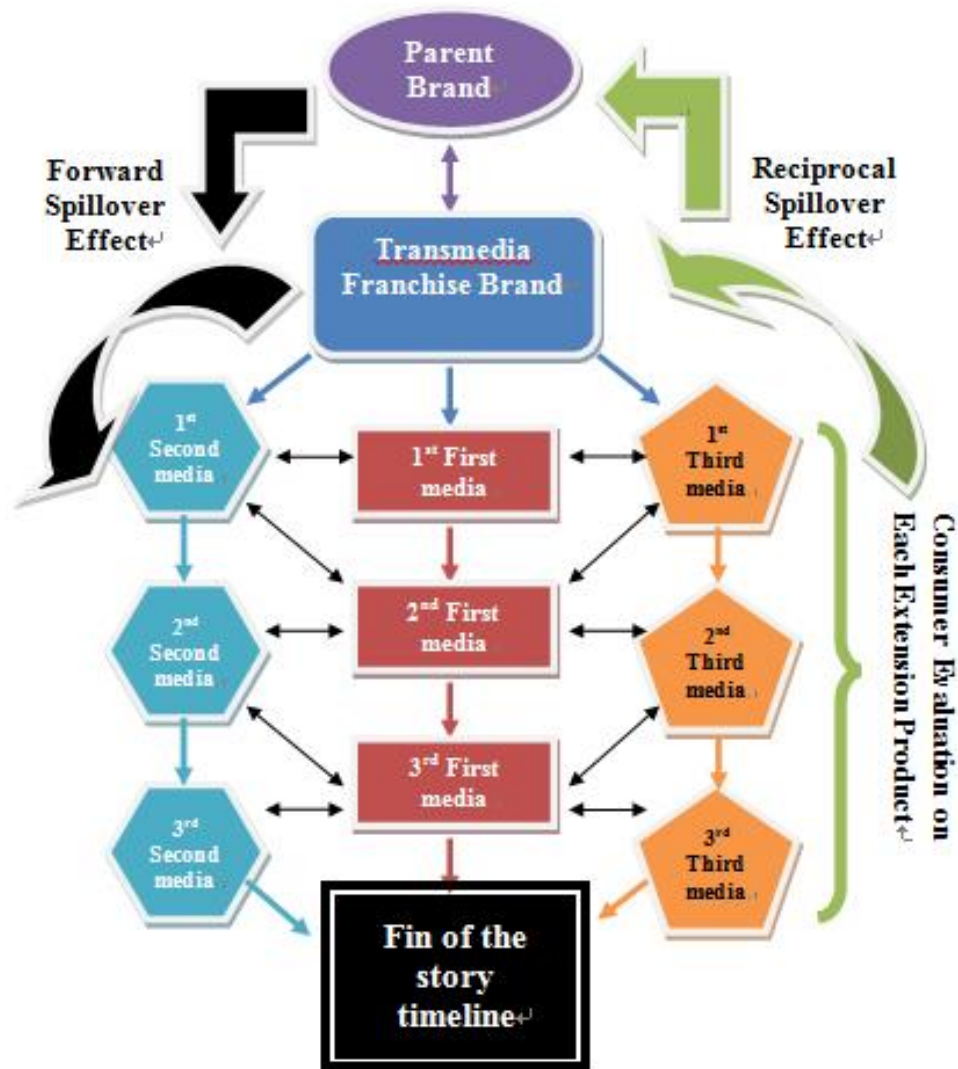


Figure 2.4.4.1 TS Production Model

In this model, the elements involved follow strictly Jenkin's principles of TS, and the story timeline dominating the model contributes significantly to the success of the transmedia franchise brand, because the rationality of how each extension product unfolds its story and how it contributes to the development of the total narrative world determines how people judge the quality of the extension products. Besides, this model only exists in the

entertainment industry, for it does not involve the manufacturing process of any other physical product. Entertainment companies using the TS production model put enormous effort on creating sceneries and plots that would surprise their VUPs, trying to fit the products to the taste and ideals of the VUPs. However, they also have to arrange their business course more specifically since “a central transmedia product design challenge is to effectively reconcile business logic, audience logic, and aesthetic logic in a family of offerings” (Davis, 2012), and “tiering may require tradeoffs between narrative-centricity and audience-centricity” (Merkin, 2003).

#### **2.4.4.2 Transmedia Branding Model**

Figure 2.4.4.2 indicates the model under transmedia branding strategy. The difference between the TS production model and this model is that transmedia branding model adds transmedia brand related goods, including toys, action figures and other themed functional products, and possibly brand licensing and brand collaboration into the total business model.

The transmedia brand is everything in this model. It stands for the narrative world, or sometimes the main characters, instead of the main stream or original story. This significant symbol links all the other parts of the model together, including the parent brand, the transmedial extensions and other merchandises.

The brand licensing can initiate story creations other than the main

timeline according to the same set of values --- namely the narrative world --- by different authors and producers, and the fan consumers themselves as well. In this way, the narrative world coming from the original story becomes the brand, so even if the original story ends somewhere, the TS of this narrative world does not stop and can continue to have various brand extensions that create additional equity to the transmedia brand. In this model, it is more likely that the main story first spills over reciprocally back to the parent brand, and then the parent brand generates forward spillover to the related goods and licensing.

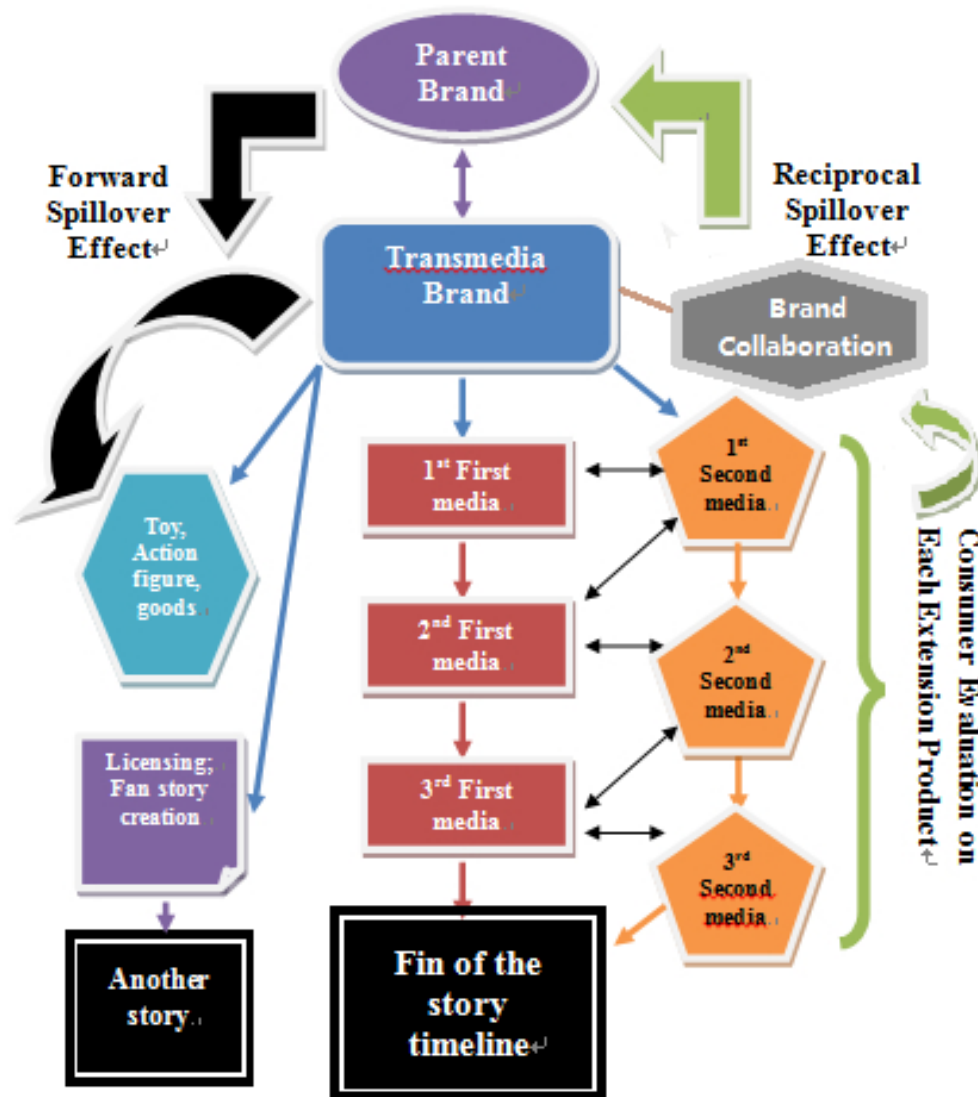


Figure 2.4.4.2 Transmedia Branding Model

One more thing worth mentioning is that this transmedia branding model can be applied to any company in any industry, or even any organization with a specific purpose under Tenderich (2014)'s idea, no matter what they produce or provide. Many entertainment companies already start organizing their businesses according to the elements of this model, but they are not the only

ones that can apply the transmedia branding strategy in the near future. Firms of other industries can either collaborate with existing famous transmedia brands and try to fulfill their business purposes with the help of these transmedia brands (such as automobile manufacturers coping with racing games, and convenience stores and fast food chains appearing in movies), or develop their own unique stories that fit the culture of the organization or the image and functions of their major products and services, and become transmedia brands themselves.

#### **2.4.4.3 Discussions**

By comparing the visualized models of TS production and transmedia branding, the author believes that all the arguments mentioned at the beginning of this section can be true depending on the perspectives they take, mainly the time periods and the industries. The author himself considers TS production as one type of strategy inside the big scope of transmedia branding. It was at the initial development stage of digital entertainment that companies could make up fancy stories and bring them to the big screens, where the majority of the audience were fascinated merely by watching the fantasies created by someone else. Nowadays, most people around the world have multiple accesses to digital contents, and they seek participation in the narratives, and enjoy placing themselves in the narrative worlds they prefer. It is now the age of transmedia branding.



The common thing that all previous researchers and scholars paid great attention to is the narrative world formed by the unique set of values created by the first author in the first story, no matter which form the story appeared in. The narrative world is exactly what appealed to the readers/customers when they decide what to purchase. In the entertainment industry, the narrative world is what people come up with when they hear the title of a franchise --- the brand name in most cases. This should be one of the essential matters that all companies need to figure out carefully, and the author believes “fit” of the traditional brand extension principles also applies here.

In real situations, the issue standing in front of an entertainment company owning a successful masterpiece, is whether to inherit the fame of the masterpiece and create a continuation out of it based on the already established audience base, or to start a new project based on the brand awareness of the parent company, or to distrust the intangible assets and brand value. Top management people of those companies have little idea of what exactly each path would bring them, for they cannot test the strategies one by one in reality, and no one can help them anticipate the precise value generated by the extension product both to the transmedia brand and the parent brand, since the existence of both successes and total failures in all the three paths mentioned above created an extraordinary complicated situation. They may not even know whether there really is a value or not among the transmedia brand, the extension products and the company brand.

## 2.5 Gamification

### 2.5.1 Definition of Gamification

The word “gamification”, coming from the digital media industry, got hugely widespread in the second half of 2010, although its first appearance was in 2002 (Marczewski, 2012), and the first document about this topic can be traced back to 2008 (Deterding et al., 2011).

Deterding et al. (2011) collected the existing terms that share similar or fully overlapped concepts, including “funware”, “playful design”, “productivity games”, “game layer” and “applied gaming”. They studied the papers themed by these terms together with the actual phenomenon of “a rapid proliferation of mass-market consumer software that takes inspiration from video games”, and defined “gamification” as “*the use of game design elements in non-game contexts*”. That is to say, “gamification” uses game elements for a purpose other than sole entertainment expectations, including “*engagement and improvement of the user experience or the joy of use*” (Deterding et al., 2011). Specifically, the authors suggested that for further empirical studies and actual implementations of “gamification” and “gamified” systems and applications, it is necessary to adjust between “gamefulness” and “playfulness” in terms of design goals as well as user behaviors and experiences, because “playing” is more a free and improvisational action while “gaming” is more rule-oriented and that there is more competition that works

towards defined goals or achievements. For one example, the term “gameful design” – design for gameful experiences– was also introduced as a potential alternative to “gamification” (Deterding et al., 2011). Also, Deterding et al. (2011) suggested that, in comparison to games on the one hand and utility software on the other, a distinct quality of “gamified” applications is their relative openness to varying situational modes of engagement – gameful, playful, and instrumental.

Fukada (2011) expressed the similar opinion in his book when exploring the background reason for the successful boom of social games (social network games). Recognized as the very first Japanese scholar of “gamification”, Fukada created his own theory of “gamification framework” (GFW) to show how successfully social games utilized gamification to attract users and motivated them to engage in the games frequently. He suggested that GFW contains six factors, which are purpose, visualization, targets, social action (inviting close friends, leader boards, etc.), game cycle and continuous improvement (translated from the points 1 to 6 listed in Figure 2.5). In this way, social games utilize both the strengths of social networking services (SNS, including profiling, blogging, twitting, and chatting) and “gaming”. People, both gamers and non-gamers, get attracted by the colorful functions of social games at the first sight, for they do not feel trapped by the game and have the flexibility to control what to play, when to play, who to play with,

how much to play and whether or not to spend any real money. However, when they start to engage in the social games, the “gaming” element begin to stimulate the senses of competition and challenge inside people’s minds when they see the game progress information shared by their friends and try to become up-levelers by all possible means including those that are not free.

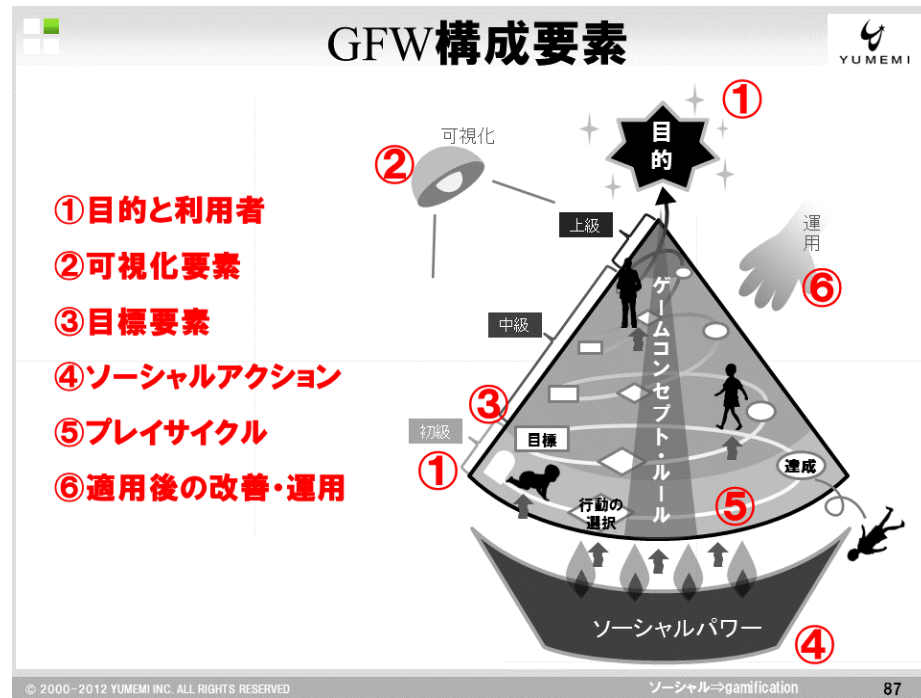


Figure 2.5 Factors of Gamification Framework (Fukada, 2011)

As a brand new area in both the business world and the academic world, there are countless versions of defining the word “gamification” (Deterding et al., 2011; Fukada 2011; Marczewski, 2012; Brieger, 2013; etc.). However, these definitions all share one common concept: “gamification” is applied to businesses other than that in the pure gaming industry by partially implementing elements used in creating a game, for the purpose of improved

user attraction, user engagement, customer retention and so on. As Fukada (2011) explained in his GFW theory, gamified applications achieve their purposes because of the human nature to desire and search for competition, involvement, achievement, status, self-expression, cooperation and a sense of accomplishment. Successful gamification cases happen to give tasks to users, induce them to engage in and fulfill the tasks, then get to a higher level and continue to cycle.

### **2.5.2 Gamification, Marketing & TS**

Some scholars argue that gamification is already widely applied in marketing (Van Grove, 2011), while some others believe that gamification is the cutting edge technique for new marketing strategies and plans (Brieger, 2013). But so far, there has been no precisely published work to prove the positive link between gamification and marketing. In fact, considering the coverage of marketing in real life with innumerable real cases and the complexity of marketing strategies, it is rather hard to tell the relationship between gamification and marketing.

However, by narrowing down the sampling range to the transmedia brands in the entertainment industry, the author can assert here that gamification is one of the derived strategies for transmedia storytelling. By gamifying an existing transmedia brand, story makers put the same narrative world in games or gamified applications, retell the same stories or create new

continuing episodes to attract both readers and gamers. It may be much more possible to prove the marketing effectiveness of gamification through the effect from gamification to transmedia brands.

### 3. Theoretical Framework and Hypothesis

Continuing with the argumentation of Section 2.4.4, the theoretical model the author wants to test is the transmedia branding model, with Figure 2.4.4.2 presented here again for a clearer explanation.

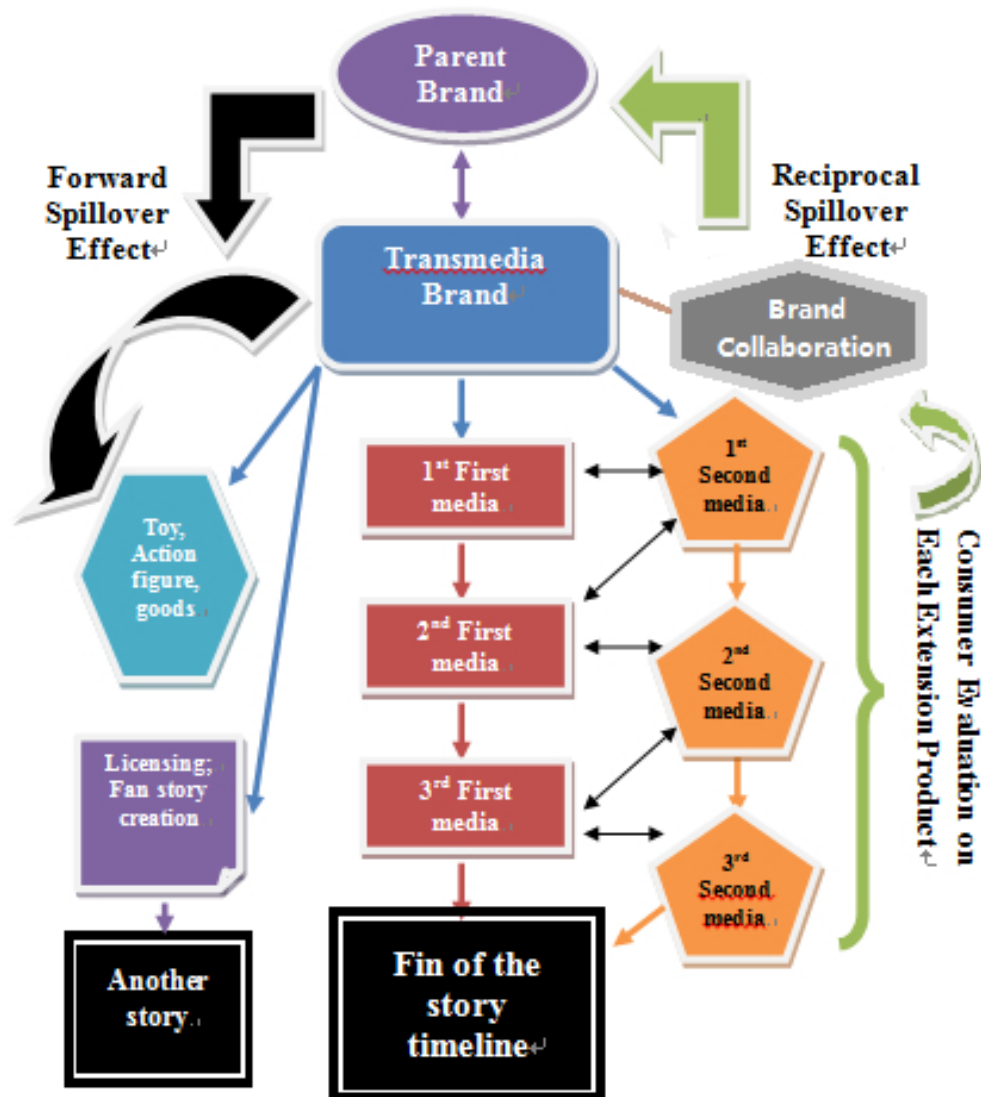


Figure 2.4.4.2 Transmedia Branding Model

Elements in the transmedia branding model can expand to infinity theoretically, especially due to the intangible or shapeless extension products that don't exist in real world. But as argued before, the major players can be summarized as the transmedia brand, the extension products in general, the parent brand, and the collaborative other brand, and the main effects that theoretically may exist are the reciprocal spillover effect from the lower level to the upper level, as well as the forward spillover effect from the upper level to the lower level, according to the spillover effect theory in the traditional branding studies. These two effects both emerge from audience evaluation on the end products. The author assumes that the consumer evaluation on every single extension product provides, either positively or negatively, a separate brand value creation on both the transmedia brand and the parent brand, and also on the collaborative brand if participating in the extension product.

With so many participating elements in the model, it is rather difficult to judge which value is of the most importance, or which value needs quicker examination. Thus, as a first step, the author brainstormed about the arguments that are worthy analyzing. What's more, although the transmedia brand can be adopted by any business organization in any industry, starting the analysis from the entertainment industry -- the industry that the model originated from -- can avoid complication at this stage and provide more explicit evidence for general argumentation.



### 3.1 General Hypothesis

Considering the nature of the entertainment industry, the author raises the following hypotheses according to the models established.

H1: the reciprocal spillover effect from brand extension products to the TS brand is always positive.

H2: the reciprocal spillover effect from TS brand to the parent brand is always positive.

H3: the forward spillover effect from the parent brand to TS brand and TS brand extension products is always positive.

H4: TS production model and TS branding model can coexist.

H5: TS production model is a section of TS branding model.

H6: the first media used for initiating the TS brand is crucial for attracting the largest audience (consumers) possible.

H7: brand extension evaluation from consumers is the vital criterion for the decision of brand extension or new brand launching.

H8: the “characters” in one TS brand are the main attractions to the audience, bringing more TS extensions through characters.

H9: the world outlook of the TS brand is the main attraction to the audience, bringing more TS extension through the world figure or storyline.

In both models established in the previous chapter, the number of participants (the extension products) can range from one to infinity. The

question here, continuing the argument in Section 2.2.3, is how to calculate the brand value created by the participants, and whether the spillover effects are positive or negative. In order to solve this question, the author would like to start the research by measuring the reciprocal effect from one transmedia brand extension product to the transmedia brand. If the reciprocal effect appears to be positive, the brand extension product does increase the transmedia brand value, and thus the models illustrated above can be certified as academically valuable, ensuring the feasibility of further verifications.

### **3.2 Core Hypothesis**

By recalling Section 2.5.2 of this paper, using gamification to examine the existence of positive reciprocal spillover effect from a game or a gamified application to the original transmedia brand would be one of the most efficient methods to catch the immediate empirical evidence for this study. The reason here can be related to the audience size, age composition, income levels, consumer behavior, time duration and other factors corresponding to each media form (See Appendix 5.1 for detailed media genre classification), but arguments about efficiency, time duration and interactivity of the chosen media form must be considered more than anything else. A game or a gamified application can involve the audience in the specific narrative world, attract the audience to seek more information interactively, and offer the very

straight information without consuming much time (this argument only refers to a typical piece of information, excluding massive information sets such as the whole storyline). Other media forms may also be feasible, but most of them are not as appropriate as games or gamified applications, for they can either be time-consuming (like movies, TV, and open events) or not interactive (like Internet webpages, books, and comics).

The most direct method to prove the positive reciprocal effect from the brand extension product to the transmedia brand, as well as other hypotheses raised above, is to acquire actual sales data of a specific transmedia brand, and utilize trend diagram analysis to compare the sales marginal increase between the period before a certain brand extension product is released and the period after the release of that product. However, with limited access to the sales data of real companies, it is indeed impossible to implement this method.

By switching his way of thinking, the author supposes that a virtual experiment would also explain the same argument. Considering that sales data is largely influenced by customers' willingness to buy the products, and brand value is all about what image the customers have towards the brand, how deeply the brand image stays in people's mind and how positively people think of the brand, the author supposes that his experiment can focus on these two questions: whether the experiment participants change their image towards the brand after taking the experiment, and whether the experiment

increases their purchase intention towards the brand in the future. Thus, the core hypotheses appear as follows:

**Core Hypothesis 1: A game or gamified application improves users' image of the transmedia brand.**

**Core Hypothesis 2: A game or gamified application increases users' purchase intention towards the transmedia brand.**

In some cases, a transmedia extension product does not only include the original imaginary story and contents, but also some contents related to real existing products and brands. This phenomenon is described as collaborative branding, co-branding, brand alliance, cross promotion and so on in marketing studies (collectively taken as collaborative branding in this thesis).

The aim of such collaboration between different brands is to create “brand synergy effect”, a positive effect discovered originally from the co-existence of different brand extension products under one single brand, but derived currently to the additional value created by the combination product of two different brands as well. Brand synergy effect, according to Shine, Park & Wyer Jr. (2007), offers brand extension products “synergistic effects on evaluations of one another independently of their similarity to the parent, leading both to be evaluated more favorably than they would if each were considered in isolation” in physical business. However, this effect has not been academically proved in other business conditions, and is especially unknown in the entertainment industry. Based on the fact that collaborative branding

is already widely applied in digital entertainment businesses seeking for the same brand synergy effect, another two interesting questions arise here:

**Core Hypothesis 3: A game or gamified application improves users' image of the gamified real brand towards the direction it desires.**

**Core Hypothesis 4: A game or gamified application increases users' purchase intention towards the gamified real brand.**

## **4. Research Methodology**

### **4.1 Research Design**

#### **4.1.1 Research Program Design**

In order to examine the two sets of core hypotheses discussed in the previous chapter thoroughly, the author has designed an experiment to provide the first-hand quantitative data for this thesis. The primary focus of the experiment is to clearly capture the brand attitude change or brand impression change of the participants towards a gamified real brand, as well as to examine the assumed existence of reciprocal spillover effect and brand synergy effect created by transmedia collaborative branding (the reciprocal spillover effect from an extension product to both the transmedia brand and the gamified real brand), with the theoretical support of the discussed arguments and theories from both branding studies and media studies. Thus, the author has come up with two possible programs to carry out this study.

The first program of experiment aims at creating a sudden situational change after introducing the test participants to a certain situation or scenario, and recording the very fresh responses from the participants right afterwards. The reason behind this idea is to reduce the number of interfering attributes to the minimum in creating a vacuum space to test the change of the desired one or several variables. This idea can be assured by the prescript space within a determined short period of time. The experiment time can vary

a little bit, but it has to be short. Otherwise, the first impression of the participants towards the tested variables cannot be captured, and the long experiment duration may also destabilize participants' mental state, which will also create undesired bias toward the procedure.

The second approach to this experiment is to conduct the whole process through a comparatively long period of time. This idea comes mainly from the issue of limited conditions, including place, time, number of participants, smoothness of the procedures, etc. As one current university student, the author of this thesis has compared the environment of the university with other available places such as the central district of the city and shopping malls, and is convinced that the university campus is the best place for this kind of experiments according to the list of limited conditions. The university students have more free time, know all kinds of information, are open to new thoughts, and, more importantly, are willing to help if it is for research purposes. And there are a large number of people there on the campus every day. In addition, the author can meet the same people at different points of time, which makes it possible to test the brand attitude change of the participants within a certain period of time, e.g., two to three weeks, if the participants are college students. When the experiment is conducted over a long period of time, the number of disturbing attributes will be considerably larger than those in just a short period of time. In that scenario, the author tries to find a way where he can ignore those attributes while the change of

the tested one is still visible. Following this logic, the author keeps it in mind that the average accumulated increase of brand attitude and purchase intention is the target attributes that he is looking for. This accumulated attitude increase towards a certain brand exists in people's minds as long as it takes place, whether this increase is positive or negative. Moreover, being the very first empirical research on the topic of transmedia branding, and more specifically, the positive value creation of transmedia branding, the aim of this research is to prove the existence of positive value generated from strategic combination of brands with TS, instead of the exact amount of value. In that sense, the bias or the interfering attributes will not appear so disturbing, since the expected results are just "yes" or "no", and probably "positive" or "negative".

By comparing the advantages and disadvantages of the above mentioned two methods, the author finally chooses the comparatively long-term experiment program. This decision is supported by the two criteria of feasibility and credibility. Firstly, talking about feasibility, although creating a vacuum space for eliminating the interfering attributes and capturing the sudden impression changes are ideal ways to pursue this study, it is rather hard to do so in reality. The short implementation time would be the biggest problem, for the author has to gather the minimum number of participants required, lead them to designated rooms, organize them into different control groups and test them in just a few hours all by himself. Such a tight schedule



may result in unexpected misses and mistakes to a team. The long-term experiment approach, on the other hand, allows the author to arrange the experiment schedule much more flexibly, with enough time to set up the rooms, tactically plan the whole procedure, gather the needed number of participants, divide them into several control groups and carefully collect the data. Secondly, the credibility of the expected results coming from both programs need to be compared. The short-term approach focuses fully on how to reach the designed goal. It is one of the most efficient ways to successfully achieve the target. But since the test environment is also specially created, it is not clear whether the same result can be achieved in normal conditions. However, the long-term one is designed under normal circumstances, making the same concern unnecessary. Besides, with such long time to disperse the momentary pressure, the experiment conductor is also able to involve a larger base of participants, so that the final results can be more trustworthy for such a quantitative research.

#### **4.1.2 Research Stimulus Design**

In this experiment, the author has selected “vehicle racing game” from the game genre classification shown in Appendix 2 to be the situational change incident. One reason behind this choice is simply that there are much more real existing brands in vehicle racing games, compared to the others from different categories. Another reason is that vehicle racing gamers seek

simulation of real-life experience rather than fictional experience, which means vehicle racing games can make users experience what they want to try in reality, but have no opportunity to experience yet. These two reasons are vital for the current study of the emotional change of consumers towards both the transmedia brand and the real existing brand.

The game selected for the examination is Gran Turismo 6<sup>4</sup>, a famous vehicle racing game developed by Polyphony Digital, and released by Sony Computer Entertainment Inc. on December 5, 2013. Gran Turismo is the transmedia brand for the popular and critically acclaimed series of vehicle racing video games developed exclusively for Sony Computer Entertainment's PlayStation gaming consoles since 1997, and Gran Turismo 6 is the latest release of the series. The franchise, advertised as "the real driving simulator", is intended to emulate the appearance and performance of a large selection of vehicles, nearly all of which have been licensed reproductions of real world automobiles (except Porsche A.G. and De Tomaso due to license issues), while Gran Turismo 6 has the up-to-date collection of the world, with a special set of cars designed from the world's leading auto manufacturers exclusively for the game. Since the brand's first debut in the last decade of the 20th century, over 70 million units have been sold worldwide for PlayStation platforms, making it the highest selling video game franchise under PlayStation trademark.

Gran Turismo 6 is chosen for this experiment for two reasons. Firstly, the

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<sup>4</sup>More Information can be found on Gran Turismo's official website (<http://www.gran-turismo.com/>).

Gran Turismo brand perfectly fits the Transmedia Branding Model established in the previous chapter (Figure 2.4.4.2). With six episodes and 15 more expansion packs, the series structured a perfect racing world for gamers to experience since the 1990s, fit the players in as racers, let them experience the professional lives and compete with others for the championships. Other than games, Gran Turismo has a number of peripheral products, one finished movie about the history of the franchise, and another one still filming with an original storyline under the same worldview. Moreover, the transmedia brand has got two more real events: Gran Turismo Award for selecting the best user-customized cars and including them in new games, and GT Academy for selecting the best Gran Turismo gamers to become real racers in reality, building itself to be much more than just a franchise title.

Secondly, Gran Turismo 6 is so far the most suitable product in the current marketplace to test the core hypotheses, namely the brand image change of both the transmedia brand and the real existing brand. As mentioned before, the series' newest game has collaborated with most of the world's leading automobile manufacturers by a project named "Vision Gran Turismo", having these car makers to create "concept models giving a unique insight into the future of the automotive sector"<sup>5</sup>. The first "Vision Gran Turismo" car emerged from the project in the grand opening of Gran Turismo 6 was "Mercedes-Benz AMG Vision Gran Turismo", with the news released on

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<sup>5</sup>“‘Vision Gran Turismo’ Announced”. Released on August 20, 2013 by gran-turismo.com. [http://www.gran-turismo.com/us/news/00\\_3377315.html?t=visongt](http://www.gran-turismo.com/us/news/00_3377315.html?t=visongt)

both Gran Turismo official website and Mercedes-Benz homepage. According to Lüder Fromm, Head of Global Marketing Communications, Mercedes-Benz Passenger Cars,

*“Video games are perfectly suited to precisely addressing young, modern target groups on an emotional level. Gran Turismo 6, with its uncontested reputation as setting the benchmark in the racing-games genre, provides the perfect platform for creating an interactive experience with a new, visionary concept for a Mercedes-Benz’s super sports car. We are certain that the concept vehicle will inspire millions of gamers and Gran Turismo fans worldwide.”*

Clearly, Mercedes-Benz was trying to utilize the platform of video games to refresh its brand image from a classic luxury car maker to a modern innovative automobile manufacturer, and expand its targets to young groups also. With this move, Mercedes-Benz became the exact real existing brand for the current experiment, and the author utilizes the AMG Vision Gran Turismo to test whether the experiment participants change their attitude towards Mercedes-Benz by actually controlling the imaginary super sport car in the game. This test cannot be done without using Gran Turismo 6, which makes the one of a kind game a crucial part of this research.

Since Gran Turismo 6 is a Playstation 3 only game, a set of Playstation 3 gaming console is the minimum standard for carrying out the experiment. However, from the author’s own experience, it is rather difficult to arbitrarily

control the fast going sporty cars in the Gran Turismo game by using original PS3 controllers. Especially for most of the girls and other people who are not good at either driving or playing a game, they may already be frustrated with the buttons and all kinds of controls before they actually get to touch the attractive sweetest part of the game. And even though the graphics and details in the game are highly simulated, driving a car by a game controller can hardly set the players in the scenario. So with the purpose to highly simulate the racing situation and to conduct the experiment more smoothly, the author decided to include Logicool (Logitech) Driving Force GT LPRC-14500 as the additional supportive equipment. Here is a quick glance of the product LPRC-14500 in Figure 4.1.2.



Figure 4.1.2.1 Logicool (Logitech) Driving Force GT LPRC-14500<sup>6</sup>

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<sup>6</sup>The image was retrieved from this site.  
[http://ucas.cocolog-nifty.com/blog/2011/02/ps3-5\\_7-4b2e.html](http://ucas.cocolog-nifty.com/blog/2011/02/ps3-5_7-4b2e.html)

The Logicool product Driving Force GT series is the highly simulative controller set designed and sold specifically for the Gran Turismo games. LPRC-14500 is the latest modified version of the series. The product has a dual shock steering wheel and a pedal panel with the basic break and acceleration to reproduce the simplified driver's seat. The product is easy to use, and the unique function of force feedback makes the certain track status in the game possible for the player to feel with his or her hands and feet. Such track or road status includes wet road surface on rainy days, and uneven roads in the mountain ways. Figure 4.1.2.2 is how the integral experiment facility looks like.



Figure 4.1.2.2 Set-up view of the experiment equipment<sup>7</sup>

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<sup>7</sup>This facility in this picture is not the actual equipment the author has used. This photo is just an image of how the installed equipment can be. The picture is retrieved from kakaku.com. <http://review.kakaku.com/review/K0000152856/ReviewCD=424279/ImageID=51626/>

### 4.1.3 Experiment Method Design

Now there is one more element of the whole experiment process that needs consideration: the experiment method. Before entering the method selection, it is necessary to divide the participants into control groups based on what the author wants to investigate.

Since the experiment stimulus is chosen to be the conceptual super sporty car “Mercedes-Benz AMG Vision Gran Turismo” from the racing simulating game Gran Turismo 6, the basis for the author to set the control groups should be whether a participant has played the game before or not. This is the essential question that needs to be answered before any further survey, because of the reason that those who have already experienced the game or the fans of the franchise have a clearer idea of the game and probably the tested conceptual car than those who know nothing about them. This knowledge difference naturally sets the groups of audience apart, and those who are blank about Gran Turismo are the right targets for the author to bring this game experience in and observe their attitude changes on both the game and the Mercedes-Benz brand. Besides, it is dangerous not to separate the participants, for the test results from people of different backgrounds would hedge with each other, and that brings bias to the experiment procedure and may cause the loss of truthful outcomes.

Another criterion to divide the control groups is the type of situational change incident. Although it has been discussed in the previous space that the

experiment stimulus is fixed on the Gran Turismo game, the brand attitude increase in participants' minds can hardly be credited on the actual involvement of the game if there is nothing to compare with. For example, if the experience of watching a traditional commercial of Mercedes-Benz can create very much similar extent of brand attitude increase or brand impression change to that generated by playing the game, that means gamification is worthless to the branding strategy of the German luxury car maker, and the author cannot expect any further positive outcomes from this research. Thus, the author decides to split the whole participant group into another three: one with the experiment stimulus of the game, one with a traditional advertisement clip, and the rest with no event.

By the end of control group determination, the discussion of experiment methods to be utilized can be put on the table. The first method that came into the author's mind was the pseudo experiment method. *A pseudo experiment* is an experiment done to all of the participants without introducing any subjects or controls. That means, the participants receive the same test in their normal conditions, and the test conductor himself compares the difference of the results of the distinct control groups. In the case of the current research, every single one that is selected by the research program gets the same test or survey questionnaires in the first place. While the test questions don't differ, the results do. The data analysis after the pseudo experiment is where the differences of the control groups come in. In the pseudo experiment, the



possible brand attitude increase and brand impression change of all the participants are recorded, and the result from the “no Gran Turismo experience” group is compared with that from the “Gran Turismo experienced” group.

Another conductible experiment is the before-after experiment. *The before-after experiment* is as easy to understand as its name. This is the battlefield for the experiment stimulus to take place. In the before-after experiment, the brand attitude increase and brand impression change of a single control group, which here stands for the “no Gran Turismo experience” group, is compared between the record beforehand and the result after the situational change incident has done its work. One thing worth mentioning here is that the before-after experiment method taken in this study is a crossover before-after experiment. With the existence of “no event”, “Gran Turismo game” and “traditional advertisement” sub-groups, not only the results of the whole “no Gran Turismo experience” group can be compared, but also the analysis in each smaller group and between each two smaller groups are feasible. Especially the data analysis among the three smaller control groups is vital to proving the strategic value of gamification to branding as well as the importance of transmedia branding. The crossover before-after experiment method provides much more varieties to the data analysis process and result interpretation.

It is a difficult decision which experiment method to choose, since both

methods seem reasonable and worth trying. Considering the experiment duration of two to three weeks, the author believes that as the conductor, there is enough time and energy for him to carry out both experiments, and actually the two can be merged into one smooth process. The pseudo experiment can be conducted first for the initial data, and then the author needs to provide the time for the “Gran Turismo game” group and the “traditional advertisement” group to experience the situational change incident, wait a few days for the control groups to digest the incident and stabilize their new brand attitude and brand impression, and finally unfold the before-after experiment. The data collection should be done right after each procedure, but the data analysis of both experiments can be combined after the whole process is finished.

To conclude this section, the research design follows a comparatively long-term schedule of two to three weeks. There are two large control groups called “no Gran Turismo game” group and “Gran Turismo experienced” group, and there also exist three smaller groups with the names of “no event”, “Gran Turismo game” and “traditional advertisement”, which are split by another criterion. With the aim at observing the average accumulated brand attitude increase in participants’ minds on both the selected transmedia brand and collaborative real brand, the study has included a pseudo experiment and a before-after experiment. In the pseudo experiment, the brand attitude of respondents is compared between those respondents who hold prior

experiences with the particular gamification and those who do not. In the before-after experiment, the brand attitude of those respondents who have no prior experiences with the particular gamification in the study is compared to their brand attitude after the gamification stimulus is applied. The experimental stimulus for “Gran Turismo game” group is Gran Turismo 6, a video game that includes digital visualizations of the real branded conceptual cars that do not exist in reality. And to explain that in greater details, the Mercedes-Benz conceptual super sport car “Mercedes-Benz AMG Vision Gran Turismo” that only exists in this special game is the stimulus to test people’s attitude change towards both brands. For the “traditional advertisement” group, the stimulus would be a Mercedes-Benz commercial clip for its best sellers.

## **4.2 Sampling and Data Collection**

Following the guidance of the previous discussion, two sets of detailed survey questionnaires were developed for the sampling and data collection process. The first set of questionnaire was designed and distributed for the purpose of recording the original impression and attitude of the participants towards brands of Mercedes-Benz before the experiment took place, and more importantly for providing the evidence for separating the control groups. The survey questions asked about participants’ opinions on Mercedes-Benz from four aspects: youthfulness, purchase intention, attractiveness and excitement.

A quick view of what the first questionnaire “Questionnaire before” looks like is shown in Figure 4.2.1 and Figure 4.2.2.

The image shows a digital form titled "Questionnaire". At the top right, there are fields for "ID:", "Sex\_\_\_\_", and "Age\_\_\_\_". Below the title, there are five numbered questions, each followed by a seven-point rating scale. The questions are:

1. What characterizes **BMW**?  
Youthful ----- Not youthful  
1-2-3-4-5-6-7
2. Do you think (the car brand) **Lexus** is  
appealing -----not appealing  
1-2-3-4-5-6-7
3. What characterizes **Mercedes Benz**?  
Youthful ----- Not youthful  
1-2-3-4-5-6-7
4. Do you think (the car brand) **BMW** is  
appealing -----not appealing  
1-2-3-4-5-6-7
5. If you had the money would you buy a **Mercedes-Benz**?  
Would definitely not buy -----would definitely buy if  
1-2-3-4-5-6-7

Figure 4.2.1 Questionnaire before (head)

Figure 4.2.1 shows the upper part of the first page of “Questionnaire before”. The questions employ a seven-grade rating system with one side equaling to “definitely agree” and the other side to “definitely disagree” with the given criteria. The experiment participants only needed to tick the rating number of each question according to their attitudes and impressions towards

the given brand in their minds, so it is really easy to fill out this set of survey questionnaire, which takes less than five minutes.

What this questionnaire also employed is the anti-bias concept. As argued before, there exists bias everywhere in the course of this study, from the very beginning right to the end. At the designing stage of the whole process, the factors of disturbing attributes have to be considered in order to filter out the real desired one variable or several variables. At this point of survey questionnaire design, the curiosity of the participants is also genuine bias to the accuracy of the current research. When people are asked to do any kind of questionnaire, they always want to know what the questionnaire is for, and they are extremely smart in these situations. What happens after the participants get the idea of the research is that there is a great chance for a participant to turn to either a “helper” or a “disturbance maker”. A “helper” fills out the desirable answer of the study, while a “disturbance maker” does the opposite. Both of these two kinds ignore their true opinions towards the questions given to them. Thus, to prevent the appearance of both “helpers” and “disturbance makers”, an anti-bias system is definitely needed for designing an effective set of survey questionnaire.

The anti-bias concept is reflected in two designs in this questionnaire. Firstly, dummy questions are included. Although participants’ opinions on Mercedes-Benz were the only ones that the experiment conductor wants to know, the same questions about BMW and Lexus, brands that are also

commonly evaluated as luxurious, classic and status symbolizing were placed here and there. What's more, the order of the questions and the order of the rating system are shuffled. For example, the first question asked about the youthfulness of BMW, while the second one was about the attractiveness of Lexus instead of a BMW related or youthfulness related question. The order of rating of the first question was also different from that of the fifth question. By the work of these anti-bias designs, the participants have to look carefully into the questions, and their probability to casually fill out answers is also reduced.

Another question was designed especially for those who do not have a fixed clear image about the car brands, such as the large number of girls who do not have any interest in cars. The question is placed at the end of the three-page questionnaire, which can be seen in Figure 4.2.2. The participants are asked to choose the car that they want to buy the most if they have a certain large budget. The four branded sporty cars all have the most symbolic and dynamic design of their brands, and since they are at the same level of price, the choice of the participants must be based on the brand value in their minds. Unlike the questions with the rating system, this one had two choices that are considered to be very sporty brands. This is because that the author wants to compare the quantity difference between the choices of classic brands and super sporty brands, and see how this difference changes after the experiment is placed.

13. Have you ever played Grand Turismo 6 in the past? <sup>١</sup>

Never, once, sometimes, often. <sup>١</sup>

١

14. Which one of these cars would you prefer to purchase if have 250,000 dollars? <sup>١</sup>

A. BMW 435i M-Sport



١

١

١

C. Ferrari 559 GTB Fiorano



١

B. Mercedes-Benz SLS AMG <sup>١</sup>



D. Lamborghini Gallardo <sup>١</sup>







Figure 4.2.2 Questionnaire before (end)

Other points worth mentioning about “Questionnaire before” include the key question of the 13th question asking about the frequency that the participants played the game Gran Turismo 6. This is the direct evidence for putting the non-experienced participants into the group “no Gran Turismo game”, while the rest goes into “Gran Turismo experienced”. Also, ID number, gender and age of the participants were noted down for the convenience of reviewing the results.

The other set of questionnaire was filled by the participants for noting

down the changes of their minds after they had taken the experiment. The rating part of the given brands remains the same. Only the last two questions have a little bit of adjustment. The detailed changes are shown in Figure 4.2.3 “Questionnaire after (end)”.

13. Which one of these cars would you prefer to purchase if have 250,000 dollars? ↵

A. BMW 435i M-Sport 	B. Mercedes-Benz SLS AMG ↵ 
C. Ferrari 559 GTB Fiorano 	D. Lamborghini Gallardo ↵ 

14. Do you find the game Gran Turismo appealing? ↵

Definitely not appealing ---- Definitely appealing ↵

1--2--3--4--5--6--7                      No comment ↵

Figure 4.2.3 Questionnaire after (end)

As shown in the figure, the question No. 14 in “Questionnaire before” is moved to the 13th in “Questionnaire after”, as a consistently relevant question to the previous twelve. At the end of this set of questionnaire, a single question on the attractiveness of the transmedia brand Gran Turismo is asked



to the participants.

The experiment was held on the campus of Ritsumeikan Asia Pacific University on usual school days. A professor offered the author the opportunity to deliver the questionnaires in one of his major subject classes and gather the experiment participants from that class. The author chose the starting five minutes or the ending five minutes of the specific major subject lecture to carry out the two sets of questionnaires. These time periods are the times that the majority of the students who have registered for the class have gathered in the classroom, while the lecture has not yet actually started, so the survey activity would not bother the main body of the lecture. The class had more than 230 registered students, and the author was able to collect 208 answered questionnaires within two lectures, which equals a week. This result guaranteed the author with an initial sample amount of around 200, and sufficient time to carry out the rest of the experiment process.

With the answers of the first questionnaire, the students were divided into two groups according to whether they had played the game Gran Turismo 6 or not. For the students of the “Gran Turismo experienced” group, basically they did not have to do anything, because they were participating in the “control” group. For those who fall into the range of “no Gran Turismo game” group, they were the ones getting experimented on. The total number of “no Gran Turismo game” group members was 152. 90 of these participants who had answered “never” in the question about Gran Turismo 6 experience and did

not already have the best impressions and attitudes towards Mercedes-Benz, were randomly selected by the Internet tool site random.org<sup>8</sup> to be the candidates of the sub-group “Gran Turismo game”. They first received a private E-mail from the instructor of the class. In the E-mail, the selected students were asked to visit a certain classroom where the experiment equipment is set in their free time. Those students who actually came to the experiment room were recognized as the effective members of “Gran Turismo game”. Then during the six-minute experiment, the participants were first asked to watch the two-minute trailer video for Mercedes-Benz AMG Vision Gran Turismo<sup>9</sup>, and then control the sporty supercar for two rounds with another two minutes. When the students finished the game, they were asked to watch their own replays, and take a look at the race and the concept car from the outside. This process took eight days to finish, and the final number of the “Gran Turismo game” effective members was 30.

The last step of the whole experiment process was to form the “traditional advertisement” sub experiment group, and then carry out the second survey. At the end of the last experiment day, the major class professor sent another email to 40 randomly chosen students, and asked them to visit the attached link to watch a short commercial for the Mercedes-Benz best sellers<sup>10</sup>. The final survey questionnaire was distributed to all of the students who attended

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<sup>8</sup> “random.org” is a tool site to randomly choose the desired sample amount from the original database. The website address is: <http://www.random.org/integers/>.

<sup>9</sup>[http://www.gran-turismo.com/us/news/00\\_8207953.html](http://www.gran-turismo.com/us/news/00_8207953.html)

<sup>10</sup>[www.youtube.com/watch?v=apYij7U5FhE](http://www.youtube.com/watch?v=apYij7U5FhE)

the lecture four days later. 167 responses were received for the second questionnaire “Questionnaire after”.

## 5. Results of the Study

### 5.1 Data Analysis Criteria

The data statistics and data analysis of this study were done through Microsoft Excel. Although the experiment participants were the same, different excel files were created for each experiment method.

In the data statistics process, columns for sequence, ID number, gender, and the sufficient questions were firstly created. The participants were graded with sequences according to the order of their ID numbers. The answers of the students to each single question related to their brand attitudes of Mercedes-Benz were collected and inserted in the corresponding cells. Also their frequencies to play the game Gran Turismo 6 were input. In order to show the results from the survey questionnaires more clearly, the column names and data were both coded. This also helped simplify the data analysis process. The list of the codes used in both the pseudo experiment and the before-after experiment is shown in Figure 5.1.1

Code list				
Gender	Gender		Youthfulness	MC1
Male	1		not youthful	1
Female	0		definitely youthful	7
Ever Played	EP		Purchase Intention	MC2
Never	1		definitely not buy	1
Once	2		definitely would buy	7
Sometimes	3			
Often	4		Appealing	MC3
			not appealing	1
Participated	PA		appealing	7
Yes	1			
No	0		Excitement	MC4
			not exciting	1
Ad. Watched	AD		exciting	7
Yes	1			
No	0		Gran Turismo Impression	GT
			not appealing	1
Would Buy	WB		appealing	7
BMW	1		No Comment	0
Mercedes	2			
Ferrari	3			
Lamborghini	4			
Others	5			

Figure 5.1 List of codes for data analysis

In the data analysis process, participants' answers to each question was averaged according to the groups they were allocated. The means of different control groups were later on paired and compared to see whether there are any significant differences. In order to prove the universality of the observed effect, which means that the results from the experiment process were statistically significant enough to represent the facts under normal conditions instead of those of a just chance event, significance testing was required for the data analysis.

*Significance Testing.* When doing quantitative experiment, we use a randomly picked small size sample to represent the characterized whole population, for the whole population is large to test. Even if the sample is randomly chosen, we cannot say that the results coming from the analysis of the sample is definitely true for the whole population, since the results may come from sampling error, just chance experiment event, or other special conditions. In this study, when the author compares the means of different control groups and there does exist an attitude increase towards youthfulness of Mercedes-Benz between “no Gran Turismo game” and “Gran Turismo experienced” groups, the author still cannot say that **“A game or gamified application improves users’ image of the gamified real brand towards the direction it desires”**. The truthfulness of Core Hypothesis 3 can be proved only after the results from the significance test say yes. The testing method used in my analysis was Students’ T-test.

*Students’ T-test.* Student’s T-test is the method to test the statistical significance of small size samples or the difference of no more than two sets of samples. In this research, it can be used to determine whether two sets of data from different control groups are significantly different from each other. T-test was applied to both the pseudo experiment and the before-after experiment.

The result of significance testing indicates the similarity of the means of the compared two sets of samples. The similarity is a percentage between 0 and 1. The smaller the percentage is, the less similar the means are, and the

more statistically significant the difference is between the two control groups or among the three or four groups. In this study, only when the similarity of the compared questionnaire results is smaller than a certain percentage, can the author say that the difference is valid and can thus conclude that the corresponding hypothesis is true. The percentage setting is shown in Table 5.1.

T-test Result (t)	Significance Value(p)	Significance level
$t \leq 0.05$	$p \leq 0.05$	Extremely significant
$0.05 < t \leq 0.07$	$0.05 < p \leq 0.07$	Significant
$t > 0.07$	$p > 0.07$	Not significant

Table 5.1 Relationship between test results and significance levels

## 5.2 Pseudo Experiment

The total sample size for the pseudo experiment was finalized at 208. A preview of the database excel file is shown by Table 5.2.1 below. Details can be found in the appendix.

	A	C	D	E	F	G	H	I
1	No.	Gender	MC1	MC2	MC3	MC4	EP	WB
2	1	0	5	3	5	5	1	2
3	2	1	3	1	4	7	1	4
4	3	1	5	3	4	4	1	2
5	4	1	1	7	3	7	3	2
6	5	1	6	6	6	6	1	2
7	6	0	1	1	6	4	1	1
8	7	1	1	2	3	4	2	5
9	8	0	3	7	7	7	1	4
10	9	1	4	5	4	5	3	4
11	10	1	2	4	4	2	1	2
12	11	0	4	4	4	6	1	4
13	12	0	4	4	3	5	1	1
14	13	0	4	2	5	3	1	4
15	14	1	6	6	6	6	2	1
16	15	1	3	7	6	3	1	4
17	16	0	4	6	4	6	1	4
18	17	1	2	2	5	2	4	3
19	18	1	2	5	6	6	1	4
20	19	0	2	7	1	1	1	3
21	20	1	1	4	6	7	1	3
22	21	1	2	1	5	2	4	1
23	22	1	2	1	7	4	1	4
24	23	0	3	3	5	6	3	4
25	24	1	7	6	7	7	1	3
26	25	1	4	3	6	6	1	1
27	26	0	5	5	6	6	1	3
28	27	0	4	4	6	6	1	4
29	28	0	5	6	5	7	1	1
30	29	0	3	5	4	4	1	3
31	30	0	5	4	5	5	1	4

Table 5.2.1 Results from “Questionnaire before” (head)

The file is coded according to the list of codes in Figure 5.1. To further explain shortened column titles, EP stands for Question No. 13 “Have you **ever played** Grand Turismo 6 in the past”, WB stands Question No. 14 “Which one of these cars **would** you prefer to **purchase** if have 250,000 dollars”, while MC1 to MC4 are correspondent to the questions related to youthfulness,



purchase intention, appealing and excitement. The answers A to D for Question No. 13 are coded with 1 to 4, while any answer other than these is inserted with a 5. The rating levels of MC1 to MC4 have different orders in the questionnaire, but they are revised to the same order here, with 1 to 7 standing for “definitely not” to “definitely yes”.

The pseudo data analysis was applied between the two sample groups of “no Gran Turismo game” (shortened as **NoGT**) and “Gran Turismo experienced” (abbreviated as **GTExp**). The first step of the analysis was to calculate the means of each group for the measures of MC1 to MC4, and the percentages of Mercedes-Benz choices to the whole choices of each group in the case of WB. The difference between the means was then observed, and lastly the Student’s T-test was applied to each measure. The results for pseudo experiment data analysis are shown in Table 5.2.2.

Data Analysis			
Sample Size	GTExp	NoGT	
	56	152	
Measure	GTExp	NoGT	T-test
MC1	3.639	3.638	0.790
MC2	4.028	4.151	0.848
MC3	4.944	5.072	0.747
MC4	4.917	4.809	0.806
WB (%)	22.2	15.8	0.672

Table 5.2.2 Results for pseudo experiment data analysis

Since the two control groups have un-equal numbers of participants, the T-test used here is a two tailed, un-equal sample sizes, un-equal variance test. The function for this type of T-test is “=TTEST (first sample dataset, second sample dataset,2,3)”.

Table 5.2.2 shows that there is a slight difference between the two sample groups on each one measure. However, the Student T-test results of all the five measures turn out to be much bigger than 0.05, which indicate that the comparisons are not statistically significant, and the differences are not valid to represent the whole population. That is to say, the pseudo experiment conducted is not effective for this study.

### **5.3 Before-After Experiment**

The results from both “Questionnaire before” and “Questionnaire after” were involved in the before-after experiment. The total sample amount was 208 for “Questionnaire before”, and 167 for “Questionnaire after”. The difference between the sample sizes was caused by the fact that some people did the first survey questionnaire while missing the second one, or vice versa.

Since the before-after experiment was there to test the increase on each measure from the first questionnaire result to the second one of the same people, only those who had done both questionnaires were eligible so that the answers to the same question before and after could be matched and the possible differences could be observed. By eliminating the data of those who

appeared only in one dataset, the finalized total sample size for the before-after experiment was 148. Table 5.3.1 provides a quick look at the matched dataset, and the details can also be found in the appendix. This dataset consolidated the results of the same participants on the same questions in “Questionnaire before” and “Questionnaire after”.

	A	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	No.	Gender	EP	PA	AD	MC1	MC2	MC3	MC4	WB	MC1a	MC2a	MC3a	MC4a	WBa	GT
2	1	0	1	0	1	1	1	6	4	1	3	1	5	2	1	0
3	2	1	2	0	0	1	2	3	4	5	1	2	3	2	5	4
4	3	0	1	0	0	3	7	7	7	4	5	7	7	7	3	0
5	4	1	3	0	0	4	5	4	5	4	4	5	4	5	2	0
6	5	0	1	0	0	4	4	3	5	1	6	1	7	7	4	0
7	6	1	2	0	0	6	6	6	6	1	6	3	5	6	1	5
8	7	0	1	0	1	4	6	4	6	4	5	7	7	6	3	5
9	8	1	4	0	0	2	2	5	2	3	2	2	3	2	3	7
10	9	1	1	0	0	2	5	6	6	4	3	6	6	5	3	3
11	10	1	1	0	0	1	4	6	7	3	2	6	2	7	4	5
12	11	0	3	0	0	3	3	5	6	4	4	4	4	4	1	0
13	12	1	1	0	0	7	6	7	7	3	6	5	7	6	3	0
14	13	1	1	0	1	4	3	6	6	1	6	4	7	6	1	2
15	14	0	1	0	0	5	5	6	6	3	5	7	7	7	2	7
16	15	0	1	0	0	4	4	6	6	4	5	2	6	6	3	0
17	16	0	1	0	1	5	6	5	7	1	4	5	6	5	1	0
18	17	0	1	0	0	3	5	4	4	3	4	5	5	4	3	0
19	18	0	1	0	0	5	4	5	5	4	6	5	6	6	3	0
20	19	1	1	0	0	4	4	7	7	4	4	3	6	6	4	0
21	20	0	1	0	1	6	7	6	6	3	6	7	6	6	3	0
22	21	0	1	0	0	1	5	6	5	1	2	6	7	2	1	0
23	22	0	1	0	0	6	7	6	6	2	6	6	7	6	4	4
24	23	1	1	0	0	1	2	4	5	1	1	4	4	4	1	0
25	24	0	1	0	1	3	7	7	7	2	2	7	7	7	2	0
26	25	1	1	0	0	7	5	6	4	3	7	5	2	2	1	5
27	26	1	3	0	0	3	4	5	3	4	3	6	4	3	2	6
28	27	1	1	0	0	5	5	5	4	4	5	4	5	5	3	0
29	28	1	3	0	1	7	1	1	1	4	5	3	3	5	4	3
30	29	1	3	0	0	7	1	7	7	3	5	7	7	5	3	1
31	30	1	2	0	0	3	6	3	3	4	4	4	4	3	4	5
32	31	1	1	0	0	4	5	6	7	4	3	6	6	6	4	5

Table 5.3.1 Consolidated dataset for the before-after matched experiment

The additional codes used in this file are PA, AD, MC1a - MC4a, WBa and GT. As briefly explained in Figure 5.1, PA shows whether the participants have participated in the Gran Turismo 6 gameplay, and AD records whether they watched the traditional advertisement of Mercedes-Benz or not. Those

marked with 1 in the PA column were vested in the “Gran Turismo game” experiment group (**GTG**), and those marked with 1 in the AD column belonged to the “traditional advertisement” experiment group (**ADG**). MC1a to MC4a as well as WBa are the corresponding “Questionnaire after” results to the same questions with MC1 to MC4 and WB. GT indicates the attitude rating score of the participants towards the Gran Turismo transmedia brand, and the rating criteria is in the same direction to the other measures.

In the before-after experiment, the results on all the measures, both before and after, were first averaged under the guidance of grouping, and then the two means of each measure were paired for significance testing. The T-test used here is a two-tailed, equal-sample-sized, unequal-variance test. The function for this type of T-test is “=TTEST (first sample dataset, second sample dataset, 2, 1)”. Lastly, the data analysis was conducted between GTG and the rest according to the mark difference in PA, male and female inside GTG (Table 5.3.3) according to gender, ADG and the rest (Table 5.3.4) based on AD, and finally between GTG and ADG (Table 5.3.5) to see whether gamification was actually effective or not.

### **Evaluation on Participation (PA)**

The results of the before-after analysis based on participation are shown in Table 5.3.2.

	PA							
	Participated (Yes)				Participated (No)			
Measure	Before	After	Difference	T-test	Before	After	Difference	T-test
MC1	2.87	4.30	1.43	0.000	3.94	4.18	0.24	0.066
MC2	4.20	5.10	0.90	0.064	4.11	4.70	0.59	0.001
MC3	5.10	5.40	0.30	0.163	5.01	5.23	0.22	0.171
MC4	4.43	5.27	0.83	0.013	4.96	5.05	0.09	0.527
WB(2)	4.00	13.00	9.00		19.00	23.00	4.00	
WB(2)(%)	2.63	8.55	5.92		12.50	15.13	2.63	
GT	0	4.1	4.1		0	2.30	2.30	

Table 5.3.2 Results of Evaluation on Participation (PA)

The table indicates that the Gran Turismo 6 game has caused increases to the GTG group's brand attitude to all the attitude measures examined, and the increases are all bigger than those of the non-experiment participants. For example, the difference between GTG members' average attitude towards Mercedes-Benz's youthfulness before the experiment (MC1) and afterwards (MC1a) is 1.43, while the difference for the non-participants is only 0.24.

The basic evaluation seems to have a promising result for this study, but the Student's T-test tells more. Judging by the criteria in Table 5.1, T-test results for MC1 and MC4 are below 0.05, so the difference between the MC1 and MC1a, or MC4 and MC4a is statistically significant. Therefore, the author has every reason to believe that playing the game actually increased participants' brand impression of Mercedes-Benz on youthfulness and excitement, which means that people do think the classic luxury car brand is more youthful and exciting after controlling the super sporty Mercedes-Benz in the game. The T-test result for MC2 is above 0.05 but below 0.07, so the

difference is still acceptable. The author can therefore assume that people feel more like buying a Mercedes car after going out for a ride with a Mercedes in the virtual world. However, since the T-test for MC3 is much over 0.07, the difference is not trustworthy, so people won't feel that Mercedes-Benz is more appealing to them after playing the game. The T-test results for the data evaluation of the non-participant control group can be interpreted in the same way, but with a favorable balance between the two groups, further interpretation on these T-test results is not necessary in this section.

The results for WB and GT need to be read with special care. WB is different from the previous four measures because the results recorded in the WB column show how many participants selected Mercedes-Benz (2) among the four branded sport cars in Q14 in "Questionnaire before" and Q13 in "Questionnaire after", and indicate the percentage of the Mercedes choices to the size of each group. The results here are not mean-based, so the Student's T-test cannot be applied here. It is a supportive measure to the purchase intention changes (MC2) of the participants, so if MC2 has a negative result, WB becomes invalid either. GT is also distinctive, for there is no data for GT before the experiment. People invited to the game play were those who were blank about Gran Turismo 6, so they were automatically assumed to grade the game with a zero.

In this evaluation process, the results of WB have strengthened the credibility of MC2's outcome, so the author has now more evidence to strongly

believe that driving the Mercedes car in the Gran Turismo 6 game increases people's purchase intention towards the brand. GT gives the impression that playing the game helps people more objectively judge the game, at least more people find the game appealing after actually touching it. However, GT result in this evaluation needs to be compared with those from other evaluation processes for more concrete conclusion.

### Evaluation on Traditional Advertisement (AD)

The outcomes of the traditional advertisement-based evaluation are demonstrated in Table 5.3.3.

	AD							
	Ad. Watched (Yes)				Ad. Watched (No)			
Measure	Before	After	Difference	T-test	Before	After	Difference	T-test
MC1	3.33	3.87	0.53	0.077	3.83	4.29	0.46	0.001
MC2	4.33	5.40	1.07	0.022	4.07	4.62	0.55	0.002
MC3	4.53	5.17	0.63	0.044	5.15	5.29	0.14	0.357
MC4	4.73	5.10	0.37	0.233	4.89	5.09	0.20	0.165
WB(2)	5.00	9.00	4.00		18.00	27.00	9.00	
WB(2)(%)	3.29	5.92	2.63		11.84	17.76	5.92	
GT	0	2.73	2.73		0	2.63	2.63	

Table 5.3.3 Results of Evaluation on Traditional Advertisement (AD)

The results from this data analysis process show clearly that the traditional advertisement creates a large attitude increase towards Mercedes-Benz on dimensions of purchase intention (MC2) and attractiveness (MC3), but not youthfulness (MC1) and excitement (MC4). The Student's T-test again proves that the before-after comparisons of MC2 and MC3 are

statistically significant enough to support this data interpretation. However, the purpose of the would-buy selection (WB) was to support MC2 originally, but the WB and WB (%) turn out to be just the opposite to MC2, which makes the power of traditional advertisement on purchase intention creation unable to tell. On the other hand, the results of GT indicate that the two groups in this evaluation process have almost the same impression towards Gran Turismo 6, which makes sense since the advertisement on the German classic car brand has nothing to do with the game.

### Evaluation on Participation (PA) by Gender

In this part, the evaluation on Participation is re-conducted to see whether gender is also an attribute that influences the before-after comparison results. In this process, only the GTG group is involved, and the group is divided into two: male and female. The results are summarized in Table 5.3.4.

	PA							
	Participated (Male)				Participated (Female)			
Measure	Before	After	Difference	T-test	Before	After	Difference	T-test
MC1	2.67	4.27	1.60	0.003	3.07	4.33	1.27	0.006
MC2	3.53	4.80	1.27	0.112	4.87	5.40	0.53	0.370
MC3	5.00	4.93	-0.07	0.849	5.20	5.87	0.67	0.007
MC4	4.60	5.20	0.60	0.120	4.27	5.33	1.07	0.060
WB(2)	3.00	7.00	4.00		1.00	6.00	5.00	
WB(2)(%)	1.97	4.61	2.63		0.66	3.95	3.29	
GT	0	4.47	4.47		0	3.73	3.73	

Table 5.3.4 Results of Evaluation on Participation (PA) by Gender

Among the previous four measures, male presents higher brand



impression change on youthfulness (MC1) and bigger brand attitude increase on purchase intention (MC2), while female tends to find the brand more appealing (MC3) and exciting (MC4) after driving the Mercedes sporty car in the game. With a result of over 0.07 in T-test, the data interpretation for MC2 becomes invalid. So the results of WB and WB(%) neither mean anything in this case. Nevertheless, GT indicates that male tends to evaluate the hard core driving game higher than female.

#### **5.4 General Discussion**

This chapter reviewed the results from the experiment using both quantitative analysis and statistically significant testing. Surprisingly, the pseudo experiment failed to prove the existence of a positive reciprocal effect from the game to real existing brand, since there was almost no difference between the brand attitudes of those who had played the game and those who hadn't.

A major reason behind this may have been the original brand image of Mercedes-Benz in the participants' minds. As a classic German luxury automobile manufacturer that has this brand image that only old men can afford and would buy, not many young people -- being the main target population of the Gran Turismo games --- feel like choosing a Mercedes-Benz to be their car to compete with the stunning super sporty machines like Lamborghini and Ferrari. Clues can be found in the "Would Buy

Selection”(WB) measure, that more than 70% of all the participants chose to buy Lamborghini and Ferrari if they had a budget of 250,000 dollars, and the percentage remained at 60% even after the experiment. Perhaps very similar results can be received if the pseudo experiment is conducted somewhere else on a different group of college students. Once the image towards a brand is planted inside one’s brain, it is so hard to change it because stereotype is so dominant in one’s mind that people would even reject touching the product to find the actual truth themselves.

On the other hand, the before-after experiment was conducted with a fixed experiment stimulus --- Mercedes-Benz. The experiment participants had to control the Mercedes concept car in the game for two laps, or watch a commercial about this brand, so the problem that happened in the previous experiment did not exist in this one. The results from the before-after experiment also seemed to be somehow promising. The analysis for Mercedes-Benz and Gran Turismo needs to be discussed separately.

Firstly, the results concerning the real existing brand Mercedes-Benz are discussed. In the evaluation based on experiment game participation (PA), game participants showed positive brand impression changes on measures of youthfulness (MC1), purchase intention (MC2) and excitement (MC4) after the gameplay. At the same time, the traditional advertisement (AD) demonstrated itself in making its audience more willing to buy the product (MC2) and finding the brand more appealing (MC3). Both evaluation

processes generated positive results on MC2, so they also need to be compared. By looking at the MC2 rows in both Table 5.3.2 and Table 5.3.3, more information can be gathered. While the control groups have similar before-after differences, participants in AD show higher purchase intention increase than those in PA. That is to say, the traditional advertisement is more effective than the game in persuading people to buy the car. However, WB in the AD evaluation turned its back on this argument, since more people in the control group chose to buy a Mercedes than those who watched the advertisement. Therefore, the author still holds a conservative view concerning the persuasiveness of a brand commercial on the audience. Thus, to summarize the achievements of both the Gran Turismo game and the commercial by comparing these two, *the game is generally more effective in changing people's brand impression (such as youthfulness and excitement), while the traditional advertisement appears to be still strong enough to convince people that the brand is good (attractiveness)*.

Furthermore, the evaluation on game participation by gender examined the influence of gender on brand attitude and impression changes. The results indicated that males gain more youthful impression of Mercedes-Benz (MC1) after playing the game with Mercedes-Benz AMG Vision Gran Turismo, while females find driving Mercedes cars more exciting (MC4). Besides, the before-after differences showed that females tend to find the brand more appealing (MC3), and the increase margin is almost the same as that of those

who watched the traditional advertisement. This is probably caused by the information unbalance between different genders. Females generally tend to have less interest in cars or driving itself, thus having less knowledge on automobile brands than males. When they had access to the Mercedes concept car in the game, girls received all kinds of information about the car and the brand that most boys already knew, so this freshness about Mercedes-Benz may have changed their brand attitude more than that of the boys.

Secondly, the experiment results about the transmedia brand Gran Turismo need to be interpreted. In this discussion, the traditional advertisement is not relevant. Table 5.3.2 shows that most of the game participants considered Gran Turismo to be normally appealing (GT=4.1), while the rest held a negative attitude towards the transmedia brand (GT=2.3). Table 5.3.4 demonstrated more specifically that male (GT=4.47) valued the game experience more than female (GT=3.73). This difference coincides with the fact that men are at the same time interested in car and game much more than women. But overall, the experience of actually trying out the game is valuable since there is a positive brand attitude difference between those who played and those who didn't.

Bringing the discussion back to the core hypotheses, CH1 and CH3 concerning the brand impression changes towards the transmedia brand and the gamified real brand can be proved to be true, which means that *letting people play the game does help increase the brand value of the transmedia*

*brand and change people's brand image of the gamified real brand along the direction the gamified real brand wants.* CH4 can sometimes also be true, because the experiment results proved that the game experience increased players' willingness to buy the car of the gamified real brand. However, this increase is smaller than that caused by a traditional advertisement, so companies may not find the collaboration strategy useful if they have to pay a higher price to appear in a game than to appear in television or webpages. CH2 is still with a question mark, but with the result of an extra test conducted outside of the questionnaires<sup>11</sup>, only two of those 30 people searched information of the transmedia brand after playing the game, the truthfulness of CH2 tends to be negative in this study.

Concerning the before-after experiment, there are two potential bias that need to be explained in detail. Firstly, while the datasets of different groups in the pseudo experiment did not differ that much, the before sections of the before-after experiment did have distinctive differences. One of the reasons that created this situation is *censored measurement*. The criterion for the author's choice of the game participants was whether they already held perfect brand attitude towards Mercedes-Benz or not. If the participant had marked a 7 in any of the rating questions, the author would not be able to see the increase after the game. Thus, the author eliminated those who marked 7 in any of the rating questions (MC1-MC4). Another reason may be *the*

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<sup>11</sup>The author asked the game participants after they finished playing the game this question "Will you search for Gran Turismo when you have access to internet afterwards", and recorded the answers as extra information.

*self-selection effect.* The experiment participation was not mandatory, so not all of the students invited to the gameplay actually came to the experiment room. A response rate of 33% (30 out of 90) may have lowered the sampling accuracy, which indirectly generated the difference in the “before” data.

Secondly, there is a positive brand attitude change among the non-participants. Although the results of the participants are higher than the non-participants, the situation still cannot be explained by the experiment process, since the author did not prepare any event for the non-participants. Two possible reasons are listed here. *Ongoing campaigns of Mercedes-Benz.* The students of the chosen lecture come from 80 different countries and regions. They have a wide range of information sources, so they might have encountered a piece of news or a commercial telling them that Mercedes-Benz had released a new model in the USA, or Mercedes-Benz Germany had added a set of premium services with the purchase of its cars. These campaigns may have raised the Mercedes brand attitude of the non-participants. *Communication among samples.* Although the game participants were repeatedly reminded that they needed to keep the game experience a secret from their friends, they may eventually leaked the information on purpose (showing off) or accidentally. The non-participants may have changed their minds in the second questionnaire towards Mercedes-Benz after hearing the good impressions of their game participant friends, and that was reflected in their rating answers.



## 6. Recommendations and Conclusion

Through a logically designed experiment process, this thesis has proved that a gamified application (a transmedia brand extension product) can change consumers' brand impression towards a gamified real brand in the way the gamified real brand desires. At the same time, a gamified application (a transmedia brand extension product) can increase audiences' attitude towards the transmedia brand by letting the audiences try it out. These conclusions further proved the existence of reciprocal spillover effect from the transmedia brand extension product to the transmedia brand as well as the collaborative real brand.

The very first purpose of this study was to empirically examine the significance of the value creation processes of the transmedia brands that specifically exist in the entertainment industry to help the entertainment providers to strategically decide their next products. However, results of the study seem to be more favorable for the real existing brands, or the traditional brands. Especially for those brands that want to change their images in people's minds (for instance Mercedes-Benz in this case), collaborations with transmedia brands, such as gamifying their products, can be one very efficient way to reach their goals. Besides, this strategy may also help those companies whose brands are not yet widely known. "If the right storyline is accessible, a brand has the opportunity to leverage existing audiences, which increases the



odds of effective spreadability.” (Tenderich, 2014) To do this, companies are provided with two choices: “create a story or join a story” (Tenderich, 2014). Although the author has no idea how applicable and how successful “create a story” can be to the less known brands, the effectiveness of “join a story” is proved with clear evidence in this study. Collaborations with well-known transmedia brands that create brand synergy effects may become one of the most common strategies among the traditional famous brands in the near future.

The study also generated applicable strategies for the entertainment companies to expand their businesses. The idea similarly lies in collaborations with other existing brands. Firstly, famous transmedia brands can actively provide virtual spaces in their products for branding solutions. Since traditional brands search for ways to change and new brands search for methods to spread, there is a totally new market for entertainment providers to enter: **the branding solution market**. This marketplace is still unexplored, but the author is convinced that the more brands there exist in the world, the bigger the market size can be. The issue is with the fitness of the story to the client brand, or vice versa. Fitness can be the most dominant element to the success of branding solutions. If the two objects do not fit, branding solutions may be viewed as annoying by viewers/users/players as product placement, and an opposite effect may happen to both the target brand as well as the transmedia brand.

Secondly, transmedia brands may consider putting their products in the shops of the collaborative real brands. For example, Gran Turismo may try to negotiate with the real car brands for placing the newest Gran Turismo game in car shops. The strategy might provide more people with access to the game, and since the consumers who visit car stores favor the specific car brand more than others, the relationship between the car brand and Gran Turismo may turn these people into potential buyers of the game as well.

## 7. Limitations and Future Studies

This research aimed to make a pioneering effort in empirical study on the subject of transmedia branding, but the possibility cannot be ruled out that there might already be similar researches that failed to fall into the author's exhaustive search. In that case, this study can be regarded as a supportive complement to existing researches. Other than the potential bias mentioned in Section 5.4, the “helpful” participants are also a big concern. The participants may behave too cooperatively or totally uncooperatively by guessing up the purpose of this study. In order to reduce the number of the “helpful” participants, the author has inserted dummy questions in the questionnaires, but they may still be obvious to those smart people.

Future studies have to be conducted on topics ranging from the other effects in the transmedia branding model, specific values in the value creation processes, to the branding solution market. Since transmedia branding itself is still new to the academic world, researches on this subject can have a great many options. For the author of this thesis, the same experiment designed on more specific target groups or people from different age groups can be very interesting, in the sense of enhancing the achievements of this research.

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## 9. Appendix

### Appendix 1: Media Genre Classification

The currently existing media forms are summarized here according to their genres, namely the carrier they are based on for information distribution. Among the Classification terms, the terms before “Digital Media” are largely based on Wilke (2010)’s works.

#### Char 5.1 Media Genre Classification

Media Genre	Media Type
<b>Print Media</b>	<b>Books;</b> <b>Comics;</b> <b>Newspapers;</b> <b>Journals;</b> <b>Photographs;</b> <b>Intelligencers;</b> <b>Small Prints:</b> Broadsheets, handbills, newsbookds, Pamphlets.
<b>Moving Pictures Media</b>	<b>Movies;</b> <b>Short films.</b>
<b>Electronic Media</b> (broadcasting)	<b>Radio programs;</b> <b>TV programs;</b> <b>CDs (Music);</b> <b>DVDs.</b>
<b>Digital Media</b>	<b>Personal Computer:</b> Webpages, software, email, cloud and streaming, PC games; <b>Mobile Devices:</b> messages, applications; <b>Gaming Consoles:</b> Games.

## Appendix 2: Game Types and Game Genres

There are indeed countless different ways to classify the types of existing games, and there are more and more innovative games building their own genre every year in the digital entertainment industry. However, they all share somehow many similar points and concepts, so I have picked two most detail classifications for game types and game genres as a reference for this study.

Chart 5.2.1 Game Genre Classification by Tekkle (Tekkle, 2012)

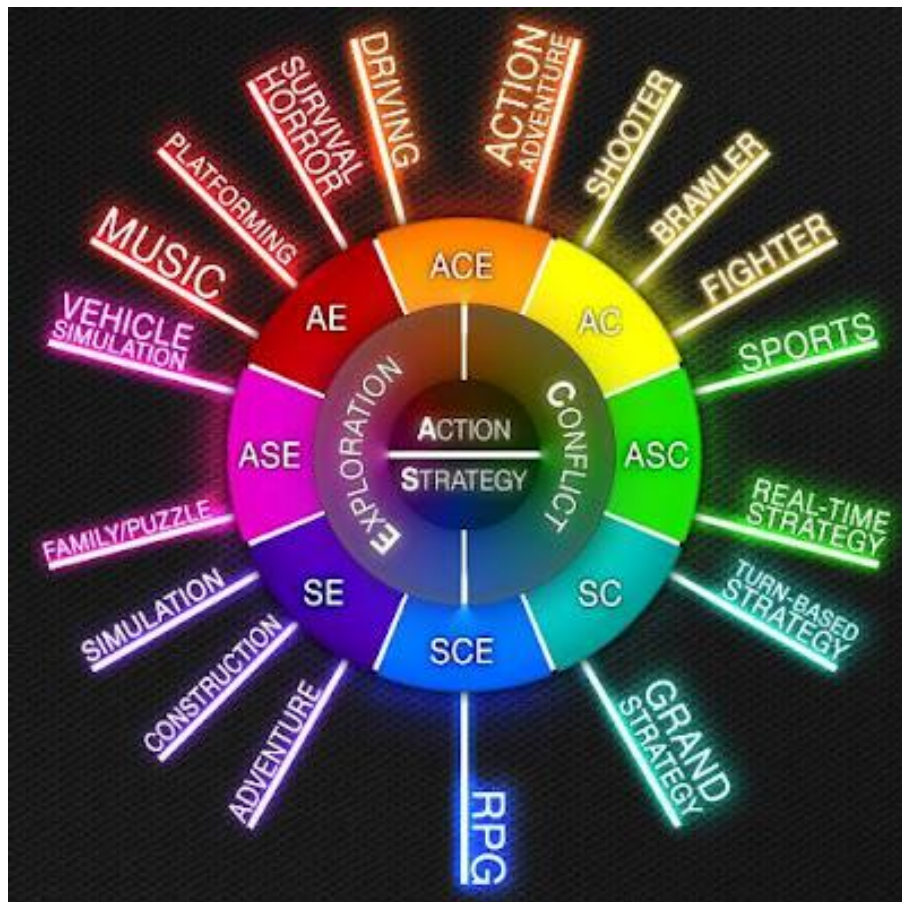


Chart 5.2.2 Puenedura's List of Game Genres (Peunedura, 2010)



### Appendix 3: First Questionnaire“Questionnaire before”

**Questionnaire**

**Sex**\_\_\_\_**ID**\_\_\_\_\_

1. What characterizes **BMW**

Youthful ----- Not youthful

1--2---3--4--5--6--7

2. Do you think (the car brand) **Lexus** is

appealing -----not appealing

1--2---3--4--5--6--7

3. What characterizes **Mercedes Benz**

Youthful ----- Not youthful

1--2---3--4--5--6--7

4. Do you think (the car brand) **BMW** is

appealing -----not appealing

1--2---3--4--5--6--7

5. If you had the money would you buy a **Mercedes-Benz**

Would definitely not buy -----would definitely buy if

1--2---3--4--5--6--7

6. If you had the money would you buy a **Lexus**



Would definitely not buy -----would definitely buy if

1--2---3--4--5--6--7

7. Do you think Mercedes-Benz is

appealing -----not appealing

1--2---3--4--5--6--7

8. If you had the money would you buy a BMW

Would definitely not buy -----would definitely buy if

1--2---3--4--5--6--7

9. What characterizes Lexus

Exciting ----- Not exciting.

1--2---3--4--5--6--7

10. What characterizes BMW

Exciting ----- Not exciting.

1--2---3--4--5--6--7

11. What characterizes Mercedes Benz

Exciting ----- Not exciting.

1--2---3--4--5--6--7

12. What characterizes Lexus

Youthful ----- Not youthful

1--2---3--4--5--6--7

13. Have you ever played **Grand Turismo 6** in the past?

Never, once, sometimes, often.

14. Which one of these cars would you prefer to purchase if have 250,000 dollars?

A. BMW 435i M-Sport



B. Mercedes-Benz SLS AMG



C. Ferrari 559 GTB Fiorano



D. Lamborghini Gallardo



Appendix 4: Second Questionnaire “Questionnaire after”

## Questionnaire

Sex\_\_\_\_\_ID\_\_\_\_\_

1. What characterizes BMW

Youthful ----- Not youthful

1--2---3--4--5--6--7

2. Do you think (the car brand) Lexus is

appealing -----not appealing

1--2---3--4--5--6--7

3. What characterizes Mercedes Benz

Youthful ----- Not youthful

1--2---3--4--5--6--7

4. Do you think (the car brand) BMW is

appealing -----not appealing

1--2---3--4--5--6--7

5. If you had the money would you buy a Mercedes-Benz

Would definitely not buy -----would definitely buy if

1--2---3--4--5--6--7

6. If you had the money would you buy a Lexus

Would definitely not buy -----would definitely buy if

1--2---3--4--5--6--7

7. Do you think Mercedes-Benz is

appealing -----not appealing

1--2---3--4--5--6--7

8. If you had the money would you buy a BMW

Would definitely not buy -----would definitely buy if

1--2---3--4--5--6--7

9. What characterizes Lexus

Exciting ----- Not exciting.

1--2---3--4--5--6--7

10. What characterizes BMW

Exciting ----- Not exciting.

1--2---3--4--5--6--7

11. What characterizes Mercedes Benz

Exciting ----- Not exciting.

1--2---3--4--5--6--7

12. What characterizes Lexus

Youthful ----- Not youthful

1--2---3--4--5--6--7

13. Which one of these cars would you prefer to purchase if have 250,000 dollars?

A. BMW 435i M-Sport



B. Mercedes-Benz SLS AMG



C. Ferrari 559 GTB Fiorano



D. Lamborghini Gallardo



14. Do you find the game Gran Turismo appealing?

Definitely not appealing ---- Definitely appealing

1--2---3--4--5--6--7

No comment