Hypervideo meets product placement: a study of product placement and its recall and recognition effects in interactive digital music video

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Date:_____11 December 2016_____

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ABSTRACT

Hypervideo meets product placement: a study of product placement and its recall and recognition effects in interactive digital music video

By Artemisa Jaramillo

The emergence of new digital video technologies, combined with the increasing ubiquity of Internet access, is challenging classical video-based marketing practices. As technological evolution has enabled the World Wide Web to improve its infrastructure, more sophisticated forms of digital video have emerged. Digital videos have the potential to add new dimensions of interactivity to product placements embedded within them. This thesis investigates how product placement effectiveness might be improved using hypervideo. In a hypervideo, through interactive placements, clickable spots are activated within a video, allowing viewers to retrieve information, or buy from, the brands portrayed. As a media vehicle, hypervideo has a greater ability to allow interactivity with consumers, and capture data, while offering a fluid and tailored product placement experience, in contrast with classical non-interactive product placement. The theoretical positioning of this thesis lays at the confluence of research on product placement, and its effects on central memory, in particular recall and recognition, and interactivity literature. Specifically, to examine whether interactivity increases brand recall and recognition of product placement embedded within digital music videos. Taking Balasubramanian, Karrh and Patwardhan (2006) as a theoretical base, 10 factors directly affecting placement recall and recognition were explored to gain an understanding of the effect of interactivity. This study followed an experimental between-group design, using human-computer interaction (HCI) recording software, a pre-questionnaire, an after-exposure questionnaire and a one-week after-exposure questionnaire. Evidence from a study of 280 participants suggests that interactive product placement is more effective than non-interactive product placement within digital music videos, as the interactive process increases recall and recognition of brands. This is the first empirical study on interactive product placement in digital music videos. This thesis proposes a Product Placement Interactivity Grid which incorporates different types of interactivity between the media vehicle, product placement, and user. Future research is required to understand the impact of interactive product placement in different media vehicles.

Keywords: Product Placement, Brand Placement, Hypervideo, Interactive Placement, Interactive Video, Interactivity, Product Linking, Plinking, Video Advertising

CHAPTER ONE
INTRODUCTION

Introduction

This chapter introduces the reader to the thesis. It begins by situating the study in the literature to which it is contributing before setting out the research agenda, the research context and the rationale for the particular study that was undertaken. The methodological approach adopted is then briefly described and the chapter concludes by setting out the overall structure of the thesis.

In 1998, Karrh pointed to product placement as part of a trend in which consumption symbols were permeating popular culture. This observation acknowledged the shift in postmodern culture where people are redefining the way they interact using digital technologies, mixing and incorporating them into their daily lives. For postmodern consumers, there is a growing need to feel different, a need that is being reflected in hyper-fragmented segments targeting very specific needs to enhance groups' uniqueness (Simmons 2008; Holt 2002; Venkatesh 1999; Firat, Sherry and Venkatesh 1994). The term used to refer to this feature of postmodernism is *hyper fragmentation*. These hyper-fragmented groups regularly seek distinctiveness by developing a close relationship with a marketplace identifier to show others and themselves who they are (Simmons 2008; Holt 2002; Venkatesh 1999; Brown 1995; Firat *et al.* 1994). Postmodern behaviour emphasises symbols, signals, and consumption as a means to community participation (Brown 2006; Simmons 2005; Holt 2002; Firat *et al.* 1995).

Postmodernists enjoy seeing concepts which previously were differentiated, clearly demarcated, and separate, becoming blurred. This feature of postmodernism is called *de-differentiation*. Postmodernists point to the blurring of the distinction between production and consumption; by consuming goods, consumers are simultaneously 'producing' themselves by developing their personal identities. De-differentiation is relevant in the context of this thesis in two aspects. First, it studies real-world consumers creating and recreating different identities through interaction on digital platforms. In this way, the distinction between online and offline worlds and behaviour is becoming more blurred. Second, by focusing on interactive product placement in digital music videos, the present study elaborates on how the lines between digital

advertising efforts and popular culture similarly become more blurred. Today, marketers use product placement to engage with viewers by placing branded products on the set, making brand and story interact, or by creating allusions to the brand (Lehu 2007; Holt 2002).

Ubiquitous Internet access and new digital video technologies are disrupting traditional video-based marketing practices, increasing the market access consumers have and creating new interaction patterns. This study investigates hypervideo, a technology that enables interactive video, and the impact such interactivity has on the recall and recognition of product placements embedded in interactive digital music videos. It posits that interactivity increases placement recall and recognition of brands placed in such digital music videos. This research builds on Balasubramanian, Karrh, and Patwardhan's (2006) theoretical framework, a model of choice in recent product placement studies (Verhellen *et al.* 2013; Matthes *et al.* 2012; van Reijmersdal, Smit, and Neijens 2010; Bressoud, Lehu and Russell 2010; Homer 2009). This theoretical framework provides a synthesis of product placement literature, audience reactions to it, and how these reactions are allocated, according to the hierarchy-of-effects. The present study is the first to assess the mix of factors affecting placement's cognitive outcomes, specifically recall and recognition, in the context of interactive digital music videos.

The theoretical positioning of the present study lies at the confluence of research on product placement (and its effect on central memory, specifically recall and recognition) and interactivity literatures.

The present study focuses on product placement cognitive outcomes, specifically recall and recognition, following Balasubramanian *et al.*'s (2006) theoretical framework. Product placement literature has mainly focused on its effects on memory (Karrh, McKee and Pardun 2003; Nelson 2002; Karrh 1998). Karrh (1998) noted the power of product placement as an advertising instrument because of its impact on cognition. Memory influences not only brand awareness and brand knowledge (Lavidge and Steiner 1961); it also affects attitudes, intentions toward brands (Barry 1987), and image overall (Keller 1993). Memory has also been considered as the most appropriate measure of product placement effectiveness (Karrh et al. 2003). Placement recall and recognition are relevant because of their effects on short and long memory (van Reijmersdal *et al*. 2010; Brennan and Babin 2004; Gupta and Lord 1998; Karrh 1998).

Its relevance is a result of the postmodern conditions of hyper-fragmentation and de-differentiation. Brands need to be remembered by consumers in a marketplace where consumers are extending their offline and online selves through their means of consumption. In a society where advertising and popular culture are so close, placed brands aim for consumers to recognise them as part of a digital music video, a film or a television programme that they identify with.

Being central to the acquisition cognitive skills (Sims 1997), interactivity and its effects have been studied in education, psychology, human-computer interaction, advertising and marketing. The present study allows (and regulates) for interaction with a medium, in this case machine interactivity (Steuer 1992) and recognises that such interactivity impacts both the level of information exchanged (Hang and Auty 2011; Sicilia *et al*. 2005) and knowledge acquisition (Sims 1997). Considerable debate has been ensued on the levels and degrees of enabled interactivity with an emerging consensus that perceived interactivity is a more accurate measure of its impact on users (Liu 2003; McMillan and Hwang 2002). The present research defines interactivity as:

> The degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronised. (Liu and Shrum 2002, p. 54)

1.1. The research agenda

The aim of the present study is to examine a previously unexplored relationship in the extant literature (i.e. product placement, interactivity and placement recall and recognition in digital music videos). The study tested Balasubramanian *et al.'s* (2006) product placement classical theoretical framework by adding new components (interactivity and *perceived interactivity*). As such, the present study presents an incremental contribution to the body of knowledge. Specifically, the study examines whether interactivity increases brand recall and recognition of product placement embedded in interactive digital music videos. The following specific research objectives are proposed in pursuance of this overall aim:

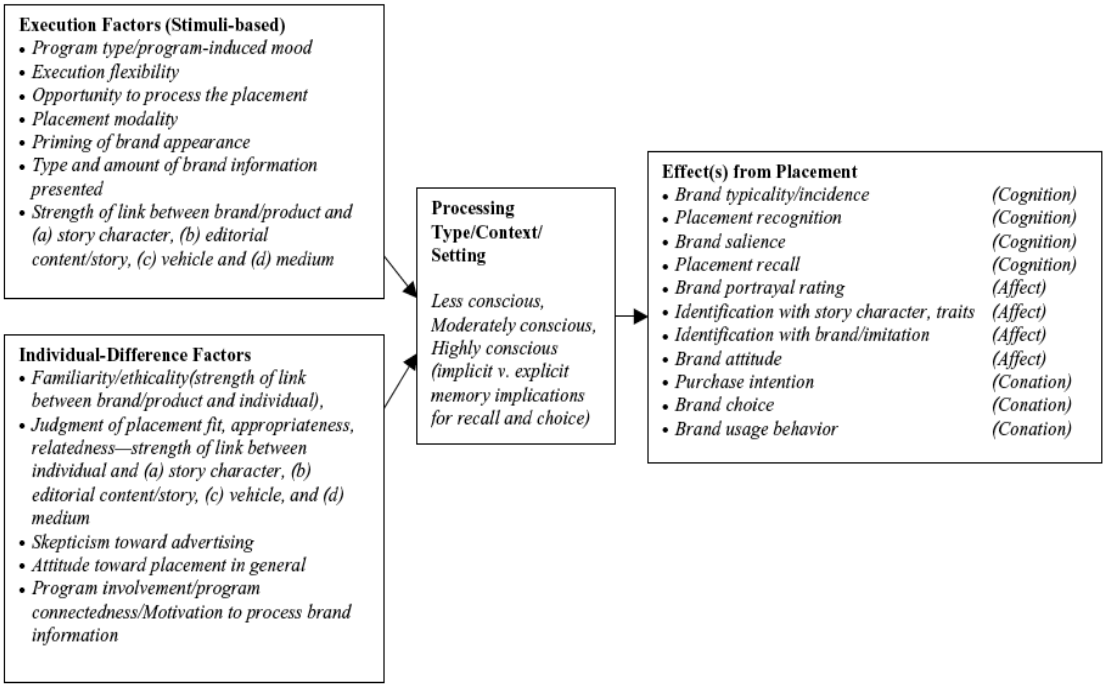
i) To empirically test the key factors which influence recall and recognition of a classical non-interactive product placement in digital music videos and the moderating effects of positive/negative context-induced mood.

ii) To analyse how the factors of the theoretical framework for classical non-interactive product placement apply in the case of interactive product placement and the moderating effects of positive/negative context-induced mood.
iii) To test whether recall and recognition levels for product placement in an interactive online medium are greater than those for product placement with the moderating effects of interactivity and positive/negative context-induced mood.

Product placement research aims to understand how placements work and how they generate specific audience outcomes. Existing theory states that there are a number of execution and individual factors which affect product placement outcomes. Studies have tried to understand these factors individually and their impact on how audiences perceive placements. For example, some have addressed placement modality (Russell 1998, 2002), execution flexibility (Grigorovici and Constantin 2010; Hey 2002), placement prominence (Brennan and Babin 2004; Gupta and Lord 1998), whether brands are portrayed by the main actors, and whether a placement appears too forced. Collectively, such factors have repercussions on the way in which audiences perceive a product placement.

The present research builds on Balasubramanian *et al.*'s (2006) theoretical framework, which is arguably the framework of choice in the contemporary product placement literature (Bressoud *et al.* 2010; van Reijmersdal *et al.* 2010; Homer 2009). This theoretical framework contextualised product placement and its effects on audience reactions by analysing existing literature, merging academic and practitioner studies, and incorporating qualitative and quantitative approaches. They identified product placement's execution and individual factors and proposed that each one has a different effect on viewers' processing depth and consequently on their final perceptions of placed products and brands. Thus, each factor should be analysed in turn to understand the response it triggers in consumers. The authors provide a synthesis of the literature on product placement factors, audience reactions to placement, and how, according to the Hierarchy of Effects Model, these reactions translate into a variety of cognitive, affective, and conative outcomes. Their framework is presented in Figure 1.1

Figure 1.1 **Balasubramanian, Karrh, and Patwardhan's (2006) Model Framework**



Source: Balasubramanian, Karrh, and Patwardhan (2006, p.9).

Product placement theory is reviewed, analysed and updated by incorporating the particularities of technological change and in particular the emergence of interactivity in digital music videos. This discussion is enriched by analysing the effects of interactivity on product placement recall and recognition and how these effects differ from those resulting from classical product placement techniques in a non-interactive environment. The research also investigates the effects of context-induced mood on memory (recall and recognition) and its impact on the relation between Balasubramanian *et al.'s* (2006) theoretical framework in an interactive and non-interactive digital music video. Mood can be transferred from the media context to the embedded brands, affecting the way in which a stimulus is processed (Balasubramanian *et al*. 2006; Aylesworth and Mackenzie 1998; Russell 1998; Goldberg and Gorn 1987; Gardner 1985). This is clearly relevant in the case of product placement in digital music videos given their comparatively short length. In a television programme, the interaction viewer-television programme-brands are built over a longer time period (Russell 1998).

Does interactivity always enhance product placement recall and recognition? Some authors support this claim in the context of videogames (Grigorovici and Constantin 2010; Nelson 2002) and websites (Jiang, Chan, Tan and Chua 2010; Sicilia, Ruiz and Munuera 2005; Liu and Shrum 2002); others argue that interactivity has in fact a

negative effect on cognitive outcomes (Mira and Faber 2007; Nelson and Yaros 2006; Ariely 2000). This latter group contend that the presence of interactivity may result in overwhelming users, thus impeding them from fully processing the information they are being exposed to.

The execution and individual factors which traditionally affect classical non-interactive product placement do not necessarily occur in a similar way in music videos. In their theoretical paper, Lynn, Muzellec and Jaramillo (2014) argued that digital music videos create a distinctive 'media context effect' (Aylesworth, Goodstein and Kalra 2011; Russell and Stern 2006; Gardner 1985). Following this logic, it is worth studying the level of interactivity, presence, and immersion enabled by interactive placement in digital music videos.

Today, with technologies such as hypervideo (Lynn *et al.* 2014; Lynn and Muzellec 2010), the possibilities to interact and engage with product placements in a music video environment have become real. Given this development, it seems plausible to ask whether size, exposure time, recurrence, visibility, contact with the artist, and whether the positivity of the artist's role affect both product placement effectiveness and the translation of meaning to a brand (Lehu 2007; Brennan and Babin 2004; D'Astous and Chartier 2000).

Although interactive product placement is already being employed in digital music videos by American companies, such as Clikthrough Technologies (See Lynn and Muzellec 2010), there are no empirical studies to date that explore the impact of such interactivity on brand recall. That is the gap this research aims to address.

The first research objective tested Balasubramanian *et al.'s* (2006) theoretical framework in the context of classical non-interactive product placement in digital music videos. Of the 10 factors affecting recall and recognition of classical non-interactive product placement, only programme-induced mood, the type and amount of brand information presented, and prior familiarity with a brand/product applied in the case of digital music videos.

The second research objective tested Balasubramanian *et al.*'s (2006) theoretical framework in the context of interactive digital music videos. The factors which affected placement recall and recognition in interactive digital music videos were:

i) Positive programme-induced mood;
ii) The opportunity to process a placement
iii) The type and amount of brand information presented;
iv) The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium;
v) Prior familiarity with a brand/ video/ singer;
vi) Involvement with the singer/ video
vii) Perceived interactivity/usability
viii) Interactivity.

Finally, the findings resulting from the third research objective suggested that interactive product placement is more effective than classical non-interactive product placement for digital music videos, as it increases recall and recognition of placed brands. The moderating effect of interactivity enhanced the effects of the factors affecting recall and recognition. Information was also a moderator but only for the case of placement recognition. These findings contribute to product placement and interactivity literatures. They also provided evidence for practitioners which suggests that interactive product placement generates higher brand awareness than classical non-interactive product placement. Being embedded online, interactive product placement increases the opportunities for brand awareness exponentially.

1.2. The research context

Kretchmer (2004) noted that advertising and promotion were already so closely aligned that the lines between entertainment and commercial persuasion were becoming blurred. He was certainly right on how close and symbiotic this relation would become over the years. With the proliferation of the Internet and its integration into daily life, marketers and brands migrated to the digital world thereby giving rise to new forms of interaction and engagement with consumers. Product placement and brand strategy have shifted from a traditional emphasis on cinema and TV programming to the new landscapes available in interactive video games, websites, and virtual communities, among others.

In this context, new media and technology have undoubtedly increased consumers' interactive capacity and possibilities.

There is a promising market opportunity in online digital videos and digital music videos in particular. This opportunity lies primarily in its reach. Over 3 billion Internet users worldwide (Internet Live Stats 2015) connect using multiple screens and interfaces. These include interactive television, personal computers, smart-phones and tablets. This situation has led to cross-platform solutions.

Video content grew from practically nothing in 1993 to 54 per cent of the total of content on the World Wide Web in 2007 (Hilbert 2014). By 2019, 80 per cent of Internet content will be video (Cisco 2016). The reason clearly lies in its capacity to communicate information, create feelings and generate engagement in a synthesised interaction. YouTube alone had a revenue of about $4 billion in 2014 (Winkler 2015).

Contemporary media consumption is screen- based. 90 per cent of consumers move between devices during the different stages of their buyer journey (Google 2012). Multi-screening has led to offline activities being continued online. In other words, consumers are not only being exposed to advertising and marketing efforts through traditional television, they are also exposed to them through video consoles, personal computers, laptops, tablets, and smartphones and can interact with this multiplicity of screens simultaneously. This phenomenon results in ever more fragmented audiences and, has led to cross-platform solutions. For example, YouTube is a video-sharing website, and as such allows shareability of videos across media vehicles, channels or interfaces (Hilbert 2014). While multi-screening brings opportunities such as access to real-time data to measure impact, target advertising and personalisation, it also brings challenges such as the use of invasive interruption-based Internet-marketing techniques, the possibility that viewers will attempt to avoid Internet advertising, and the emergence of a more sophisticated consumer who expects crafted, non-invasive commercial overtures. Interactive product placement presents an alternative to invasive marketing techniques, responding to more sophisticated forms of consumption.

In the digital world, brands benefit from access to data and media channels, interactivity, personalisation (Micro targeting), syndication, big data (which means accountability for each strategic and tactical campaign objective), integration across

platforms, channels, and media vehicles, and testing. Access to digital channels and data means being available in real time and all the time giving brands the opportunity to engage with consumers, create live events, or respond to contingencies as a form of PR marketing, as soon as they occur (Dilen 2016). All of these interaction points lead to the availability of more marketing content than before. While brands have free access to the content generation platforms, so do their competitors. In such a dynamic context, one the main digital benchmarks for competitor analysis lies in content quality. For instance, for digital marketing practitioners, content marketing has been identified as the activity with the greatest commercial impact, representing a 22 per cent, followed by big data, 17 per cent, and automation, 13 per cent (SmartInsights 2016). Having set the scene, the reader can understand why new media and technology have undoubtedly increased consumers' interactive capacity and possibilities.

Releasing music videos online has proved to be a popular move, creating momentum via social media networks, and brand partnerships. Artists themselves are creating unique experiences for fans. In the search for unique, crafted experiences, strategies such as targeted advertisements and digital video advertising aim to reach captive and involved audiences, ready to create and explore their fantasies. Brands placed within these media may be perceived as vehicles to materialise these fantasies (Molesworth 2006). Imagine if you could watch Katie Perry's latest music video and interact with it? What if you could click on her sunglasses and have them delivered to your door the following morning? This is possible thanks to interactive product placement.

1.3. Rationale

Research on music videos and classical non-interactive product placement is still relatively scarce (Burkhalter and Thornton 2012; Plambeck 2010; Schemer, Matthes, Wirth and Textor 2008). However, music videos do bring new characteristics to the product placement discussion which are worth considering.

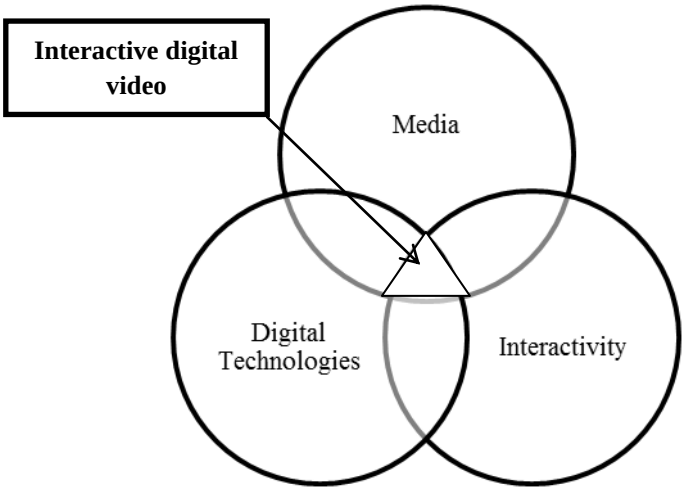
In a similar way to advertising (McCracken 1989), music videos can function as a mechanism for transferring cultural meaning from brands to consumers. This process is akin to celebrity endorsement because artists transfer the cultural meanings they espouse to the brands embedded within their music videos. Burkhalter and Thornton

(2012) noted that young people are especially susceptible to symbolic consumption and are keen to adopt the trends which are portrayed by their favourite artists.

A classic example of the presence of product placement in music videos is the video *Telephone* (2010), where Lady Gaga showcased product placement in a rather prominent fashion. Although critics had mixed views about the merits of the video, the point remains that it showed conclusively that consumer culture has begun to colonise and embrace music videos. While earlier music videos were confined to analog broadcast by traditional television, the Internet can now be used to increase presence and repetition. For example, the *Telephone* video achieved 62 million views on YouTube in the year of its release (Plambeck 2010). Because of their increasing importance for advertising, music videos are increasingly being adopted to convey brand meaning. For example, an independent blogger identified product placements in 39 music videos from the Billboard Top 100 list 2014 (Brands&Films 2015). However, only a small amount of research has been conducted to explore the effects of product placement specifically in the context of music videos (Burkhalter and Thornton 2012; Hudders *et al.* 2012; Matthes *et al.* 2012; Schemer *et al.* 2008).

Digital technologies have enabled different levels of interactivity with different media (e.g. digital videos) (see Figure 1.2). Because digital videos can be accessed with different devices, interactivity levels will depend on what each device interface is capable of, although 'clearly, the distinction between the computer and the television is blurring' (Little and Venkatesh 1994, p. 14). For example, in an interactive digital video the viewer experience is no longer passive because interactivity gives viewers the opportunity to interact with media content (Balfanz *et al.* 2001). Moreover, this interaction can be customised according to an individual’s preferences (Little and Venkatesh 1994).

Figure 1.2 **Digital technologies and interactive digital video**



An interactive placement involves the activation of clickable spots on objects (e.g. products, brands, people, and places) within a video, thereby allowing the viewer to retrieve information about (or even buy) the brands portrayed on screen (Lynn *et al.* 2014; Lynn and Muzellec 2010). Typically, the hyperlinked areas are denoted by moving the cursor within the video. When a user rolls over a hyperlinked area, a label is displayed and users can double-click to expand the content (see Figure 1.3). These mouse rollovers do not interrupt the playing of the video (see Figure 1.4).

Figure 1.3 **Product placement in the interactive music video 'The Breakeven' by The Script**

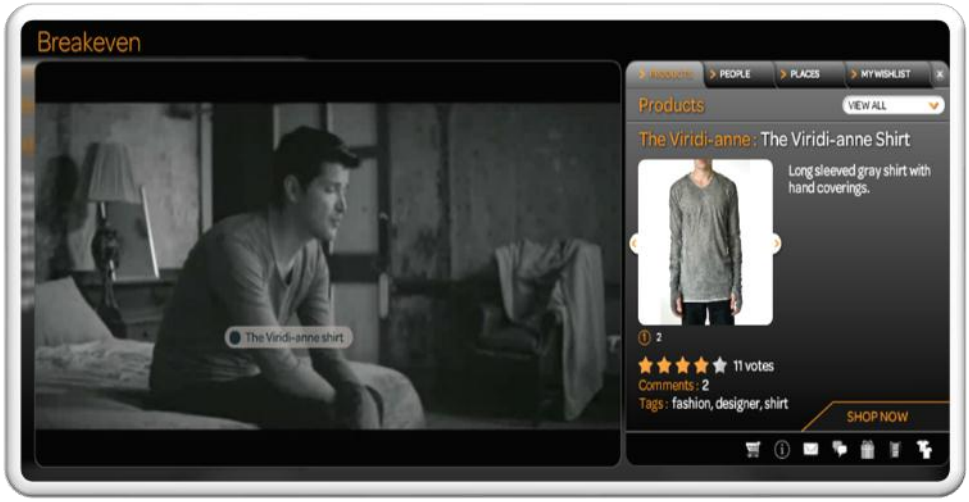


Figure 1.4 **Cursor rollover in the interactive music video 'The Breakeven' by The Script**

For the purposes of this study, the Clikthrough interactive music video platform was used. Clikthrough is an interactive digital videos platform which adds object-tagging software to digital videos. Other examples of similar software providers are Zentric (2015), Interlude (2012) and Rapmedia (2011). For example, in the Clikthrough.com interface, the interactive music video is displayed centrally. Users may expand a contiguous window which gives the user access to additional functionality and information including artist information, chat, comments, a poll evaluating the brands presented and a link to other videos. The interactive digital music video interface includes a 'My Wishlist' option where users can bookmark the preferred products they observed during the video and ‘Buy now’ and ‘Buy Similar’ functionality thereby linking the placement to intention to purchase and indeed actual purchase.

In a hypervideo interface, viewers are in control of their viewing experience and can decide what information they want to retrieve by choosing whether or not to click on certain links within the video (Moresco 2008; Finke and Balfanz 2004). As a result, in an interactive placement, interactivity is 'selective': viewers know that they can interact and display further information about the elements portrayed on the screen but can equally choose not to.

Interactive product placement within a hypervideo enables high degrees of interactivity and temporal flexibility – the placement can be pre-emptive, real-time, or retroactive (Lynn *et al.* 2014). These characteristics are fully explored in Chapter Two.

Interactive placement has many advantages. For example, interactive placement is part of the video's storytelling or narrative. In other words, hypervideo placements are non-intrusive and do not interrupt or invade the video frame like YouTube advertisements. If a user chooses to click on an element within the video, this information is displayed in a contiguous window or in another site without interrupting the video's flow (Lynn *et al.* 2014; Han 2010; Moresco 2008; Balfanz *et al.* 2001). Another advantage is that users can access information which is related to what they are watching (Moos and Marroquin 2010). User-computer interaction allows users to decide on the information they access, giving them control over their viewing experience by interacting and expanding the information of only those products and brands which interest them (Hang and Auty 2011; Schlosser 2003; Ariely 2000). In other words, because interactivity is selective, users choose where and whether they want to click and expand certain object-related information.

Hypervideo makes it possible to link any element to different media types

> … within commercial and user-generated video to other websites or indeed e-commerce sites and to share on social networking sites, thus presupposing two new forms of product placement - social placement and user-generated placement (Lynn *et al.* 2014, p.19).

This characteristic is important in the context of e-commerce because a user can make a purchase by clicking on an item within the video while simultaneously sharing information about it on social networks (Lynn *et al.* 2014; Moresco 2008).

Interactive placement can contribute to reconfiguring the factors traditionally considered to have an effect on product placement outcomes. For example, interactivity can increase prominence and duration (Lynn *et al.* 2014). In the context of interactive placement in digital music videos, there are more opportunities to notice and to engage with a placement, even if it is subtle. Viewers can click on an element and display further information about it but they can also move the cursor on top of the video screen and see the labels which appear on top of hyperlinked objects (e.g. brands, people, products and places) featured. A viewer could then choose to watch and interact with a digital video several times. However, such interaction can potentially be overwhelming for users, preventing them from properly processing the information to which they are being exposed (Ariely 2000).

In an interactive product placement, content can be either user- or brand-generated. Product linking (or plinking) implies user-generated content which leads to a website, or a social network, leading to social placement and user-generated placement. Plinking brings numerous opportunities for businesses and individuals. For instance, influentials and micro-celebrities could benefit from this together the public in the context of YouTube or other video-enabled interfaces (Kozinets and Stefano 2014; Burns 2006). This characteristic of interactive product placement responds to the postmodern condition of *hyper-fragmentation* by providing tailored experiences which are meaningful and relevant to consumers (Simmons 2008; Holt 2002; Firat *et al.* 1994; Brown 1993).

Studies have found that interactivity also increases cognitive involvement, independently of product type, because of the control it gives to users coupled with the possibility of their receiving more information about focal interactive elements (Jiang *et al.* 2010; Sicilia *et al.* 2005; Liu and Shrum 2002).

1.4. Research methods

This thesis followed a 2 (interactive/non-interactive) x 2 (programme-induced mood: positive/negative) between-groups factorial experimental design (Lazar et al. 2010). The dependent variables being investigated are levels of both brand recall and recognition (presence/absence) resulting from exposure to product placement in interactive/non-interactive digital music videos and the context-induced mood (positive/negative) effects. Four experimental conditions were prepared using Morae Recorder.

The independent variables consisted of the 10 factors outlined in Balasubramanian *et al.*'s (2006) integrative conceptual framework.

Execution factors:

i) Programme-induced mood;
ii) The opportunity to process the placement;
iii) The type/amount of brand information presented;
iv) The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium.

Individual factors:

i) Prior familiarity with a brand/product;
ii) Judgement of placement fit;
iii) Scepticism towards advertising;
iv) Attitudes towards placements in general;
v) Involvement;
vi) Connectedness.

The impact of these factors on implicit memory was also explored. A survey method to address the research objectives was utilised. Three questionnaires were devised to assess the factors portrayed above: a pre-questionnaire, an after-exposure questionnaire and a one-week after exposure questionnaire. Data analysis was conducted in two steps. First, hypothesis testing was assessed per factor, comparing the interactive and non-interactive conditions in each context induced-video, and then comparing the positive and negative conditions with and without interactivity according to the research questions. To this end, general statistics such as correlations and independent-samples t-test, and regression and moderation analysis were performed. Second, to test the whole model, linear regression analysis was utilised using an integrated database. Moderation analysis was also performed, exploring the moderation effects of context-induced mood, interactivity, perceived information and gender.

Two digital music videos were utilised to investigate the impact of programme-induced mood valence (positive/negative) over product placement recall and recognition. The videos were chosen from the Clikthrough Technologies website (www.clikthrough.com) as it contains a number of music videos of leading artists enhanced as hypervideos. 'The Man Who Can't Be Moved' by The Script, with 21 products placed and hyperlinked, was used for the negative context-induced mood study. For the positive context-induced mood study, the 'I Gotta Feeling' video by the Black Eyed Peas featuring 27 product placements was utilised. The music videos were pre-tested by a pool of researcher participants. They were assessed for mood prior to exposure, then were exposed to one music video (positive/negative) context-induced mood, and were assessed for mood after exposure. Mood was positive after watching the positive context-induced digital music video, and negative after watching the negative one.

A convenience sample was utilised in accordance with similar studies in product placement, human computer interaction and interactivity (Verhellen *et al.* 2013; Park *et al.* 2008; Cauberghe and De Pelsmacker 2008; Nelson and Devanathan 2006; Sicilia *et al.* 2005) with participants being assigned randomly to only one of the four conditions.
In Conditions One and Two, the control conditions, participants were exposed to a linear digital music video stimulus (non-interactive) in either a positive or negative context-induced mood video. Consequently, participants had no opportunity to interact with the product placements. In Conditions Three and Four, the interactivity conditions, subjects were exposed to a digital video with enhanced interactivity using hypervideo, in this case available through Clikthrough Technologies, in either a positive or negative context-induced mood video. There were two stages for each condition. In Stage One, subjects answered a pre-questionnaire, were exposed first to the music video stimuli and then asked to complete an after-exposure questionnaire. In Stage Two, participants returned to the computer laboratories to complete a one-week after exposure questionnaire.

The interactive and non-interactive conditions were compared with a view to proposing an integrated model assessing the effects of context-induced mood on the range of factors affecting recall and recognition of the featured brands.

1.5. Thesis structure

The thesis contains seven chapters organised into three parts. Part One includes two chapters covering background literature, identifying research gaps in this literature and formulating the research hypotheses for empirical testing. Chapter Two starts with an analysis of the evolution of product placement as a practice, its characteristics, benefits and limitations before discussing classical non-interactive product placement theory. The discussion is framed utilising Balasubramanian *et al.*'s (2006) integrative conceptual model framework. This framework is widely referenced in the field (van Reijmersdal *et al.* 2010; Bressoud *et al.* 2010; Homer 2009). Each of the 10 individual and execution factors affecting product placement recall and recognition in classical non-interactive product placement theory are analysed, including the context in which these factors have been studied. Chapter Three moves the discussion on to product placement and digital platforms and how product placement has been adapted to different media channels by using digital technologies. Chapter Three also introduces

hypervideo and its characteristics. Interactivity theory is discussed, incorporating an analysis of presence, immersion, and virtual experience and how they are shaped by different media channels and by interactivity. The chapter also discusses the weaknesses and areas of opportunity in current product placement literature and concludes by introducing the conceptual framework of the present thesis together with the hypotheses and research objectives.

Chapter Four comprises Part Two of the thesis and outlines the chosen research paradigm together with the research methodology, process, and context. It discusses the methods utilised for both product placement and interactivity research in relevant literature. Both research strategy and rationale are presented in detail. The experimental design is outlined introducing the use of human-computer interaction remote observation recording software. The rationale for selecting a convenience sample is presented. A detailed account of the development and conduct of the experimental procedures is then provided, including the administration of a pilot study and the modifications which were made to the main experiment following the pilot study.

Part Three presents the results, discussion and conclusions. Chapter Five focuses on the statistical analyses of studies 1 (positive context-induced mood) and 2 (negative context-induced mood). For each study, both experimental conditions are compared. This chapter presents an integrated framework including data from the four possible experimental combinations. Chapter Six presents higher level analysis. Chapter 7 discusses the findings and presents a summary of the results. Finally, Chapter Eight outlines the theoretical contribution, and the methodological, managerial and research implications of the study. It concludes by acknowledging limitations to the scope and methodology of the study and by suggesting recommendations for future research in the areas of product placement in particular and interactivity in general.

Conclusion

This chapter has set out the rationale and background to the study. The following chapter forms part of the first section of the thesis and focuses on reviewing the literature and developing the hypotheses that underpin the study.

PART ONE
LITERATURE REVIEW

CHAPTER TWO
CLASSICAL NON-INTERACTIVE PRODUCT PLACEMENT

Introduction

This chapter is divided into two sections. Section I presents the evolution of product placement literature and the contributions of academic researchers and industry practitioners to this literature. An understanding of product placement and how it has evolved is developed by reviewing the different media channels and their respective product placement practices. The ethical dilemma arising from the use of product placement as an advertising tool is also discussed in a historical context. The characteristics of product placement are then outlined to provide a broad understanding of existing literature.

Section II discusses and updates the theoretical framework of current product placement research proposed by Balasubramanian *et al*. (2006). The framework addresses execution and individual level factors which affect viewers' perception of product placements. The framework illustrates how implicit and explicit memories are affected by these factors and how this is reflected in placement outcomes following the Hierarchy of Effects Model – cognition, affect and conation. This model is widely referenced in the field (van Reijmersdal *et al.* 2010; Bressoud *et al.* 2010; Homer 2009). In this section, each factor in the model is analysed in depth. The aim here is to examine whether these factors and previous research findings can be used to explain interactive placements. These are presented in the form of hypotheses at the end of each section.

2.1 The evolution of product placement

Product placement refers to placed brands rather than product type; for this reason, it has also been called 'brand placement' (Hudders *et al.* 2012; Schemer *et al.* 2008; Nelson and Devanathan 2006; Brennan and Babin 2004; Nelson 2002; Karrh 1998). Product placement has been defined as a paid attempt to influence audiences which does not identify the sponsor (Balasubramanian 1994). Another noticeable definition refers to product placement as 'the insertion of branded products or services into mass media content with the intent of influencing consumer attitude or behaviour' (Newell *et al.* 2006, p. 577). The present study adopts the definition of product placement provided by

Karrh (1998, p. 33) as 'the paid inclusion of branded products or brand identifiers through audio and/or visual means within mass media programmes'. As discussed in the following section, product placement has not always been paid for. Karrh's stipulation above that product placement has to involve some form of payment was not always the case. In fact originally it involved some sort of unpaid brand mention within best-selling novels and popular songs (Karrh *et al.* 2003). A very early form of product placement can be found in *The Pickwick Papers* (1837) by Charles Dickens. Pickwick was a coaching service from London to Bath at the time (Newell *et al.* 2006). Decades later, product placement began to be used to bolster the creative content of films by adding realism to the plot. Here branded products were typically donated by companies to the producers free of charge. Originally, producers received commercial props at no cost reducing the cost of production; manufacturers gained valuable exposure for their brands with minimal outlay (Newell *et al.* 2006; Galician Ed 2004; Segrave 2004; DeLorme and Reid 1999; Balasubramanian 1994).

Today, product placement features in a wide range of media including films, television programmes, music videos, radio programmes, songs, video games, plays, novels (Lehu 2007; Nelson *et al*. 2004; Segrave 2004; Gupta and Lord 1998; Karrh 1998). More recently, product placements have featured in digital media in the form of virtual, online and interactive placements (Lynn *et al.* 2014; McDonnell and Drennan 2010; Grigorovici and Constantin 2010; Cauberghe and Pelsmacker 2006).

Product placement is a sophisticated practice which draws on a long established history which dates back to the first decades of cinematography in the mid 1800's (Lehu 2007; Newell *et al.* 2006; Galician Ed 2004; Segrave 2004; Karrh 1998). The first documented product placement in films took place in *Washing Day in Switzerland* (1896) (Newell *et al.* 2006). The film shows three women hand-washing clothes. One of the ladies stands on top of a box with the French translation 'Sunlight Savon' and another clothes container is placed on top of another box with the German translation 'Sunlight Seife.' Both correspond to the Lever Brothers soap, distributed and promoted in Europe by the Swiss business person Lavanchy-Clarke, who also distributed and contributed to shooting the Lumière films (Newell *et al.* 2006). It was, however, Thomas Edison who converted product placement into an advertisement practice. By using cooperative arrangements, he aimed to reduce production expenses and providing promotional services at the same time.

In the early years, films typically showed the products of their sponsors in an explicit fashion looking to reduce production costs in exchange for appearing in the films (Newell *et al.* 2006; Segrave 2004). For example, automobile manufacturers offered free use of their cars to studios; other manufacturers were willing to donate furniture, jewellery, and clothing (Segrave 2004). This practice was adopted by filmmakers and programmes to add realism to the plot without considering any commercial agenda (Galician Ed 2004; Segrave 2004; DeLorme and Reid 1999; Balasubramanian 1994). For instance, street scenes, shop interiors and indoor scenes were shot with signs and/or products. Products were also used to develop characters' personality. For example, a car could say a lot about a person's financial status and level of sophistication (Segrave 2004).

As the film sector evolved, so did the idea of using films as a channel for promoting and selling goods in both domestic and foreign markets, leading in some cases to the appearance of advertising films (Newell *et al.* 2006; Segrave 2004). A 1918 article by Lynn Meekin in the *Scientific American* and quoted by Segrave (2014) noted how rapidly US products were expanding into foreign markets after World-War I and how useful it could be to utilise films to capture and captivate new markets:

> … the world is keen for the movies, and the audience at a picture show is fair game for the American advertiser, […] but he shouldn't take advantage of it (Segrave 2004, p. 8)

This quote highlights three aspects of product placement which were apparent even at this early stage. First, it shows people's eagerness to use and embrace new media, in this case, films. Second, it signalled a new business opportunity for companies to include their products and brands within films. Lewis R. Freeman, in an article published in 1920's, cited examples of how U.S. goods were successfully advertised in other global markets. For instance, whilst he was travelling in Java, Indonesia, Freeman witnessed how viewers watched a film in a rather disengaged manner until they saw the main actress using a sewing machine. Everyone seemed to relate to the actress as she was performing an activity which was familiar to them; in this way the sewing machine became central to the audience. Third, it highlights a potential ethical dilemma - whether captive audiences are exposed to promotional efforts they are unaware of. This issue has been the subject of controversy among both practitioners and academics even up to the present time, and will be discussed further later in this section.

Soon companies realised the enormous potential and reach of using films as publicity vehicles for their brands and products. Firms produced industrial films where they showed their products 'in action' to gain clients, and as mediums to train their employees in how to use equipment (Segrave 2004). Meanwhile, studios had to decide the nature and extent of commercial participation in the film industry. Products were needed to enhance film plots, and, since production costs were expensive to begin with, different mechanisms were developed to incorporate commercial concerns into the process. This raised a number of serious issues. For example, on what basis would the film maker charge companies for brand appearances within the film? Would audiences react negatively to brand exposures, and would a featured brand align itself correctly with the company's brand proposition? Despite these controversies, product placement practice continued to increase, and the question of payment for such placement remained a delicate matter.

A further development in product placement practice was tie-ups. Tie-ups emerged as a cooperative arrangement between producers and brands in which on-screen exposure of branded products, off-screen celebrity endorsements, or a combination of both were traded for paid advertising, distribution and unpaid promotions by brands (Newell *et al.* 2006). Tie-ups soon became popular in the film industry. Examples of this practice include the Warner Brothers and Buick tie-up deal whereby the Buick brand would be the only one featured in up to 10 WB films (Newell *et al.* 2006; Segrave 2004). Buick featured the films on its traditional advertising communications.

With the advent of mass media, advertising was utilised as a mean of helping fund new media, such as radio. At the beginning, creative production in broadcast media relied exclusively on network programming, and sponsorship was sought to support this programming (Kretchmer 2004). Eventually, disguised as an attempt to support new media in amplifying their reach, advertisers and brand agencies participated in the programme creation process itself in order to assure repeated brand mentions, including product pitches camouflaged with jokes as part of the storyline (Turner 2004). Sponsors and shows developed a close and integral relationship (Kretchmer 2004; Turner 2004).

Television made its appearance in the 1950's and offered a new landscape for brands and advertising. Following the example of the film industry, television programmes were sponsored by and often named after specific brands (e.g. "The Colgate Comedy

Hour") with the opportunity of being openly promoted across programmes (Hudson and Hudson 2006). Shows were created with the active involvement of sponsors; soon brand managers established terms for how their brand was to be displayed on screen. These terms included being portrayed in a favourable plot, being positively utilised by well-regarded people, and not being associated with negative connotations and situations (Kretchmer 2004; Turner 2004). Television network departments, seeking to preserve and enlarge their business, guaranteed a programme aligned with the sponsor brand and its image (Kretchmer 2004). While the product placement practice continued to gain acceptance in the film industry, it was not the case on television. Off-screen publicity and free supply were less relevant to network productions and led to a conflict of interests with traditional advertising models. Product placement was perceived threat to advertising (Newell et al. 2006). This lead to the recommendation to avoid tie-in advertising made by the Broadcast Advertising Bureau in 1951 (Newell *et al.* 2006). It can be understood the risk of utilising product placements in television. Placements were accounted as in-program advertising, conflicting with traditional advertising. While radio and television writers tried to include branded mentions and product appearances, it led to negative reactions over placement utilisation.

Product placement was a well-established practice by the 1980's, when film producers openly decided to amend scenes and actively include paid products inserts (Balasubramanian 1994; Karrh 1998). The first study addressing product placement as a practice was conducted by Steortz (1987).

Balasubramanian (1994) identified product placement as an established hybrid message type. Other types of hybrid messages include programme-length commercials and programme tie-ins. An hybrid message refers to the combination of advertising and publicity elements where audiences are unaware of the commercial purpose and therefore more receptive and open to embedded messages (Balasubramanian 1994). Hybrid messages have two main elements: first, the advertising element is paid for and entitles the sponsor to retain control over the context where the message is shown; second, the publicity element avoids identifying the sponsor thereby giving more credibility to the message (Balasubramanian 1994). To avoid being perceived as too forced or obvious, hybrid messages disguise their commercial intent to appear believable. The classic 80's children's film *E.T. the Extra-Terrestrial* (1982) represents an emblematic example of product placement as it operates today. In the film, Hershey

Foods Corporation presents their new product Reese's Pieces. The central character, Elliot, uses Reese's Pieces candies to lure ET; the company reported a 65% increase in sales following the success of the film (Balasubramanian *et al.* 2006; Galician Ed 2004; Karrh 1998; Russell 1998). In this sense product placement typically entailed a hybrid message which incorporated paid advertising within entertainment vehicles (Balasubramanian 1994).

In the 90's, video games incorporated product placement seeking to add realism and to help bypass production costs (Nelson 2002). Glass (2007) proposed that video games utilise placement in three different ways: monopolization, billboarding, and utilisation. Monopolization occurs when games are developed explicitly around brands. For example, the online game *Kitchen Assault* was developed around Weetos cereal, a Weetabix brand. Billboarding functions in a more natural manner placing brands and products in the form of billboards shown, for example on in-game highways and stadiums. Billboards are digitally placed and can be easily changed if a brand starts a new campaign. Utilisation, as its name suggests, implies customising different worlds so that users can 'use' the product or brand within the game. More recently, online computer games have integrated brands in what is known as *advergames* that craft the whole gaming experience around the brand (Hudson and Hudson 2006; Kretchmer 2004). See the case of *iwin* (http://www.iwin.com/) as an example of brands creating customised online and PC games. It is evident that the relation between advertiser and content provider in such *advergames* becomes even closer. More sophisticated placements are embedded in virtual worlds such as Second Life, where users can interact with brands and order products to be consumed in real life (Papagiannidis *et al.* 2008). This is a remarkable example of brands co-creating the game with customers within the *massively multiplayer online role playing game* (MMORPG) to recreate real-world activities (Papagiannidis *et al.* 2008). The digital experience transcends the virtual world. For instance, at Dell Island in Second Life, users can visit the Dell factory, customise their Dell computers, and purchase a real Dell computer online (Papagiannidis *et al.* 2008). Product placement in video games constitutes a new level of consumer involvement (Nelson 2002). In fact, as noted, technology facilitates digitally enhanced experiences that increase involvement levels.

The 90's saw the emergence of what has been termed the postmodern moment. Postmodernists delight in seeing concepts which used to be differentiated, clearly

demarcated, and separate, become blurred and opaque. In this way Postmodernism welcomes it when established categories and classifications of race, gender, social class and taste are undermined. The common term used for this feature of postmodernism is *de-differentiation*. Postmodernists evidence many examples of dedifferentiation in the contemporary marketplace. At a very general level they point to the blurring of the distinction between production and consumption; by consuming goods, consumers are simultaneously 'producing' themselves by developing their personal identities. More specific examples include the fusing of commercial brands with popular cultural artefacts such as the partnership between Nestle and Coca-Cola with Disneyland and the coming together of social advocacy and commercial promotion in Benetton's widely-discussed advertising campaigns (Brown 1999). In the context of this thesis, postmodernists would arguably point to two instances of de-differentiation that it raises. First, by studying physical subjects and the manner in which they behave interactively on disembodied digital platforms, it forefronts how the distinction between online and offline worlds is becoming increasingly blurred. Second, and more specifically, by focusing on product placement in online music videos, it serves to undermine the ongoing de-differentiation between commercial initiatives and popular cultural artefacts.

This overview of the evolution of product placement practice shows that it is now a very fluid, dynamic, and well-established method of product and brand promotion. It also shows how this practice is impacted by on-going developments in media technology and sophistication (Shankar and Malthouse 2006). For example, technological development has made possible viewing across devices and across channels simultaneously (Lynn *et al.* 2014; Cauberghe 2008; Schmitt 1999). This means that one can start watching content on mobile, tablets, desktop computers and synchronise content across screens with the use of products such as Chromecast and AppleTV. Consumer attention is obviously fragmented in such situations nonetheless; they do offer marketers new channels with which to engage consumers. Different media also create distinctive media habits; watching a film, a television programme, or playing a video game are distinctive practices. Each of them provides a different level of consumer involvement and consequently represents a different setting for product placement.

This outline of the development of both product placement and technology raises a number of questions. Is product placement shaped by technological evolution? Is product placement different from one media channel to another? Has product placement evolution kept up with changes in consumer behaviour? As audiences become more sophisticated and *'marketing literate',* is product placement practice broadening its scope sufficiently and expanding into different forms of digital media to engage in new ways of interaction?

2.1.1 Product placement benefits

Alongside the body of research focusing on the ethical aspects of product placement, there has been a parallel stream of research investigating how product placement impacts and affects audiences. Balasubramanian *et al.* (2006) provide a synthesis of the literature addressing product placement, audience reactions to it, and how these reactions relate to a variety of cognitive, affective, and conative outcomes. This framework will be analysed in detail in Section 2.2. Before doing so, a further analysis of product placement's benefits is presented in the following section.

Products and brands now play well-integrated roles in the editorial content of media. By definition, product placement is part of the viewing experience and is not intended to be perceived by users as having a commercial intent (Grigorovici and Constantin 2010). Placements are part of the storyline. Scenes and plots are carefully planned. Brand managers and custodians arrange their placements in close collaboration with media creative teams. They analyse scripts and suggest possible placements as the creative process unfolds (Hudson and Hudson 2006). For example, James Bond's films have been famous for utilising well registered product placements (Karrh *et al.* 2003; Karrh 1998). In earlier films, such as *The World Is Not Enough* (1999) and *Die Another Day* (2002), James Bond is seen drinking his signature vodka martini. However in *Skyfall* (2012) James Bond is also seen drinking Heineken beer. Heineken reported that after paying an estimated £45 million, the beer was placed in two scenes, one of them in the hands of James Bond himself (Barrie 2012) .

It is argued that product placement lends authenticity to content. Traditionally products and brands have been utilised to add realism to the plot and to offer a sense of familiarity (Segrave 2004; Nelson 2002; Avery and Ferraro 2000). For a recent

example, in the American television programme *Modern Family* (2009) Episode 19 of Season 1 is mostly devoted to Phil Dunphy and his desire for an Apple iPad for his birthday. Product placement can also lend authenticity by evoking different time periods. Furniture, transport, and clothing placements create historical contexts which help audiences imagine they are watching events at a certain time (Nelson 2002; Avery and Ferraro 2000).

Placed products can also convey different personality traits (Segrave 2004; Nelson 2002; Avery and Ferraro 2000). Through symbolic consumption on screen, audiences can see how characters develop by using a variety of products and services and this in turn adds to the overall unfolding and credibility of the story (Holbrook 2004). In this sense, on-screen characters are somehow 'living billboards of products' and their personal image is extended through their use of brands and possessions (Kretchmer 2004).

Product placement gives to products and brands a certain level of association with specific characters, celebrities, films and television programmes; such associations can prove a bonus or a liability (Brennan and Babin 2004; Avery and Ferraro 2000). The goal is obviously to ensure that placed products are depicted in a favourable light. For example, the film *The Internship* (2013) placed Google at the centre of the story. Most of the film was about Google, its lifestyle and the merits of being part of the team (see Figure 2.1).

There are also financial motivations behind the adoption of product placement by media creators. First, it contributes to subsidising the cost of production by accepting sponsorship from brands. Sets require furniture, products and brands to recreate the scenery and plots, and the existence of brands supplying these goods free of cost represents savings for the production team. Second, product placement is a source of income. Since products need to be integrated within movie and programme sets, production teams opt for offering placement opportunities for brands. It is financially attractive to invite companies to place their products in exchange for payment (Hudson and Hudson 2006).

Figure 2.1 **An example of product placement as a film plot**

Source: Sauer (2014)

Another reason that makes the adoption of product placement widespread from an advertiser's point of view is that audiences cannot avoid seeing it because it is integrated into the plot and is part of the storyline (Brennan and Babin 2004; Galician Ed 2004; Segrave 2004; Avery and Ferraro 2000). Product placement is seen as a solution to "channel hopping"; an avoidance strategy widespread among television audiences who wish to skip advertisements (Hudson and Hudson 2006). Since viewers are receptive and involved in the stories portrayed on-screen (Karrh 1998), product placement offers brands a captive audience who are less aware and less resistant to their promotional overtures (Nelson 2002). Ideally, for the advertiser, product placement should yield greater brand awareness, more positive brand attitudes, and increased sales (Hudson and Hudson 2006; Karrh 1998).

On a related point, advertisers also warm to product placement due to the global distribution of films and television programmes, a factor that promotes both message reach and message life (Karrh 1998; Balasubramanian 1994). For example, a television programme or film may be watched several times in a number of countries, increasing exposure to the products placed and reinforcing their respective images.

2.1.2 Product placement limitations

Despite the benefits of product placement discussed above, it does have its limitations. First, placements may provoke different reactions from viewers (Balasubramanian *et al.*

2006). Although they may not be negative in all cases, these reactions may depend on the prominence and duration of the placement, its salience, its position on the screen, and the degree of relevance to the overall story or plot (Bressoud *et al.* 2010b). Second, there is the inability to control the amount of time and visibility of the placed brand. Often brands are not recognised due to their location within the scene or plot, or their lack of prominence in the film or programme. In some cases placements are forced to fit the story in a manner which can alert and unsettle the audience (Gupta and Lord 1998). For instance, in a single 22-minute episode of *Seinfeld*, an NBC television programme, seven brands were mentioned. The writers revealed that in some cases dialogues were amended to include audio brand placements (Karrh 1998).

Third, brands usually look to avoid inappropriate contexts where they are either misused or involved in violent scenes (Balasubramanian *et al*. 2006). This proviso also includes cases there the placed product is used to make negative social statements, looking to avoid the spill over effect from story to brand (Russell 1998). However, in the context of advergames, Waiguny *et al.* (2013) show some more nuanced results. In their study, negative advergames were perceived as more arousing leading to positive explicit brand attitudes. While the advergame brand was linked to the placed brands by association, familiarity with game content had an effect on the associations gamers developed towards the brands in question. Negative content generated positive implicit associations when the placed brand was familiar, but led to negative associations when the brand was unfamiliar (Waiguny *et al.* 2013).

Fourth, the placement decision is made *a priori*, and there can be a high risk of uncertainty regarding the success of the host media vehicle which obviously cannot be determined in advance. As such, brands are investing in placements not knowing for certain whether they will derive an acceptable Return on Investment [ROI] (Brennan and Babin 2004; Avery and Ferraro 2000; Rosen 1990). So, the marketer bears the risk of poor box office or ratings performance of the film or TV show in which the placements are embedded (Rosen 1990). Fifth is the predictability issue, in the sense of knowing in advance the quality or number of placement opportunities available in the future, thus effectively precluding advance planning for placement opportunities (Balasubramanian 1994; Rosen 1990).

Following this overview of the perceived benefits and potential downsides of product placement, the next section moves to examine the inner workings of product placement in a more detailed fashion. Specifically, it will examine the range of both personal or individual factors within the viewer as well as the external or execution factors in the placement which affect the placement's outcomes.

2.2 Execution and individual factors which affect product placement outcomes

The present study builds on Balasubramanian *et al.'s* (2006) theoretical framework, which identifies the response of audiences to product placement based on three sets of independent variables: execution factors, individual factors, and processing depth.

The execution factors consist of what the media creator controls when integrating a placement into a given media vehicle (Balasubramanian *et al.* 2006). The individual factors depend on how consumers perceive placements based on their own experiential knowledge (Russell 1998). Both sets of factors affect a placement's processing depth. Depth refers to the extent to which a viewer processes and evaluates a stimulus, and occurs in the explicit or implicit memory. Finally, all the factors, whether individual or execution, influence cognitive, affective, and conative outcomes. These outcomes are organised in accordance with the Hierarchy of Effects Model (Barry 1987). Cognition refers to the creation of brand awareness and brand knowledge based on the information provided primarily, but not exclusively, by advertising (Barry and Howard 1990; Barry 1987; Lavidge and Steiner 1961). Affect refers to consumer attitudes towards brands, and the generation of preference towards them (Lavidge and Steiner 1961). Conation consists of the motives which lead to influencing or implementing a purchase decision (Barry and Howard 1990; Barry 1987).

Following the Hierarchy of Effects Model, the present work reviews the gamut of factors related to the cognitive outcomes of a placement, particularly recall and recognition. Testing Balasubramanian *et al.*'s (2006) work, the empirical instrument in the present study utilises 10 factors (execution and individual) and two levels of processing depth (explicit and implicit) which affect placement recall and recognition. Each of these is discussed in detail, and a literature update on Balasubramanian *et al.* (2006) is presented.

2.2.1 Execution factors

Execution factors refer to the variables which the film/programme/music video/video game creator can control (Balasubramanian *et al*. 2006). These variables allow a sense of control over how to portray these brands and products within a placement vehicle. Balasubramanian *et al*. (2006) identified the execution factors as: programme type/programme-induced mood, execution flexibility, the opportunity to process a placement, placement modality, priming of brand appearance, the type and amount of brand information presented, the strength of the link between a placed brand and programme characters/editorial content/story, vehicle, and medium.

Each of these execution factors can affect how audiences process different messages and thus the outcome of the product placement itself, and is discussed sequentially.

2.2.1.1 Programme type/programme-induced mood

The study of programme-induced mood is relevant in order to understand how media channels can affect the way in which audiences perceive embedded products and brands. Holbrook and Hirschman (1982) were among the first consumer behaviour authors to note how the symbolic meanings with which many products and service offerings are charged can in turn give rise to a variety of mood states. In this sense, much of consumption is experiential. Consequently, academics have studied the transference effect from programme to brands in order to understand how mood affects the way a stimulus is processed (Balasubramanian *et al.* 2006; Aylesworth and Mackenzie 1998; Russell 1998; Goldberg and Gorn 1987; Gardner 1985). The following section focuses on understanding the nature of mood and how programme-induced mood can influence product placement recall and recognition.

Findings from the social psychological and consumer behaviour literatures show that mood has a direct and indirect impact on the recall and evaluation of advertisements and brands (Gardner 1985). The Elaboration Likelihood Model (ELM) (Petty and Cacioppo 1986; Cacioppo and Petty 1984) suggests that mood can influence how an advertisement is processed by individuals in two distinct ways. First, a programme-embedded mood can serve as a peripheral persuasion cue under circumstances of high and low involvement. Second, it can affect the extent to which an individual processes stimuli centrally. Central processing entails an individual devoting cognitive attention in

order to try to understand the advertisement to which he or she is exposed (Aylesworth and Mackenzie 1998). Therefore, central processing produces higher cognitive effects than peripheral processing. Mood literature has supported the findings that positive moods decrease central processing while negative moods increase it (Aylesworth and Mackenzie 1998).

To understand mood and its effects on placement recall and recognition, it is necessary to discuss how mood has been conceptualised. In an early study, Watson and Tellegen (1985) discussed how mood should be an accurate assessment of individuals' emotional experiences. Note that the authors position mood as an emotional experience which belongs to the dimensional structure of affect as a psychological condition. Being an emotional experience, mood is perceived in a subjective way by individuals (Gardner 1985). Emotional states are 'transitory conditions of the organism', and as such can change rapidly and even substantially in a very short space of time (Mehrabian 1996). However, are mood and emotions the same? Many academics say 'no' and seem to regard moods as less intense feeling states which can be easily manipulated by context (Goldberg and Gorn 1987; Holbrook *et al*. 1984). A mood, even if intense, rarely interrupts an individual's behaviour in order to focus on the source of emotional distress, given its general nature. Moods are short-lived, temporary states of mind which can be altered by context and change throughout the day (Aylesworth and Mackenzie 1998).

Researchers have developed ways to measure mood and determine how individuals are affected by stimuli (Watson and Tellegen 1985; Belk 1984). A drawback of these measurement techniques is a lack of understanding about the particular mood which is being studied. Belk (1984) suggested that different stimuli can evoke positive emotional responses, but these moods and emotions can be very different. For example, the scene of a film, an advertisement portraying babies and puppies, and an image of a young couple on a beach can produce a number of positive emotions which differ widely and are not interchangeable (Belk 1984).

Pleasantness (positive-negative) and arousal (high-low) have emerged as the two major dimensions of mood and are well established in marketing and social psychology studies (Watson and Tellegen 1985). Some academics have identified a third dimension, dominance (Blum and Mehrabian 1999; Russell and Mehrabian 1977); however, it is

not replicable across studies or cultures (Watson and Tellegen 1985; Russell 1983). Accordingly, this present research discusses the two major dimensions given above and dispenses with 'dominance'.

Pleasantness is 'a positive affective state that is felt to be distinguishable from preference, liking, positive reinforcement, and approach avoidance' (Bearden, Netemeyer, and Haws 2011, p.310). Pleasantness is measured in terms of positive or negative valence and influences how one perceives a stimulus (Shapiro, Macinnis, and Park 2002; Aylesworth and Mackenzie 1998; Goldberg and Gorn 1987). Although a mood can be positive or negative, its intensity or arousal determines whether an individual is alert (Goldberg and Gorn 1987). This corresponds to the Excitation Transfer Theory (Zillmann 1971) which claims that a state of highly emotional arousal is later transferred to another situation, irrespective of valence. In other words, a mood can be positive or negative but what really makes a difference in terms of impact is its intensity.

Arousal (high-low) has been linked to mood intensity (Goldberg and Gorn 1987). Arousal affects the level of processing and is defined as the 'degree of energisation, activation, inner tension, alertness … a state of wakefulness or action preparation' (Shapiro, *et al*. 2002, p.19). In addition, arousal has been understood as a state that varies along a single dimension from feeling sleepy to displaying frantic excitement (Bearden, Netemeyer, and Haws 2011). Following this reasoning, it makes sense to analyse the mood construct, with arousal and pleasure as separate dimensions, in order to observe the effects on product placement recall and recognition.

There are two theories addressing the relationship between moods created by programme content and the manner in which featured advertising stimuli are processed - Mood Congruency Theory and Consistency Theory. Mood Congruency Theory states that television shows and films set a particular mood tone and that this transfers to the way in which advertisements shown on these media are cognitively processed by the audience (Aylesworth and Mackenzie 1998; Goldberg and Gorn 1987). A positive programme-induced mood facilitates and promotes processing depth and at the same time links the programme mood to the featured products and brands. For example, positive mood-induced programmes encourage positive moods, creating positive cognitive responses and better recall (Goldberg and Gorn 1987). If a television show

creates a positive mood, and an advertisement is embedded during the break, viewers link the positive feelings created during the programme and connect them to the advertisement, thereby transferring the emotion. This implies that moods can influence people's judgements. But how does the process described by Mood Congruency Theory influence cognitive processes such as recall and recognition? Literature has suggested that a positive mood increases information processing, while a negative mood (e.g. that of a depressed person) decreases memory (Goldberg and Gorn 1987; Isen 1984). Consistency Theory argues that a commercial that induces negative mood is recalled more clearly if presented in the context of a positive mood-induced programme because people in a positive mood state are more receptive. This is similar to a state of flow which suppresses any conscious thinking and focuses only on the task or stimulus which is producing the positive state (Holbrook and Hirschman 1982). People are then more likely to recognise, react to, and recall any negative stimuli which interrupt this state of flow by activating conscious processing.

Placements, unlike advertisements, are embedded in the editorial content as part of the storytelling so that placed brands are more closely tied to the media context than an advertisement during a break would be. If the programme-induced mood is positive, then one can expect an immediate transference of affect to the featured product or brand (Balasubramanian *et al*. 2006). Moreover, while a positive mood translates to brands and products, a negative mood triggers central processing of the mood's source, prompting the receiver to suppress any processing of the advertisement (Goldberg and Gorn 1987). Evidence on context-induced mood influencing embedded advertisements suggests that a negative programme-induced mood does not induce central processing of an ad. On the contrary, a negative mood makes viewers focus on the negative mood's source (Aylesworth and Mackenzie 1998). As a result, positive moods decrease central processing and negative moods increase it (Aylesworth and Mackenzie 1998). What does this mean for product placement?

To date, two studies have addressed the impact of context-induced mood on product placement (Mitchell 2014; van der Weele, Groenland, and Noordewier 2009). The study by van der Weele *et al.* (2009) aimed to explore whether products placed in positive mood-induced programmes were more effective than those placed in negative mood-induced ones. The measures of effectiveness were recall, recognition, attitudes, and purchase intention. Mood was manipulated in three mood valence conditions (positive,

negative, and neutral). van der Weele *et al.* (2009) found that recall and attitudes are higher if placed in the context of a positive television show, a finding which is consistent with Mood Congruency Theory. Thus, recall and attitudes are higher in a condition of positive programme-induced mood. No evidence was found for the Mood Consistency Theory. However, this study had a number of limitations. First, it used scripts instead of actual television shows and therefore relied on participants' central processing and on participants being more cognitively involved. In such a situation, reading necessarily involves higher cognitive involvement and participants are more likely to remember those cues to which they have been purposively directed. This environment can have a positive effect on an experiment and differs greatly from a real-life setting. Second, the study relied on a small sample of participants (N = 43) who were exposed to both stimuli and were possibly influenced by them.

Mitchell (2014) acknowledged the lack of research on the effects of mood in product placement. In her doctoral dissertation, she explored the effects of the emotional context of a film scene on product placement and the repercussions it had on brand attitudes and purchase intention. Among her findings, she discovered that attitudes towards brands are positively influenced when the scene valence is positive and arousal level is high. Similarly, when a positive brand is placed in a scene with positive valence, purchase intention is higher. This means that scene valence and arousal are relevant for brand attitude construction. However, only scene valence affects purchase intention.

While Mitchell's (2014) study did not address mood and its effects on recall and recognition, van der Weele *et al.'s* (2009) findings suggested a higher recall of placements embedded in a positively valenced television show. Furthermore, mood has been shown to influence the effectiveness of advertisement recall and recognition in a traditional setting (Gardner 1985; Goldberg and Gorn 1987; Aylesworth and Mackenzie 1998). This finding can be extended to the placement context. In addition, as noted in Balasubramanian *et al.*'s (2006) review, programmes containing placements are usually charged with emotional content Thus, consistent with Goldberg and Gorn's (1987) results, while a mood can be positive or negative, its intensity determines whether an individual is *alert* or not. Following this, two hypotheses can be expressed.

Hypothesis 1a: Positive context-induced mood in digital music videos produces higher recall of interactive placement than positive context-induced mood in classical non-interactive product placement.

Hypothesis 1b: Positive context-induced mood in digital music videos produces higher recognition of interactive placement than positive context-induced mood in classical non-interactive product placement.

Hypothesis 1c: High arousal in digital music videos produces higher recall of interactive placement than high arousal in classical non-interactive product placement.

Hypothesis 1d: High arousal in digital music videos produces higher recognition of interactive placement than high arousal in classical non-interactive product placement.

Mood states, upon exposure to stimuli, can be affected by the media message. It is also interesting to analyse the change of mood before and after stimulus exposure and to consider whether this affects placement recall and recognition. Similarly, it is worth investigating the impact of positive and negative media contexts on recall and recognition levels for embedded brands. For example, would these effects be the same under conditions with and without interactivity? These questions lead to the following hypotheses:

Hypothesis 1e: Positive context-induced mood in digital music videos produces higher recall and recognition than negative context-induced mood.

Hypothesis 1f: Context-induced mood has a positive effect on the change of viewers' mood before and after stimulus exposure.

Hypothesis 1g: Interactivity has a positive effect on the change of viewers' mood before and after stimulus exposure.

2.2.1.2 Execution flexibility

Digital technologies have adopted and merged with product placement, thereby giving rise to new types of digitally embedded placement. Examples of these include virtual, retrospective, and online placements (Balasubramanian *et al*. 2006).

Virtual placements can be digitally added to live broadcasting and can only be seen by media viewers as opposed to those who attend the live event (Balasubramanian *et al.* 2006; Hey 2002). The difference between a classical non-interactive placement and a virtual placement consists in the latter allowing the insertion of elements which were not there in the first place (Hey 2002). This type of placement offers the flexibility of geographical customisation at a national and international level. For example, during Super Bowl XXXV in 2001, Princeton Video Image Inc. branded the first down line. This line was not part of the real green and was digitally added so that it could only be seen by TV viewers. The added advantage was that the brand was customised according to the country where it was telecast. In the United States, no logo was added; in Germany, the brand was FedEx; in Canada, it was Pizza Pizza; while in Mexico it was Banca Serfin (Hey 2002). Similar examples related to baseball games, league racing, and even the Grammy telecasts have been documented by Hey (2002). Kretchmer (2004) noted that virtual placements were utilised in video games, but the practice have been outdated by the advent of *advergames*.

More recently, McDonnell and Drennan advanced the definition of virtual placements by stating that 'the image of a branded product is digitally inserted into a film or TV program after the program has actually been made' (2010, p. 26). This definition corresponds well to retrospective product placement as presented by Lynn *et al.* (2014) and Balasubramanian *et al.* (2006). In this regard, retrospective placement seems like an extension of virtual placement which can be achieved *a posteriori* and is not only applicable to live broadcasting. A retrospective placement, as its name suggests, digitally embeds brands in a mass media programme or film *after* its release (Lynn *et al.* 2014; Balasubramanian *et al.* 2006). This type of placement enables brands to be placed after the visual media, for example, films, videos, and TV shows, have been produced. Brands can also be customised geographically; thus, specific brand items can be digitally added to syndicated media.

Online placements are real-time online and involve the delivery/updating of customised placements while individuals play Internet-based video games (Grigorovici and Constantin 2010; Balasubramanian *et al*. 2006). This type of placement includes in-game billboards or brand logos embedded in avatars' clothing, where no further brand information is disclosed (Grigorovici and Constantin 2010; Nelson and Devanathan 2006). The major advantage, and disadvantage, of this type of placement is that it targets highly segmented audiences

Lynn *et al.* (2014) noted how digital technologies add a temporal aspect to execution flexibility, making it possible to place brands before, during, or after a programme is released. They pointed out how digital technologies, hypervideo in particular, make the existence of interactive product placement and retro-interactive product placement possible. Technical descriptions for the different types of technology-enhanced placement referred to in this section, including interactive and retro-interactive placements, and their temporal aspects are outlined in Table 2.1.

Balasubramanian *et al.* (2006) noted that among the most common advantages of these types of placement is the ability to customise/personalise messages and assess message impact in real time. Further, academics and practitioners agree that one of the advantages of online advertising is that, in general, it enables better targeting, the improved measurement of effectiveness, and a greater return on investment (Edelman 2010; McDonnell and Drennan 2010). Academics and practitioners also agree that online advertising placements eliminate two disadvantages of traditional advertising: the risk of poor box office performance and the inability to plan in advance for placement opportunities (Lynn *et al.* 2014; Balasubramanian *et al.* 2006).

Table 2.1 **Existing and emerging forms of product placement**

Virtual Placement Type	Technical Description	Temporal Aspect	Interactivity
Conventional Product Placement	Non-technical	Ex Ante	No
Online Placement	Real time online delivery or updating of customised brand messages, e.g. Internet-based video games.	Real Time	No
Retrospective Placement	Digitally embedding brands or brand messages in a mass media programme or film after its first release.	Real Time or Ex Post	No
Virtual Placement	Brands or brand messages digitally added during a mass media programme to which live-event audiences are not exposed.	Ex Post	No
Interactive Placement	Interactive placement is the activation of clickable anchors on objects (products, people, places, and brands) within a video which enable the viewer to obtain more information about, and sometimes buy, the objects.	Ex Ante	Yes
Retro-Interactive Placement	Retro-interactive placement is the activation of pre-existing objects within video programming ex post facto with clickable anchors.	Ex Post	Yes

Source: **Lynn *et al.* (2014, p. 20-21)**

However, Lynn *et al.* have pointed out that online advertising placements are not without their drawbacks:

> Online, virtual and retrospective placements are typically analogous to traditional online banner or television advertising and suffer from the same limitations, if not more. Examples cited in literature are typically the placement of revised virtual billboards in films, video games, or television programming. As such while they have execution flexibility advantages, they suffer the same limitations as single mode visual-only screen placements (Sabherwal *et al.* 1994; Brennan and Babin, 2004). These new forms of placement, while possibly being more informative than traditional placement and therefore more likely to increase cognitive outcomes (Russell, 1998), may irritate audiences by being too obviously a placement. (2014, p. 17)

Lynn *et al.* (2014) also noted how successful television programmes (films, video games, etc.) are repeated and syndicated worldwide. In such cases, a company might note that a particular television programme for instance has gained widespread popularity. While retrospective placement would allow for post-production inclusion of its brand in this programme, interactive retrospective placement would also enable viewers to click on a placed product and complete a purchase.

Digital technologies enable execution flexibility for new forms of product placement, thereby increasing all message outcomes (Balasubramanian *et al.* 2006). For example, placement recall of in-game advertising and billboards is higher in an immersive computer game environment than otherwise (Nelson 2002). In addition, virtual placement recall in the context of interactive TV is higher than that of non-interactive placements (Grigorovici and Constantin 2010; McDonnell and Drennan 2010; Cauberghe and Pelsmacker 2006). However, virtual, online, and retrospective placements, even when they are more prominent than classical non-interacitve placements and likely to affect outcomes positively (Balasubramanian *et al.* 2006; Russell 1998), can irritate audiences by being too noticeable or inappropriate for the context. This 'need to fit' can affect the brand and the media where the placements are inserted, thereby diminishing, or provoking negative impacts on brand attitude. Further, the major advantage and disadvantage of this type of placement is its highly segmented audiences.

It is also worth noting that studies of virtual, retrospective, and online placements have not recognised the impact of interactive placements (Lynn *et al.* 2014). Consequently, the present study explores whether the theoretical proposition of Balasubramanian *et al.* (2006) can be extended to the issue of interactive product placement in digital music videos. It also posits that interactive product placements offer a better fit and are less likely to give rise to negative attitudes towards the brand or music video in which they are embedded.

2.2.1.3 The opportunity to process a placement

The opportunity to process a placement refers to the circumstances which allow viewers to cognitively process a placement, such as its prominence and exposure time (Karrh *et al.* 2003). Russell (1998) suggested that placements vary in intensity according to their connection to plots. Further, Gupta and Lord (1998) and Russell (1998) identified level of prominence as an element which is important in order to increase placement effectiveness. In addition, Gupta and Lord (1998) stated that placements which belong to any of the three modes (visual, verbal, verbal-visual) can be subtle or prominent.

A subtle placement occurs when a brand is shown in the background without being central to a scene or is displayed on a small scale with brief exposure. Often, this type of placement does not require noticeable integration of the product into a scene and can be easily placed without substantially affecting the plot (Gupta and Lord 1998). For Russell (1998), a subtle visual placement, which is what she called a creative placement, insinuates a brand into the plot in the form of outdoor advertisements in street scenes.

A prominent placement occurs when a brand identifier is highly visible because of its size or centrality to a scene and can be gauged by measuring the time of the placement's appearance in seconds (Gupta and Lord 1998). This type of placement attracts greater attention to a brand. An example of a prominent placement occurs in the American television programme *Friends* (2000) Episode 11 in Season 6 where Pottery Barn, a home furnishing store chain, is central to the plot (see Figure 2.2). Another example of a prominent placement occurs in Sex and the City, the Movie (2008) where Carrie's (Sarah Jessica Parker) boyfriend uses a pair of Manolo Blahnik blue high heels to propose to her. The actress wears the pair of Manolos, making them central to the plot (see Figure 2.3).

Figure 2.2 **An example of a prominent placement (I)**

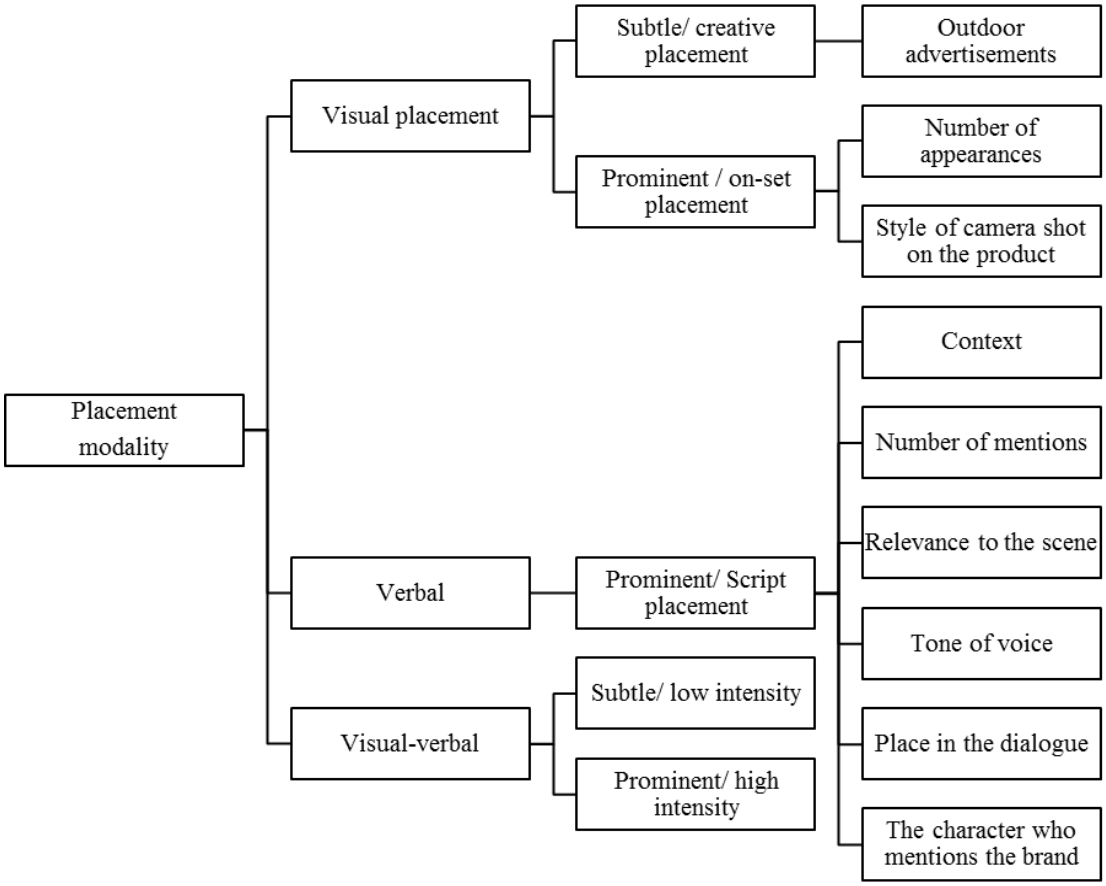
Source: Sweeten (2014)

Figure 2.3 **An example of a prominent placement (II)**

Source: HubSpot (2015)

Gupta and Lord (1998) and Russell (1998) considered that placement modality could be subtle or prominent (creative/on-set) and that there are different elements which affect the degrees of prominence (see Figure 2.4). For example, in the case of a verbal placement, prominence varies based on: the number of mentions a brand receives, whether the brand mentioned is relevant to the scene, whether the tone of voice is positive or negative, the place at which the brand is mentioned within the dialogue, and the character who mentions the brand. For a visual placement, prominence depends upon the number of appearances of a brand on screen or the style of camera shot used for the product. Finally, a verbal-visual placement varies from low to high intensity. Low intensity is considered a combination of a mention of a brand and a brief appearance on screen, whereas high intensity occurs when an actor clearly engages with a brand or where a brand becomes central to the scene. During the episode 'The One with the Apothecary Table' mentioned earlier, Pottery Barn is central to the scene, the table is shown and admired in different scenes by central characters who discuss the merits of the home furnishing store as well as the quality and style of products it stocks. A more comprehensive summary of these characteristics is presented in Figure 2.4.

Figure 2.4 **Product placement prominence**



Source: Adapted from Gupta and Lord (1998) and Russell (1998).

Following Gupta and Lord (1998) and Russell (1998), subsequent placement studies have identified other factors which affect placement prominence such as: the number of verbal mentions or visual appearances of a brand, whether a brand appears in the foreground or the background, whether there is a close-up camera shot of a brand, whether a brand is essential to the scene, and whether a character interacts with a product (Brennan and Babin 2004; Avery and Ferraro 2000; D'Astous and Chartier 2000). Lehu and Bressoud (2009) summarised these characteristics (see Table 2.2).

Table 2.2 **Characteristics of prominent placement**

Variables	**Sources**	**Authors**
Space occupied by the brand	Product size	Fontaine 2002 Gupta and Lord 1998
	Scale of product shot	Fontaine 2002 Russell 1998
	Visibility	D'Astous and Chartier 2000 Russell 1998
Other brands present simultaneously	Presence of other prominent brands	Fontaine 2002
	Multiple simultaneous placements	Gupta and Lord 1998
Duration brand is displayed	Duration brand is displayed	Fontaine 2002 Gupta and Lord 1998
	Placement time	D'Astous and Chartier 2000
Brand location	Position	Gupta and Lord 1998 Russell 1998

Source: Lehu and Bressoud (2009, p.15)

The main limitation when assessing placement prominence is that it requires qualitative coding, which means that each placement depends to a great extent on the judgement of the coder. Although there are a number of characteristics which can be taken into account when determining placement prominence, it remains a rather subjective approach. Arguably, this situation reflects the fact that placements are always different. Because placement prominence is an execution factor, it is equally important to study how audiences perceive it. For example, is there a difference between researchers' qualitative coding and audiences' perceptions? The following studies have assessed the prominence (subtle/prominent) of placements using qualitative approaches.

Gupta and Lord (1998) assessed the effectiveness of prominent versus subtle placements by comparing aided and unaided recall for product placements with recall for traditional advertisements. Participants were exposed to a 30-minute film excerpt where the experimental stimulus was a prominent placement, a subtle placement, or an advertisement. They found superior recall rates for prominent product placements compared with subtle ones. In addition, advertisements registered higher recall rates than subtle product placements, and prominent placements had higher recall rates than an advertisement for the same product. However, the participants were not exposed to the complete film, and the stimuli employed during the test did not involve prominent

and subtle placements for the same product in the same film. Despite these shortcomings, the authors' findings suggest high recall rates for prominent product placements embedded in films.

Law and Braun's (2000) study addressed the impact of placement prominence and repetition on explicit memory (recall and recognition) and implicit memory (mere exposure effect and familiarity). Participants were exposed to one of the two conditions and watched a 10-minute segment of the television show *Seinfeld*. Findings indicated that prominent placements were more often recalled and recognised than subtle ones.

Russell (2002) utilised a within- subjects design to investigate four experimental combinations: modality (visual/verbal) x plot (subtle/prominent). In the memory test, the verbal versions- subtle and prominent- had greater impact on memory than the two visual versions. Prominent versions (verbal and visual) had higher recognition than subtle (verbal and visual).

Brennan and Babin (2004) analysed the effects of brand prominence on placement recognition. In their research, undergraduate students were exposed to one of two complete films and then asked to complete a recognition test. Consistent with Gupta and Lord (1998) and Russell (1998), subtle placements were brands placed as background props, while prominent placements were brands which were either central to the scene or endorsed by the main actor. The results showed that visual-verbal placements exceed the recognition rates achieved by visual-only prominent placements, with visual-only prominent placements receiving more recognition than subtle or creative ones.

More recently, Cowley and Barron (2008) studied the effects placement prominence and exposure had on brand recall and attitudes. Their study differed from Brennan and Babin (2004) and Law and Braun (2000) principally in the way in which they approached prominent and subtle placements. For instance, in their study, subtle placements are equated with the visual-only mode and prominent placements with the visual-verbal mode. As a consequence, the results cannot be compared. Their findings suggest that visual-only mode placements are perceived as more acceptable than audio placements.

Prominence leads to a strong impact on audience reactions. D'Astous and Chartier (2000) found that audiences are more concerned about the presence of prominent placements than subtle placements in movies. They established that participants' evaluations of a placement are negatively related to perceptions of prominence. This suggests that the more prominent a placement is, the less acceptable it is. D'Astous and Chartier's (2000) is the only study where viewers are asked to evaluate a placement's prominence and connection to a plot. Elsewhere, Cowley and Barron (2008) criticised prominent placements and considered them aggressive placements which do not cultivate careful engagement with consumers. After reviewing practitioner placement practices, they concluded that visual placements are perceived as more acceptable than verbal ones. A further review found that brand placements on commercial networks are more prominent and better integrated than those on public networks (Smit, van Reijmersdal, and Neijens 2009).

The effects of placement prominence can be explained by using Persuasion Knowledge Model (van Reijmersdal, Neijens, and Smit 2010; Cowley and Barron 2008; Friestad and Wright 1994). The Persuasion Knowledge Model explains how people respond to persuasion attempts (e.g. an advertisement, a product placement) based on their previous experience, awareness, knowledge and interpretation of such attempts., (Friestad and Wright 1994). People first get familiar with persuasion attempts and evolve in their coping mechanism based on their acceptance of such practices and their understanding of the motives underpinning them. For instance, prominence has positive effects on placement recall and recognition but has negative effects on placement attitudes because its presence triggers viewers to process stimuli consciously and to question the suspicious nature of the placements (Cowley and Barron 2008; Russell 2002; D'Astous and Chartier 2000).

In this context, it is important to discuss how prominence works for interactive product placement. In principle, every interactive placement is prominent when a user clicks on it. Thus, every such placement, be it subtle or prominent, can heighten its prominence because viewers can click on a chosen hyperlink within the video and retrieve further information about it. This characteristic of interactive product placements is called control. The initial challenge for this type of placement is to be appealing enough so that a viewer watches it and is willing to interact with it. The second challenge is for the placement to be relevant enough for a viewer to click on it. This relevance can arguably

be linked to individual preferences. In fact, even when a user simply rolls the cursor over the placement, he or she is able to see the brand name, which means that even subtle placements can become prominent with interactivity (se Figure 2.5). Once viewers choose to click on an interactive placement, they focus on the information displayed increasing the chances of cognitive processing (e.g. recall and recognition). Being in control, viewers of an interactive music video are aware of being exposed to product placement, activating their persuasion knowledge.

Figure 2.5 **An example of a subtle interactive placement**

Source: Clikthrough (2014)

These observations lead to the following hypotheses.

Hypothesis 2a: Prominent interactive product placements achieve higher recall and recognition than prominent classical non-interactive product placements.

Hypothesis 2b: Interactivity has a positive effect on recall and recognition of prominent product placements.

Hypothesis 2c: Subtle interactive product placements achieve higher recall and recognition than subtle classical non-interactive product placements.
Hypothesis H2d: Interactivity has a positive effect on recall and recognition of subtle product placements.

This section has mainly analysed the literature on the effects of product placement prominence on brand recall and recognition. Persuasion Knowledge Model and the effects of placement prominence on brand evaluation and attitudes are discussed further in Section 2.2.2.2.

2.2.1.4 Placement modality

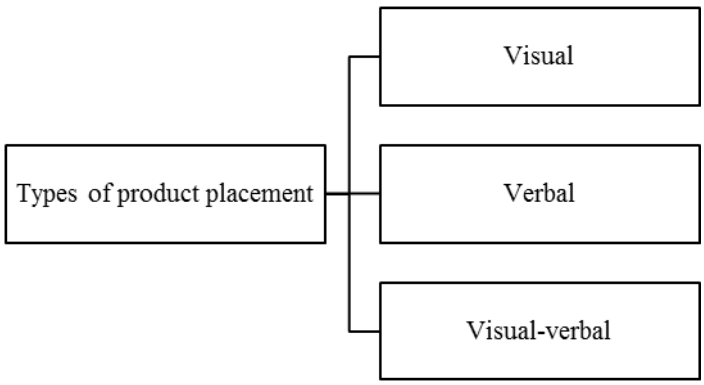
Placement modality refers to both the mode of presentation in which the placement is executed and the senses activated by the stimulus during the coding process. The two main studies which have explored the theoretical nature of placement modality are Gupta and Lord (1998) and Russell (1998). Both based their work upon that of Paivio's (1991) Dual Coding Theory regarding perceptual encoding, which looks at how individuals interpret a stimulus in order to categorise the types of product placement according to their modality and relevance.

The Dual Coding Theory of memory and cognition is a multiple coding theory which emphasises the importance of the verbal/non-verbal symbolic contrast (Paivio 1991). It posits that 'cognition is served by two modality-specific systems that are experientially derived and differentially specialised for representing and processing information concerning nonverbal objects, events and language' (Paivio 1986 cited in Paivio 1991, p.258). Paivio (1991) postulated that imagery and verbal processes involve different memory codes that can occur simultaneously. In this sense, memory increases with the activation of different memory codes. For instance, if an individual is reading (visual mode) a book and listening to the audio version of the same book, he or she is more likely to recall the stimulus better compared with using just one memory mode.

Placement modality is primarily classified by following a two-dimensional approach (Gupta and Lord 1998). The visual and verbal modes are evident, and the combination of audio and visual cues leads to higher recall of a placement. Paivio (1991) highlighted the superiority of the visual over the verbal mode when these occur simultaneously. The

non-verbal code is mnemonically stronger than the verbal code. In fact, after reviewing his own theoretical and empirical work, Paivio (1991) concluded that image superiority should be considered an empirical generalisation. Following this reasoning, verbal cues should be harder to retain than image-based ones. Finally, and consistent with Paivio (1991) and the works of Gupta and Lord (1998) and Russell (1998), placement modality has been classified in three presentation modes: visual, verbal, and visual-verbal (see Figure 2.6).

Figure 2.6 **Placement modality**



Source: Based on Gupta and Lord (1998) and Russell (1998)

The first mode, visual placement, as its name suggests, corresponds to visual brand identifiers such as logos, distinctive products and billboards which are embedded in a television show, film, or any media vehicle (Gupta and Lord 1998). This basically consists of physically placing branded products in scenes of a film, programme or video.

The second mode corresponds to verbal or auditory placement, or what Russell (1998) identified as script placement. This modality refers to the mention of a brand name as part of a television show or film without showing any visual brand identifier (Gupta and Lord 1998).

The third mode, visual-verbal, (audio-visual) placement, involves both mentioning and showing a brand. Russell (1998) described this mode as plot placement, which refers to major placements which become part of the plot and build on the character's personality. Gupta and Lord (1998) illustrated the third mode in action; for example, the

main character in *Wayne's World* (1992) drinks from a can of Pepsi while saying 'the choice of a new generation' (see Figure 2.7).

Figure 2.7 **An example of audio-visual product placement**

Source: Kennedy (2013)

The Dual Coding Theory has proved helpful in understanding how cognitive processes occur. But how does this understanding work with regard to interactive product placement? In principle, interactive placements are visual mode placements. It is assumed that viewers are attracted by visual imagery; they are expected to see a placement and click on the product to receive further information, reinforcing the visual mode. Such visual placements are the most popular placements, perhaps because audio-visual ones are the most expensive and hardest to implement (Gupta and Lord 1998). Consistent with Paivio (1991), recognition memory is higher for pictures than for words. This means that visual memory is superior to audio memory, which may represent an advantage for interactive product placements because they reinforce the visual memory mode (pictures and written words in the form of expanded product information). However, interactive product placements are ultimately single mode; for instance, an interactive placement rests on the assumption that a viewer can click and connect with the placement. It is hard to imagine the mechanics of an audio interactive placement. Where would viewers click? For example, in the song *Lola* by the Kinks (1970), the lyrics make a verbal reference to a brand:

> I met her in a club down in old Soho
> Where you drink champagne
> and it tastes just like Coca-Cola, C-O-L-A cola.

Would singers agree to include within their videos a can of Coca-Cola when they mention the drink? In such a case, a dual-mode placement would reinforce the placement.

In the case of interactive placements and their modality, examples with audio interactive product placement are not available for research purposes. However, the temporal flexibility which interactive audio placements might add should be considered (Lynn *et al.* 2014). For instance, in an audio-only interactive placement it would be possible to add asynchronous information to brand mentions. For example, Clikthrough (2014) offers access to a list of placements present in the digital music video. In doing so, people have the option of getting a closer look at all the products and brands placed, whether they noticed them or not during the streaming. Interactive audio and audio-visual placements clearly present an area for further study. However, for the purposes of the present study, only visual mode interactive product placements are explored.

2.2.1.5 Priming of brand appearance

Priming of brand appearance refers to reinforcement of the placement appearances in traditional advertising channels prior or simultaneous with the release of the media vehicle where the placement is embedded. Priming of brand appearance aims to give cues to the audience to look for the placed brands within the placement vehicle (e.g. film, television programme, video game) (Balasubramanian *et al.* 2006).

This practice obviously entails cooperation between marketers, media editors and producers (Lynn *et al.* 2014; Balasubramanian *et al.* 2006). Sponsors promote their brand appearances to increase the reach and success of their placements and take advantage of the strength of the link between the brand, the placement vehicle and the actors (Karrh *et al.* 2003).

Balasubramanian *et al.* (2006) documented how priming of placements produced better cognitive outcomes, such as recall, than non-primed placements. Despite its impact on product placement recall and recognition, the effect of priming of brand appearance in the case of interactive product placement is not part of the present study. Further research should address the repercussions of interactivity and priming of brand appearance for both product placement cognitive outcomes and purchase intention.

2.2.1.6 The type and amount of brand information presented

The type and amount of brand information presented influence recall and recognition of product placements. In order to understand how this issue affects interactive product placement, the theoretical grounds of informational and transformational advertising will now be discussed. The type and amount of brand information presented refers to the informational and transformational advertising classification theories coined by Wells (1980) and expanded by Puto and Wells (1984). Puto and Wells (1984) studied the information processing theories of cognitive psychology and the theories of emotion and persuasion in social psychology to explain the effects of informational and transformational advertisements.

Traditionally, informational advertising was devoted to the development of cognitive awareness in consumers, helping them to evaluate brands and form opinions about them which would influence purchase decisions (Puto and Wells 1984). To a degree, every advertisement:

> provides consumers with factual (i.e., presumably verifiable), relevant brand data in a clear and logical manner such that they have greater confidence in their ability to assess the merits of buying the brand after having seen the advertisement.(p.638)

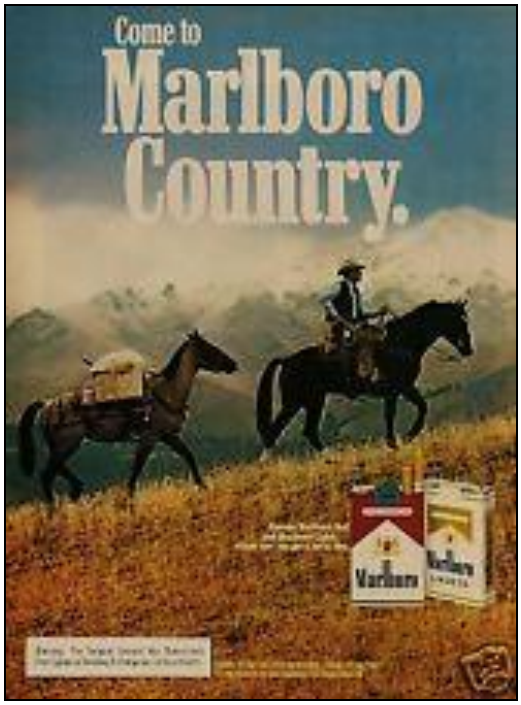
Informational advertisements present factual information about brands which make them thinking-oriented or fact-based (Gardner 1994), which have a relative absence of personal-related cues (Goldberg and Gorn 1987) and which seek to trigger cognitive effects on viewers (Puto and Wells 1984). Hence, an informational advertisement aims to provide enough reliable data to generate confidence in a consumer at the point of selecting one brand over another. Puto and Wells emphasised that an advertisement is informational only if the consumer perceives it as giving information 'which is immediately and obviously important' (1984, p.638). As suggested, the aim of informational advertisements is to activate cognitive memory (Cutler, Thomas, and Rao 2000). In this regard, research has shown that informational advertisements directly affect recall and long-term memory, providing higher recall than transformational advertisements (Park, Stoel, and Lennon 2008; Puto and Wells 1984; Berger 1962). Park, *et al.* (2008) found that the more information presented, the higher the recall, and the higher the influence on purchase intention. Thus, informational advertisements are primarily directed at generating brand awareness and brand attitude, which in turn affect purchase decisions (Aaker and Stayman 1992).

An informational advertisement is not however limited to being informational; in fact, it can simultaneously be transformational to a certain degree (Puto and Wells 1984). For instance, informational advertisements can change expectations about a brand's performance and affect an audience's perception of a brand (Aaker and Stayman 1992). Thus, consistent with Puto and Wells (1984), informational and transformational are not exclusive categories. In fact, in traditional advertising theory, to reach an 'effective persuasive communication, an advertisement must be transformational, informational or both' (Puto and Wells 1984, p.640).

Transformational advertisements seek to create an advertising experience. Further, they aim to translate the meaning of an advertisement to the brand by making the experience not only cognitive but also emotional (Aaker and Stayman 1992; Puto and Wells 1984). In other words, transformational advertisements shift consumers' brand evaluation from informative to affective by setting a context and by giving a brand a particular meaning which relates to consumers' imagery. Thus, transformational advertising entails the association of the 'experience of using/consuming the advertised brand with a unique set of psychological characteristics' (Puto and Wells 1984, p.638).

Transformational advertising generates an emotional state, and this state affects an individual's knowledge structure by creating selective recall and selective focus (Puto and Wells 1984). In this regard, transformational advertising is directed towards affective rather than cognitive processing. First, selective focus emerges by associating the emotional state created by a transformational advertisement with the brand so that the two will subsequently be linked or even transformed into a new, pleasant emotion. For example, Puto and Wells (1984) used the 'Come to Marlboro Country' advertisement to illustrate how viewers projected their own feelings and fantasies on to the advertisement until their personal imagery became part of the experience of smoking (see Figure 2.8). Second, a transformational advertisement enriches the brand by creating a user-like experience on screen so that the audience recalls the brand which is linked to the experience. Such an advertisement even transforms the experience into something different (Aaker and Stayman 1992; Goldberg and Gorn 1987; Puto and Wells 1984). Therefore, transformational advertising tends to facilitate the selective recall of past experiences. This recall occurs in an effortless process whereby the viewer associates an experience with past experiences which produced a similar emotion.

Figure 2.8 **An example of selective focus on a transformational advertisement**



The relationship between transformational advertising and consumer buying behaviour seems evident given that buying decisions do not rely on cognitive processes alone. For example, affect has an important role with regard to buying behaviour. This is explained by Holbrook and Hirschman (1982) in the context of hedonic consumption, where emotional desires dominate utilitarian motives when it comes to selecting a product. Hedonic consumption, as defined by Hirschman and Holbrook (1982, p.92), includes 'those facets of consumer behaviour that relate to the multisensory, fantasy and emotive aspects of one's experience with products'. The effectiveness of informational and transformational advertisements differs according to day-after-recall tests (Puto and Wells 1984). Puto and Wells (1984) noted that transformational advertisements need repeated exposure in order to increase their recall scores compared to informational advertisements. Other research supports this observation (Park, Stoel, and Lennon 2008; Berger 1962).

In order to understand how the transformation process works, Puto and Wells (1984) explained the presence of mediating factors such as empathy, involvement, and personal relevance, all of which allow consumers to relate closely to the experiences and feelings generated by a portrayed brand. Russell (1998) analysed these factors, seeking to establish how product placement fulfils all the basic requirements which allow it to be considered a transformational experience.

Because product placement is a form of endorsement and because of the transformational effect, it is important to have a good fit between brand, celebrity, and host show (Russell 1998). This parallels Kamin's (1990) hypothesis on the need for a good fit between brand and celebrity. This 'fit' issue, vital in assessing the transformational impact of a placement, was understood by Balasubramanian *et al*. (2006) as a strong link between the placed brand and the story character, editorial content/story, vehicle, and medium, and is discussed in 2.2.1.7.

Personal relevance refers to the degree to which the viewer connects with the programme (Russell 1998; Puto and Wells 1984). Russell (1998) acknowledges Hirschman's (1988) observation that viewers project and view themselves as the characters in novels, plays, and films. Thus, personal relevance is linked to involvement and connectedness (Russell 1998), both of which are parts of the individual-difference factors within the theoretical model of Balasubramanian *et al.* (2006). They are discussed further in Section 2.2.2.5.

Empathy is closely related to personal relevance (Russell 1998; Puto and Wells 1984). Puto and Wells defined empathy as the 'vicarious emotional identification' of a viewer with a particular actor (1984, p.639). Other research has also shown how audiences identify themselves with characters (Fiske 2002). Because they are aired regularly, soap operas have been referred to as the 'safest outlets for vicarious identification' (Mitroff and Benis 1989, p.80 cited in Russell 1998, p.359). However, films, music videos, and other media also provide an experiential aspect of consumption (Holbrook and Hirschman 1982) and can be considered to offer an immersive environment which enables vicarious emotional identification.

Placements are feature-rich and meaningful because they are part of a media context and these characteristics help them to attract greater attention, thereby influencing recall. Thus, product placement enables an audience to transform the experience of using a brand to match the use shown in the film/television show (Russell 1998). Because such brands are embedded in a mainstream medium story, be it a film, music video, or video game, they receive the meaning of the medium in which they are embedded (Balasubramanian *et al*. 2006; Russell 1998; Nebenzahl and Secunda 1993). For instance, a brand which is placed in a particular television show is linked by the viewer to the show's experience. Thus, the experience of the television show becomes

interwoven with the viewer's feelings about the brand. However, the nature of classical non-interactive product placement prevents the brand in question from being portrayed in an explicit informational fashion as it might be in a normal advertisement (Balasubramanian *et al.* 2006; Russell 1998).

Placements differ from advertisements in that they do not contain a substantial amount of brand-related information (Balasubramanian *et al.* 2006). They are not designed to contain such information precisely because they are embedded in media vehicles (Russell 1998). In a television show or film context, usually, brands are not meant to be the focus of the story, except when the storyline makes them central to the plot. Balasubramanian *et al*. (2006) argued that increasing brand information within a placement would distract audience attention away from the story to focus on the brand. This situation would have a twofold effect. On one hand, increasing brand information within a placement would increase attention to the brand and consequently increase cognitive outcomes such as recall and recognition. On the other hand, placements with product information run the risk of being considered incongruent, unless the brands are placed carefully to blend congruently with the storyline. This is especially relevant in the context of interactive product placements because these contain more information than classical non-interactive product placements.

Interactive product placements are embedded within media vehicles, e.g. digital music videos. Following the reasoning discussed above, interactive product placements are transformational. Music videos aim to create an experience around the lyrics of songs and the singers' personalities. They set scenes, for example, a party or a holiday destination, as plots to give context and meaning to the songs' lyrics. Schemer *et al.* (2008) used 'evaluating conditioning' to explain how placements can affect consumers' attitudes when exposed to rap videos. They found that pairing brands with a positively evaluated artist produces a positive attitude towards the placed brands, while placing brands with a negatively evaluated artist produces a negative attitude. Indeed, the use of conditioned learning as a way of understanding emotional transference implies that an individual evaluates the meaning of a music video and transfers this meaning to the embedded brands. Schemer *et al*. (2008) showed that when an audience's preference for a music genre (e.g. rap) is high, the conditioning procedure works better, a finding supported by Russell and Stern's (2006) conclusion that attachment to an endorser produces positive attitudes.

As well as being transformational, interactive product placements are also informational. Here it should be noted that, unlike classical non-interactive placements, interactive product placements display brand-related information. Using a music video as the medium, placements are hyperlinked, giving the viewer the option to click on them and expand the information pertaining to the particular brand, person, or place portrayed on screen. After this, a banner is displayed on a different frame without interrupting the ongoing viewing experience. The banner contains further information and a 'buy now' option. In this way, these videos potentially enhance the amount of brand information available to viewers. With this addition of brand-related information, and in line with research findings, recall is higher for interactive product placements because they contain more information compared with classical non-interactive product placements. This is because interactive product placements transfer meaning and also strengthen the information given to consumers. A further discussion on recall levels in interactive environments is provided later in the present study. Building on Puto and Wells (1984) and Berger (1962), an interactive product placement contains both transformational and informational elements, and should thus generate higher recall levels. Puto and Wells (1984) emphasised that informational and transformational advertisements are only informational if consumers perceive them as such; thus, it is important to assess consumer evaluation after advertisement exposure. The next hypotheses are therefore as follows.

Hypothesis 3a: Interactive product placement is perceived as more informational than classical non-interactive product placement.

Hypothesis 3b: Interactive product placement is perceived as more transformational than classical non-interactive product placement.

Hypothesis 3c: The type and amount of brand information presented has a positive effect on product placement recall and recognition in interactive digital music videos.

Research has shown that an effect of context-induced mood occurs when processing emotional and informational advertisements (Goldberg and Gorn 1987). Goldberg and Gorn (1987) exposed students to either a positive or a negative mood-induced food and beverage commercial and found that those exposed to emotional advertisements felt

significantly happier than those who viewed informational advertisements. In other words, positive mood-induced advertisements produce a higher transformational evaluation from viewers because they feel more positive after exposure and translate these feelings in turn towards the featured brands. Following this, another hypothesis emerges.

> *Hypothesis 3d: Product placement is perceived as more transformational when embedded in a positive context-induced mood media vehicle than when embedded in a negative context-induced mood media vehicle.*

Drawing a parallel between advertising, product placement, and interactive product placement, it is possible to formulate a series of hypotheses to further analyse how brands and the amount of presented brand information influence interactive product placement. The work of Balasubramanian *et al.* (2006) and Russell (1998) explained the transformational nature of placements because they embed brands in a context and seek to transform the experience of the television show/film into something meaningful to the brands. Balasubramanian *et al.* (2006) and Russell (1998) have also discussed how interactive product placements provide specific and detailed information, unlike traditional product placements. The present study seeks to understand how audiences perceive interactive product placements in terms of their transformational and informational effects.

2.2.1.7 The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium

The strength of the link between a placed brand and the elements of the media vehicle has been extensively studied in advertising and marketing (McCracken 1989). Balasubramanian *et al.* (2006) noted how the execution factors which affect product placement effectiveness can strengthen the association between a placed brand and the characters in a film or programme storyline. The stronger this association is, the more effective the cognitive brand elaboration is in enhancing cognitive outcomes (Russell 2002).

A celebrity endorser is ‘an individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement’

(McCracken 1989, p.310). This definition includes film and television stars, sports stars, singers, influential politicians, and business people. The way in which these celebrities endorse a product can be explicit (by advertising it) or implicit (by using it). In addition, endorsers may or may not be experts (McCracken 1989).

In order to understand how the celebrity endorsement process works, it is important to understand models of source credibility and source attractiveness. Both models have featured in social psychological research and have been extensively validated in communication and celebrity endorsement studies (Amos, Holmes, and Strutton 2008; Erdogan, Baker, and Tagg 2001; Erdogan 1999). The effectiveness of the source credibility model rests on the *expertise* and *trustworthiness* of the source: the extent to which the source possesses these characteristics makes the message credible and persuasive (Hovland, Janis, and Kelley 1953). With the source attractiveness model, the effectiveness and persuasive power of a message depends on the *familiarity*, *likeability*, and/or *similarity* of the source (McGuire 1985). In principle, a celebrity who possesses any of these characteristics can act as an endorser irrespective of the product. However, McCracken (1989) has critiqued the distinction between these two models on two main grounds. First, a claim that a celebrity endorser is an attractive model cannot be adequately explained. Exactly what is it that makes a celebrity an attractive one? Second, there are no clear grounds for discriminating between a credible and attractive celebrity model.

In response to this criticism, the Meaning Transfer Model, coined by McCracken (1989), posits that celebrities can effectively endorse brands if they are consistent with, and reinforce the cultural meanings of those brands. Celebrities possess symbolic cultural properties which can be transferred to brands and from the brands to consumers. McCracken described the process in three stages. Stage One consists of meaning transference which occurs when a celebrity is linked to an advertisement. Many meanings are contained within the concept of celebrities, for example, status, personality type, and lifestyle. McCracken (1989) noted, however, that 'even the most heavily stereotyped celebrity represents not only a single meaning, but an interconnected set of meanings' (p. 313). Compared with anonymous endorsers, celebrities offer configurations of meanings given their positions in the cultural landscape, and the fact that they are powerful media figures. For instance, in the Martin Scorsese advertisement for Dolce and Gabbana, Scarlett Johansson and Matthew

McConaughey represent elegance much more vividly than an anonymous endorser (see Figure 2.9). Such celebrities attain a set of meanings from the roles which they perform in the media and their public lives. Further, each public appearance adds to the set of meanings they represent.

Figure 2.9 **An example of celebrity endorsement**

Source: Dolce&Gabbana (2013)

Stage Two refers to the choice of a celebrity endorser whose set of meanings corresponds to those which the brand wants to reflect/evoke. Once the celebrity is chosen, advertising efforts focus on capturing, reflecting, and even embellishing the meanings from the endorser in an effort to highlight similarities between the endorser and the brand. Stage Three details how consumers incorporate the transferred meanings into their lives. Consumers seek constantly for products to fulfil their ideas of self, and celebrity endorsers' images facilitate this process. For consumers, the constructed self of a celebrity is an example, aspiration, and inspiration to look up to. A celebrity constructs a self which is based on all of his or her public appearances and then makes this set of meanings available when he or he endorses a brand to consumers. Following this logic, a celebrity acts as a trend-setter in terms of consumption.

A placed product functions within a media vehicle, which provides a congruent stimulus between the endorser context and the brand, and which influences responses (Kirmani and Shiv 1998). For example, because sitcoms attempt to recreate real-life situations, they often incorporate products to recreate scenarios and add to the construction of meaning. In this media genre, characters are defined not only by what they say and do, but also by the products they use (Russell and Stern 2006).

> Classic examples of backgrounding a product as something that is 'just there' are abundant in Friends, where the characters' apartments contained items ranging from Heineken beer to Barilla spaghetti sauce. (Russell and Stern 2006, p.9)

A product placement has an element of surprise when integrated into a media channel and can encourage people to wonder why a particular brand is being paired with a certain show or actor. In this regard, the aim of a product placement is not to hide the brand but to attenuate its commercial intent so that its presence as part of the story is well received and noted by the audience. For example, in the Episode 19 of Season 7 called 'The Indecision Amalgamation' in the television programme *The Big Bang Theory* (2014), the character Sheldon has to choose between buying a PS4 or an Xbox console. The episode occurs in an electronics shop and the brands blend with the purpose. He discusses with Amy the advantages and disadvantages of each console and how each can enhance his gamer experience (see Figure 2.10).

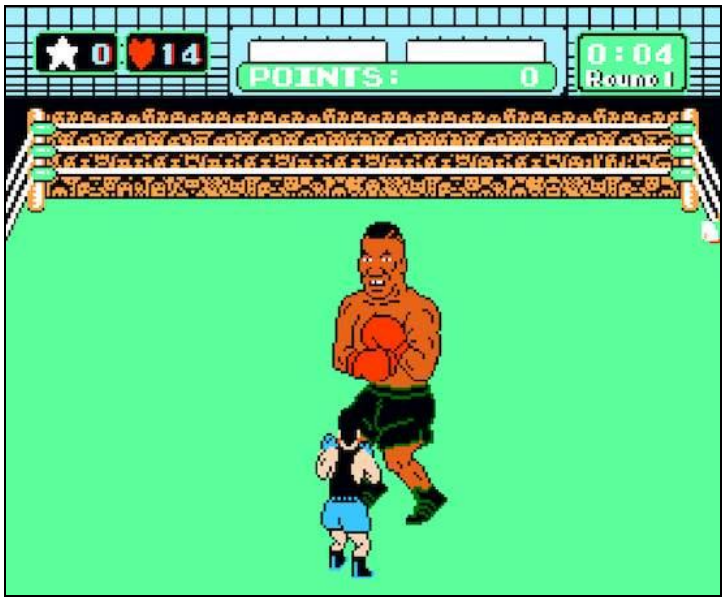
Figure 2.10 **Brand, character, and TV show congruence**

Source: "The Indecision Amalgamation" (2014)

Celebrities are branded images which contribute to consumer identification with a brand (Nelson 2002; Keller 1993). Watching a brand being used by an admired character transfers a set of meanings to the brand. This process helps the audience to relate to the actor's lifestyle and transforms a brand into an aspirational object, transcending its own mundane meaning. This also helps to transfer the celebrity's personality traits to the brand, increasing the personality characteristics associated with it (Aaker 1997). The next time an individual sees the brand and consumes it he or she will recall this aspirational feeling, and the common use of the same object will prompt the feeling that

he or she ‘shares’ something with the celebrity in question (Nelson 2002; D’Astous and Chartier 2000; DeLorme and Reid 1999). For example, a filmgoer made the following comment regarding the brands to which he had been exposed while watching a film and his willingness to purchase a product placed next to his favourite film star: ‘If you saw it linked to someone you admired, you simply have to try it’ (DeLorme and Reid 1999, p.80). Perhaps this is the reason why brand placements associated with principal actors are positively perceived by audiences, resulting in brands which are remembered better than those with which an audience has no prior familiarity (D’Astous and Chartier 2000). For example, famous sports figures such as Mike Tyson have endorsed video games, including *Punch Out!*, a series of boxing video games created by Nintendo (1987) (see Figure 2.11).

Figure 2.11 **Mike Tyler endorsing the video game Punch Out!**



Source: PCMagazine (2011)

The match between an endorser’s associations and the attributes associated with a brand enhances attitudes towards the brand under conditions of high issue-relevant elaboration (Kirmani and Shiv 1998). In this regard, Kirmani and Shiv (1998) studied subjects’ perceptions of the congruity between brands and their endorsers. Consistent with the ELM (Petty and Cacioppo,1986), Kirmani and Shiv (1998) used endorsers (e.g. Clint Eastwood) as persuasive arguments to form brand attitudes. They found that an endorser can serve as a central persuasive argument or a peripheral cue. Their findings indicated that brand attitudes increase when endorsers’ associations are strong and match brand associations.

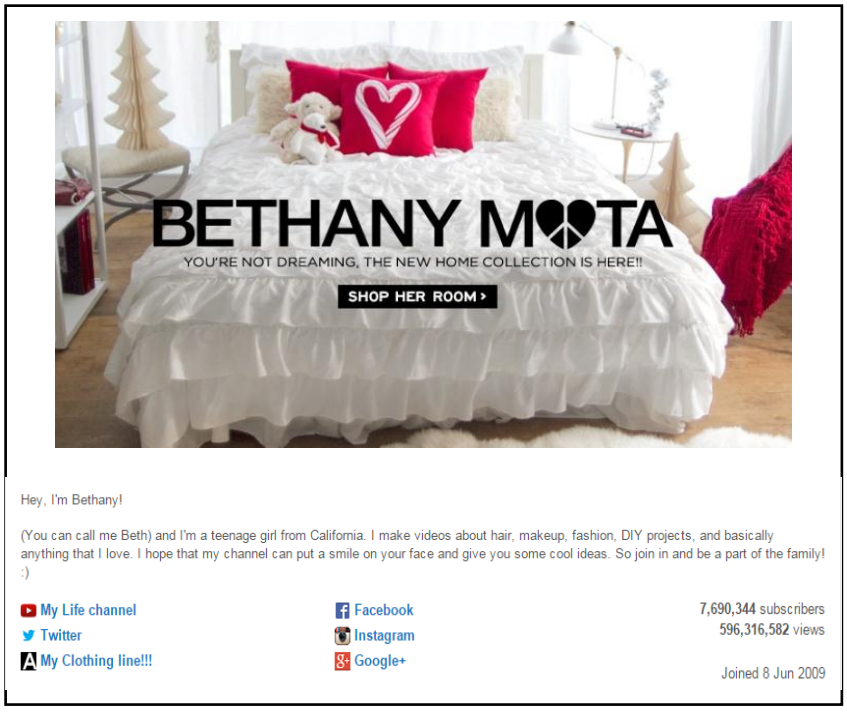
Russell and Stern (2006) found that consumers align their personal attitudes towards placed products with the attitudes on-screen characters display towards these products. Uusing real sitcoms as stimuli, they found that even after exposure to a single episode, viewers develop attitudes towards characters and adopt characters' overall attitudes towards products. Following this reasoning, the importance of the association between product and character is evident (Russell 2002; DeLorme and Reid 1999).

Research on placements within films has also indicated a positive impact on consumer evaluation, recall, and recognition when a brand is jointly featured with the actor in a film scene (Russell 2002; D'Astous and Chartier 2000; DeLorme and Reid 1999). D'Astous and Chartier's (2000) assessed the reactions to placements within 11 films. They directly coded the 'presence of the principal actor in the scene (yes/no) and the use of the product by the principal actor (yes/no)' (2000, p.36). Their results suggested that a product placement with the principal actor present is liked and remembered better than a product placement which does not feature this actor. More recently, Wiles and Danielova (2009) analysed 31 films with the largest opening audiences in 2002 in order to explore the factors which directly influence a placement's worth. They controlled levels of celebrity association, following Russell and Stern (2006), and noted a distinction between recurrent characters who were well established in their roles and non-recurrent characters. Consumer associations with the former are richer than those with new non-recurrent characters, a finding which is consistent with McCracken (1989). Wiles and Danielova's (2009) supported the proposal that placement effectiveness is enhanced when a product is endorsed by an established recurrent screen character but not by a celebrity. Thus, it seems logical to argue that the symbolic meaning is carried from the storyline. In this regard, how do such findings translate to user-generated videos?

User-generated videos posted on the social media platform YouTube were investigated by Verhellen, Dens, and Pelsmacker (2013). Specifically, they examined the effects of brand prominence and celebrity endorsement on brand recognition and purchase intention. Four versions of a cooking tutorial were produced with each endorser (celebrity expert/amateur) appearing in two conditions according to how the brand was portrayed (prominent/subtle). The videos were posted on YouTube. Participants answered an online questionnaire embedded in the online videos. Prominent endorsements by a celebrity expert enhanced purchase intention more than subtle

endorsements. However, celebrity endorsement had no significant impact on the recognition of the prominent placement. Verhellen, *et al* (2013) explained that in this media vehicle, the presence of a celebrity can raise suspicions. For instance, when one likes a video, one may resent the idea of being manipulated, especially if celebrities are endorsing brands subtly. Perhaps this is one of the reasons why influentials, also referred to as micro-celebrities (Kozinets and Stefano 2014), are preferred in user-generated contexts such as social media. For example, the teenage blogger Bethany Mota built such a strong and successful fan base that Aeropostale decided to work with her to create a new clothing line for its brand (see Figure 2.12). Thus, in terms of endorsement, whether by celebrities or influentials, it is more effective to be associated with endorsers who possess established public personalities than with those who are constructing them.

Figure 2.12 **An example of an influential's endorsement**



Source: Aeropostale (2014) and Mota (2014)

Burkhalter and Thornton (2012) conducted a content analysis of brand placement in 203 hip-hop music videos and showed that the majority (67%) were associated with a main character, such as a famous rapper. Schemer *et al*. (2008) provided evidence to show that when the preference of an audience for a music genre (e.g. rap) is high, evaluation of the paired brands is positive. Further, not only does the genre affect the type of

evaluation of the embedded brands, artists also wield influence. For instance, positively evaluated artists transfer a positive sense to the paired brands just as negatively evaluated artists are associated with negative brand evaluations. This finding supports Russell and Stern's (2006) conclusion that attachment to an endorser produces positive attitudes. Schemer *et al*. (2008) also analysed the impact of conditioning on brand recognition. They found that evaluative conditioning effects are more likely when there is no brand recognition and that these conditioning effects are attenuated with high recognition. In addition, while well-integrated placements are positively regarded by viewers, the better the integration, the less likely it is that viewers will recall it successfully in the long term. The need for brand fit must also be noted because consumers evaluate a placement better when the product is clearly related to the programme content (D'Astous and Chartier 2000). This leads to the following hypothesis.

Hypothesis 4a: The perceived fit of a celebrity endorser with brands in a digital music video has a positive influence on recall.

Hypothesis 4b: The perceived fit of a celebrity endorser with brands in a digital music video has a positive influence on recognition.

2.2.2 Individual difference factors

Individual difference factors refer to the variables which determine the relationship between audience, media, and placement (Balasubramanian *et al.* 2006). These variables correspond to audience characteristics and are enhanced/influenced by the advertising stimuli received. Balasubramanian *et al.* (2006) synthesised the individual-level variables as follows: prior familiarity/ethicality (strength of the link between brand/product and the individual); judgement of placement fit, appropriateness, relatedness (strength of the link between individual and (a) story character, (b) editorial content/story; (c) vehicle, and (d) medium); scepticism towards advertising; attitudes towards placements in general: and programme involvement/programme connectedness/motivation to process brand information.

Research in consumer behaviour has identified differences in individual processing styles which influence the effectiveness of a perceived message and Russell (1998)

posited that product placement effectiveness depends on such styles. Individuals approach the information they receive and link it to their own stock of cultural and experiential knowledge in different ways. As a result, their past experiences and prejudices affect the manner in which they receive, interpret, and react to placements. For instance, if individuals are mainly visual in their processing style, they are more likely to pay attention to screen placements. Thus, each individual-level variable may or may not influence the perceived effectiveness of placements. In this regard, it is interesting to analyse the impact that each variable has on placement effectiveness and to explore the related theoretical grounds and practical implications.

2.2.2.1 Prior familiarity with a brand/product

As discussed in the prior section dealing with *the strength of the link between a placed brand and story character, editorial content/story, vehicle, and medium,* endorsers bring a set of meanings to the brands with which they are paired. In this way, *prior familiarity with a brand, product, and endorser* influences an individual's perception of a placed product.

Familiarity can be defined as follows:

> Knowledge of the source through exposure, likability as affection for the source as a result of the source's physical appearance and behaviour, and similarity as a supposed resemblance between the source and receiver of the message. (McCracken 1989, p.311)

Balasubramanian *et al.* (2006) discuss the effects of the presence/absence of prior familiarity on the recall and recognition of embedded brands. On the one hand, unfamiliar brands are recalled more successfully (the von Restorff effect); on the other, prior familiarity enhances brand attitude (the Meaning Transfer Model). The von Restorff effect means that the recall for a new item is higher than for a familiar item because the former's novelty triggers a viewer's attention towards it (Balasubramanian 1994). This situation occurs because the results of unexpected stimuli are incongruent with the viewer's prior expectations of the plot. Consistent with the von Restorff effect, Nelson (2002) found that in video games new unfamiliar brands are recalled more readily. Reese's Pieces, in the film *ET the Extra-Terrestrial* (1982) is particularly relevant to the discussion about the placement of a previously unknown product. Despite being unknown, the product's subsequent success due to inclusion in the film

was remarked upon both by the company itself and academic commentators (Brennan and Babin 2004).

Prior familiarity with a brand affects audience reaction towards placements because it enables identification with the brand and triggers preconceptions of the brand, and connects these to the new environment where they are portrayed. McCracken's (1989) Meaning Transfer Model can be used to explain this phenomenon. *Prior familiarity with a brand* intensifies the viewers' experience because they feel that by knowing the brand portrayed on the screen, they can identify themselves with the relevant scene. Thus, prior usage strengthens the connection and develops the particular experience with the film's context, either through contact with an actor or by adding a new meaning to an already familiar brand (Brennan and Babin 2004; Nelson 2002; DeLorme and Reid 1999; Russell 1998). In other words, if an audience is familiar with a brand, viewing it on the screen strengthens the brand image; however, prior familiarity with a brand does not necessarily affect brand recall. Further, noticing familiar brands on screen enhances film enjoyment (DeLorme and Reid 1999). DeLorme and Reid's participants (1999) provided significant insights on what filmgoers think when exposed to a familiar brand on screen:

> ... brand recognition ... if you see something in a movie and then you're at the grocery store. If you recognize the name then you're probably more likely to buy it than its competitor because the name stands out. ... [Chad, younger, age 21, electronics frequent, focus group salesperson]. (p.80)

> […] It's put in your head what kind of satisfaction that will bring you and that might influence your buying because the person in the movie seemed to enjoy it and you've got the visual effect of them seeming to enjoy it. ... [Hanna, younger, age 20, unemployed, frequent, focus group] (DeLorme and Reid 1999, p.80)

As described by a frequent filmgoer, the presence of a familiar brand within a film is something which 'you can relate to immediately' (DeLorme and Reid 1999, p.78) and which reinforces positive feelings towards both the brand and the film. Thus, relationships with films become more personal when filmgoers notice familiar brands portrayed in them. This sense of identification also translates from brands to characters. Exposure to previously purchased brands validates and strengthens consumer decision-making and future purchasing intention (DeLorme and Reid 1999). Indeed, DeLorme and Reid (1999) found that filmgoers are more likely to remember and recognise familiar brands in films.

Brennan and Babin (2004) conducted a study to investigate whether familiar brands in prominent placements are recalled more often than unfamiliar ones. They based their discussion on the findings of a series of experiments in psychology conducted by Watkins, LeCompte, and Kyungmi (2000). These experiments showed that familiar words which occur more often in everyday language are recalled better than unfamiliar words, regardless of the presence of anything which would facilitate retrieval. After conducting their research, Brennan and Babin (2004) found that with regard to on-set placements, familiar brands are recognised to a greater degree than unfamiliar brands. In fact, familiar brands have higher recognition levels than unfamiliar brands in films (Scott and Craig-Lees 2010; Brennan and Babin 2004; DeLorme and Reid 1999) and video games (Nelson, Yaros, and Keum 2006; Nelson 2002).

In a study among practitioners of the Entertainment Resources and Marketing Association, Karrh, McKee, and Pardun (2003) investigated beliefs regarding product placement. The findings appear rather contradictory. When asked about the main characteristics they look for in a brand to be placed in a film, practitioners made comments which included the following: a brand should be 'already well-known' and one 'that most programme viewers already use'. These points were made almost as often as the comment that practitioners look for 'a brand that is new to the market'. Few reasons could be advanced to explain this, but what does hold true is that ultimately most brand placement features well-known brands (Brennan and Babin 2004).

Finally, after discussing the effects of prior familiarity on product placement, it is reasonable to assume that these effects are the same in the presence/absence of interactivity. Therefore, consistent with the above discussion, the following hypotheses are proposed.

Hypothesis 5a: Previous unfamiliarity with the brand has a positive effect on placement recall.

Hypothesis 5b: Previous familiarity with the brand has a positive effect on recognition.

Hypothesis 5c: Previous familiarity with the digital music video has a positive effect on placement recall.

Hypothesis 5d: Previous familiarity with the digital music video has a positive effect on placement recognition.

Hypothesis 5e: Previous familiarity with the singer has a positive effect on recall.

Hypothesis 5f: Previous familiarity with the singer has a positive effect on recognition.

2.2.2.2 Judgement of placement fit

Judgement of placement fit refers to congruence between the placed product and the storyline (Russell 2002; 1998). This factor does not refer to the execution itself but rather to how the fit is perceived by an audience (D'Astous and Chartier 2000; DeLorme and Reid 1999; Karrh 1998). In other words, viewers would perceive a placement as congruent based on a series of characteristics, for example, whether the placement is deemed consistent, relevant, and pertinent. These judgements affect placement recall and recognition (Russell 2002, 1998; Lee and Mason 1999).

Although prominence is an execution factor, it is closely linked to plot connection congruence. Russell (1998) noted that plots are not always built carefully around a brand; in this regard, a placement can be either prominent or subtle and congruent or incongruent according to its integration within the plot. Judgement of placement fit studies the congruence of a plot connection in the eyes of an audience and how this affects audience reactions towards a placed brand.

The congruency/incongruency literature has maintained that when a stimulus is congruent with a medium in either the verbal or visual mode, it triggers little cognitive elaboration. Mandler (1981) explained how personal schemas mould people's understanding of their environment. A schema is how an individual understands reality; thus, when one perceives a stimulus which is similar to a past experience, one reacts according to an influenced perception. Thus, when an event is perceived as congruent to an existing schema, it is perceived as familiar and acceptable and is even liked. Incongruity, in turn, leads to arousal and conscious evaluation. Following this logic,

extreme incongruency leads to higher recall but negative evaluations (Lee and Mason 1999).

Excessive or inappropriate brand appearances in films have been perceived as interruptive, causing viewers to react against them. They add to the feeling among audiences that brands are trying to fool them and underestimate their intelligence, or that the films are poor in quality (Gould and Gupta 2006; DeLorme and Reid 1999). Further, if a placement does not fit within a story, it is not perceived as necessary; thus, it can cause viewers to reject it (D'Astous and Chartier 2000; DeLorme and Reid 1999; Karrh 1998). A placement is more memorable because of increased cognitive elaboration, but must lead an audience to give more consideration to the reasons why the stimulus is presented within a certain context. For example, in the film *I, Robot* (2004), Del Spooner (Will Smith) is a technophobic cop from 2035. Converse is central to one scene where Del Spooner opens a package of brand new sneakers. In two further scenes, the character is asked about what is he wearing and he says 'Converse 2004' (with a camera close-up), and later is complimented with a 'nice shoes' comment (see Figure 2.13). These mentions in a rather futuristic film may seem too blatant and forced.

Figure 2.13 **An example of a product placement (in)congruency**

Source: Brands&Films (2010)

The Persuasion Knowledge Model supports the proposition that for a brand to be efficiently processed, viewers must be aware of being exposed. For instance, with regard to a product placement, a lack of awareness of exposure can trigger the use of explicit reasoning, which leads to counter-argumentation (Friestad and Wright 1994). Further, consistent with Genre Theory (Russell and Stern 2006), what is considered congruent can differ from one media vehicle to another. For example, research has addressed the impact of judgement of fit with regard to films (Lehu and Bressoud 2009;

Cowley and Barron 2008; Russell 2002; D'Astous and Chartier 2000) and game shows (Gould and Gupta 2006). Gould and Gupta (2006) found that prominent placements are judged more pertinent in the context of a game show given the nature of the medium. However, further research seems appropriate in order to understand whether effects are moderated by the type of programme.

Russell (2002; 1998) contextualised judgement of fit as a relation between plot and modality. If integration is perceived seamlessly, it is congruent. If there is no perceived integration, or it appears too forced, it is considered incongruent. Plot connection can be high or low and its measure is primarily qualitative; it is then the task of researchers to examine the nature of the connection, exposing the stimulus and comparing it across consumers (Russell 2002). The congruent and incongruent combinations between plot and modality are presented in Figure 2.14.

Figure 2.14 **Judgement of fit**

	Plot	
Modality	**Lower integration**	**Higher integration**
Visual	Congruent	Incongruent
Audio	Incongruent	Congruent

Source: adapted from Russell (2002)

If a placement is well integrated, it is received better by the audience; however, it may still not be remembered (D'Astous and Chartier 2000). In a study in which they sought to understand the impact of objective and subjective characteristics on memory and attitudes towards placed brands, D'Astous and Chartier (2000) analysed consumers' responses using excerpts from different films. Their results showed that the interaction between prominence and integration, namely plot connection, attenuates the negative impact of prominence. Further, consistent with information congruency literature, integration shows a positive impact on consumer liking for a brand and a negative impact on brand recall and recognition. In addition, even if prominent, congruent placements are less likely to be deemed unacceptable.

Russell (2002) utilised a theatre-based methodology to simulate real viewing conditions when testing students' reactions to product placement in films. She suggested that incongruous placements are remembered to a greater extent in the visual rather than auditory condition. However, congruous placements are more persuasive than

incongruous ones although the latter achieve higher cognitive outcomes (e.g. recall and recognition) than the former. Nonetheless, incongruence enhances viewers' resistance which, in turn, can generate negative outcomes (D'Astous and Chartier 2000; DeLorme and Reid 1999).

More recently, Gould and Gupta (2006) conducted two studies in order to understand how viewers assign meaning to product placement in the context of game shows, as mentioned earlier. The first study analysed the essay-styled responses of undergraduate marketing students towards game shows. The second study analysed in depth the findings of the first study by using direct interviews with other students. Interestingly, participants' opinions of the central role of placements in game shows were closely tied to their opinions of the show itself. Further, a participant said that the use of product placement was pertinent as long as it was 'appropriate and non-offensive' (Gould and Gupta 2006, p.70).

Cowley and Barron (2008) noted that prominent (visual-verbal) placements have a negative impact on the brand attitude of those viewers who report high levels of programme enjoyment. The underlying reasoning is that prominent visual-verbal references motivate viewers' elaboration in that such references raise suspicion, irritability, and counter-argumentation because they can be seen as marketing-driven/persuasion mechanisms. In their critique of prominent visual-verbal placements, Cowley and Barron (2008) argued that these are disruptive and highly distractive and can appear too forced. Further, these placements are aggressive without developing a careful engagement with consumers. Visual-only placements, as the authors stated after a review of practitioners' practices, are perceived as more acceptable than audio placements.

Lehu and Bressoud (2009) found that prominent placements achieve higher recall when connected to a plot. In their study, they analysed brand placements in 11 DVD films with a sample of French filmgoers. They measured spontaneous day-after recall through a face-to-face survey. In addition, Lehu and Bressoud (2009) used two academic experts to assess whether the placements were (high-low) prominent and connected to the plots. The participants did not decide themselves whether they considered that the placements were connected. The characteristics used to gauge 'connection with the plot' – some of

which are drawn from previous studies – are reproduced in Table 2.3 below. By way of a qualification, it should be borne in mind that this study assessed only unaided recall.

Typically, academics have either self-assessed or referred to panels of experts in order to evaluate the nature of plot connection and the congruence of each product placement (Lehu and Bressoud 2009; D'Astous and Chartier 2000). Thus, it is interesting to explore how viewers actually evaluate the fit between placements and media (Russell 2002).

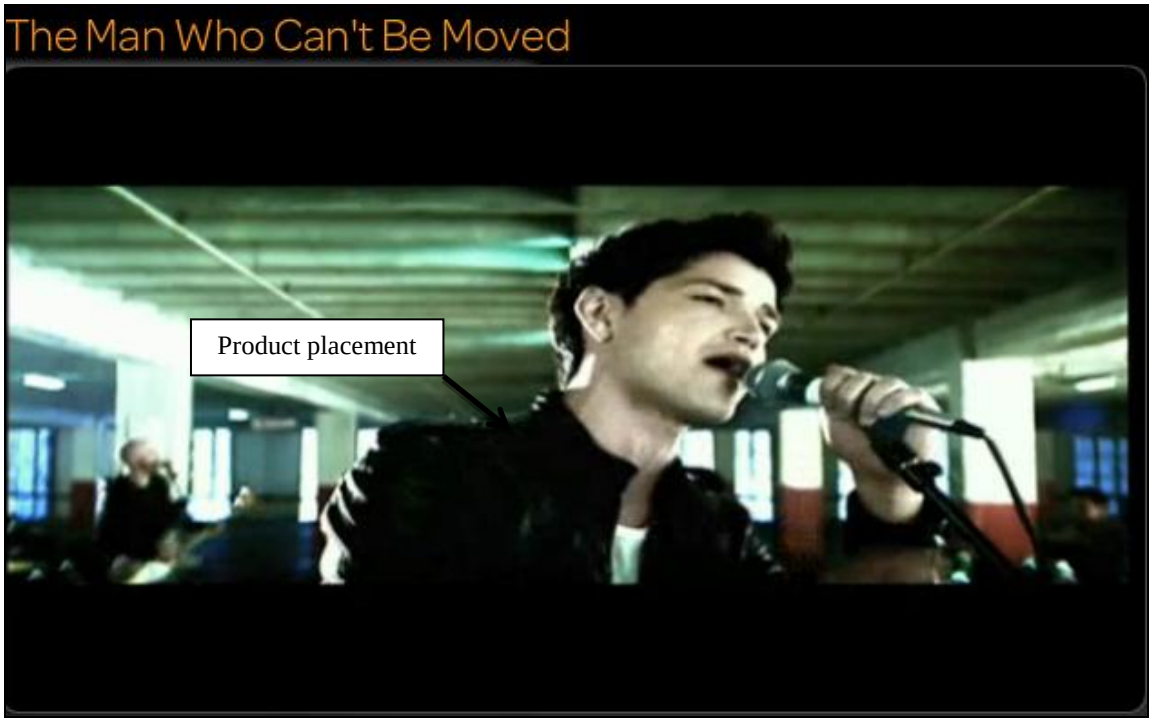
Table 2.3 **An example of plot connection coding**

Variables selected for coding	**Sources**	**Authors**
Product involved in the action	Role of the product in the intrigue Role of the product in the situation	**Fontaine 2002;** **Ong and Meri 1994**
	Role of the brand in the scene	**Russell 2002; Ong and Meri 1994**
	Related to the context of the film	**D'Astous and Chartier 2000**
Product in contact with the main character	Role of the product for the character Type of character associated with the product	**Fontaine 2002**
	Character identified with the brand	**Russell 2002**

Source: Lehu and Bressoud (2009, p.16)

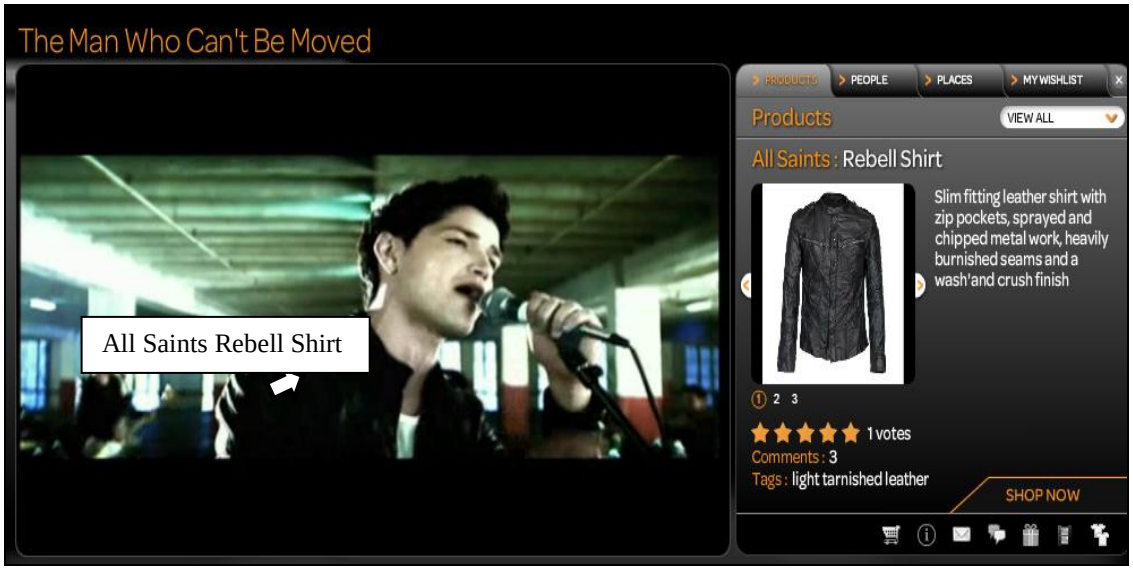
In an interactive placement, interactivity is elective. Viewers decide whether they interact with the brands. This means that they can freely choose not to see any brand while watching a video and brands can be deemed congruent. For example, in the music video 'The Man Who Can't Be Moved' (2008) by The Script, Danny wears a shirt, the brand of which is not recognisable on screen (see Figure 2.15). Once the user moves the cursor and clicks on the shirt, all brand-related information is displayed (see Figure 2.16).

Figure 2.15 **Interactive music video**



Source: Clikthrough (2014

Figure 2.16 **Digital music video and interactive product placement**



Source: Clikthrough (2014)

However, viewers can choose to move the cursor around the video and see which brands are portrayed. This action enables viewers to be aware of all the embedded brands. If a viewer actively decides to click on a given product within the video, additional information is displayed. It is interesting to study whether this added

information increases the likelihood of a placement being perceived as incongruent and how this affects cognition. This leads to the following hypotheses.

Hypothesis 6a: Congruence with the plot has a negative effect on interactive placement recall.

Hypothesis 6b: Congruence with the plot has a negative effect on interactive placement recognition.

Hypothesis 6c: An interactive placement in digital music videos is perceived as more incongruent than a classical non-interactive product placement.

2.2.2.3 Scepticism towards advertising

Scepticism is an attitude developed by viewers which makes them suspicious and judgemental about the marketing efforts to which they are exposed across different media (e.g. films and video games) (Balasubramanian *et al.* 2006; Gupta, Balasubramanian, and Klassen 2000; DeLorme and Reid 1999).

Early studies on product placement in films noted that viewers can be more sophisticated than marketers are prepared to acknowledge. In other words, viewers are aware of the persuasive intent of embedded placements (Nelson 2002; DeLorme and Reid 1999). However, as can be expected, consumers differ in their attitudes towards advertising; indeed, the spectrum ranges from complete acceptance to scepticism (Pollay and Mittai 1993). For example, a brand which is well placed adds realism to a plot and is perceived as real and unobtrusive by audiences (Nelson 2002). However, this can lead to scepticism towards the nature of the persuasive intent and its subliminal nature (DeLorme and Reid 1999; Pollay and Mittai 1993). Special mention in this regard must go to ethical concerns about the use of product placement.

When product placement first appeared in mass media channels it generated quite an amount of criticism. Terms such as 'screen advertising' were used at the time to refer to what we now call product placement.

> Screen advertising is unfair to our audiences. An advertisement on the screen forces itself upon the spectator. He cannot escape it, yet he has paid his admittance price for entertainment alone.
>
> Nicholas Schenck, head of MGM, 1931 (Segrave 2004, p. 19).

The acceptance of product placement practice in the film industry has not been without controversy. As product placement became a common practice in films in the 80's, scholars started to discuss its ethical and legal implications.

There were concerns regarding people avoiding going to the cinema if they felt films contained abusive and manipulative advertising. Consequently, some radical scholars even suggested boycotting films (Snyder 1992). In their view, if audiences were unhappy with Hollywood's product placement practices, they should stop watching films as a way of showing their disapproval and stopping these practices (Snyder 1992). In hindsight, these critiques seem rather extreme and paternalistic in their assumption of an unsophisticated and uncritical audience.

Academic critics also reacted strongly to the disguised persuasive power of product placement and its potential harm to captive audiences. If subjects watch and immerse themselves in a media channel, they become an easy target for the placements contained within it. Product placement has been considered as a form of stealth marketing (Holt 2002), and as such has been questioned by both customers and marketers on ethical grounds (Kaikati and Kaikati 2004). For example, excessive placements in the Lady Gaga video *Telephone* gave rise to a negative reaction from fans, a reaction which transferred over to the featured brands provoking criticism of both the singer and the brand (Plambeck 2010).

Other less critical academics chose instead to emphasise the ethical grounds of product placement as perceived by consumers and focused primarily on audiences' attitudes towards product placement within mass media programming (Gupta and Gould 1997; Nebenzahl and Secunda 1993). These academics showed that product placement was a well-accepted practice among audiences. In fact, viewers were apparently aware of the commercial intention of such placements (D'Astous and Chartier 2000; Gould *et al.* 2000; Gupta and Gould 1997), and considered that the presence of such products added realism to the content (Nelson 2002). In those situations where audiences did object to the presence of placements within films, television and video games, they typically did so on ethical grounds (Kim and McClung 2010; Gupta and Gould 1997).

Product placement raised ethical and legal issues among academics and practitioners at the time. The general concern was very simple; people pay for entertainment and this is

what they expect to receive, entertainment free of advertising. This concern applied to a range of different media channels. Ethical concerns often focused on the inclusion of products such as cigarettes, alcohol, guns, and fast food, particularly in media targeted at children (Hudson *et al.* 2008; Nelson *et al.* 2004; Gould *et al.* 2000; DeLorme and Reid 1999; Gupta and Gould 1997). Critics of product placement practice argue that the increasing presence of product placement in films and soap opera programmes serves to promote mainly unhealthy food (Goodman 1985), cigarettes (Lackey 1993), and alcohol (Diener 1993), and should therefore be taken seriously by public policy makers (Sutherland 2006); the practice should be regulated whenever the products in question could be harmful and/or addictive (Kureshi and Sood 2010; Sutherland 2006; Lackey 1993). Governments considered too that product placement needed to be regulated (Kureshi and Sood 2010; Sutherland 2006). European regulations have traditionally been stricter than American ones but have become less severe over recent years (Sutherland 2006). For example, the European regulatory framework for Audiovisual Commercial Communications now allows product placement, with the exception of those cases deemed to be ethically charged, provided that its presence in any programme is disclosed at the beginning of the broadcast[1]. This regulatory framework also establishes that unpaid placements are considered as paid-for when the placement (e.g. goods or services supplied) is of significant value[2]. Furthermore, paid-for product placement is fully prohibited in children's programmes, news programmes, and documentaries[3] (Commission 2009). The current legislation establishes that each EU country is free to determine further restrictions on the usage of product placements. In the Netherlands, for example, public broadcasters are allowed to use placements only in cultural programmes, and sports or charity events (Smit *et al.* 2009). All European regulations are based on the perceived potential harm to audiences. Their aim is to inform people that they are being exposed to product placement and that some of the products featured are potentially harmful.

Adopting a viewer-centred approach, Gupta and Gould (1997) sought to discover whether viewer characteristics had any effect on their attitudes towards product

1 Directive 2007/65/EC of the European Parliament and of the Council amending Council Directive 89/552/EEC on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities [2007] OJ L332/41

2 Directive 2007/65/EC [1993] OJ L332/34 (Television broadcasting activities Directive)

3 Directive 2010/13/EU of the European Parliament and of the Council of 10 March 2010 on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services (Audiovisual Media Services Directive) (1) [2007] OJ L 95/1

placement in films. They found that people who watch films more frequently were more accepting of the presence of ethically-charged placements such as cigarettes and alcohol. The effects were moderated by sex, with men being more receptive to such placements than women (Gould *et al.* 2000).

Audiences also showed discontent with product placements which were too obvious or prominent (D'Astous and Chartier 2000). DeLorme and Reid (1999) found that viewers are more sophisticated than product placement detractors assumed them to be. They are aware of the presence of placements within the plot, and the contribution they make to the story telling. According to this line of research, viewers do understand the presence of product placement, but it has to be an integral part of the story telling, serving a purpose, and not merely an intrusive commercial add-on.

Perception affects how audiences process an advertising stimulus. For instance, using the Persuasion Knowledge Model, Nelson, Keum, and Yaros (2004) explained how viewers mould their beliefs about a particular stimulus according to their own perception of the persuasive attempt. In this regard, the Persuasion Knowledge Model functions as a way of coping with a stimulus to which viewers are exposed. In other words, sceptical consumers develop solid counterarguments, leading them to distrust any similar marketing message, boycott it, or simply tune out (Nelson *et al*. 2004; Pollay and Mittai 1993). Thus, it is important to know whether a consumer is sceptical about advertisements in general because this scepticism can be translated to the product placement realm (Nelson *et al.* 2004; Gupta, *et al*. 2000).

Nelson *et al*. (2004) conducted a netnographic study on game players who spent more than 20 hours per week online. Their study supports how negative attitude towards advertising would lower tolerance towards product placement, resulting in a product-boycotting behaviour. The following verbatim exemplifies the type of sceptical/intolerant attitude they uncovered towards advertisements.

> I am so sick of adverts, that I would never buy a game like that again. I already refuse to watch TV or listen to the radio, and now I'm saying it again … (p.19)

The above user's testimonial supports Gupta *et al*.'s (2000) findings in a different medium (computer games). It also supports the theoretical explanations of the Persuasion Knowledge Model with regard to users reinforcing their counterarguments

against stimuli. This point echoes the findings of DeLorme and Reid (1999) who concluded that filmgoers are not uniformly influenced by brand placements since other factors such as past experience, self-image, demographics, context, and awareness of the intent of placements also come into play.

Research has addressed the influence of age on the level of viewers' scepticism. DeLorme and Reid's (1999) findings suggest that certain target audiences tend to be more sceptical towards placements (e.g. baby boomers) while others (e.g. Generation X) accept brands as part of the storytelling and even associate them with feelings of belonging, comfort, and security (DeLorme and Reid 1999). This situation can be explained by the fact that younger generations grew up surrounded by exposure to an increasing number of marketing communication messages; thus, they are used to having them as part as their daily lives. For example, studies have shown that after eight years of age, children recognise the commercial intent of advertisements but do not necessarily understand their persuasive intent (Hudson, Hudson, and Peloza 2008).

Commercial/non-commercial prejudices are evoked according to the type of placement. If a placement does not fit the story, it is not perceived as necessary and may lead to viewers rejecting it (Gould and Gupta 2006; Russell 2002; DeLorme and Reid 1999). Thus, audiences have become more sophisticated in their understanding of the practice of brand placement and are active interpreters instead of passive receptors (Karrh 1998). These effects have been discussed in Section 2.2.2.2.

Finally, research has suggested that gender and cultural background (e.g. nationality) influence the level of scepticism towards placements. In terms of gender, men are less sceptical towards ethically charged products than women (Russell and Stern 2006; DeLorme and Reid 1999; Karrh 1998; Gupta and Gould 1997). When exploring whether gender differences shape acceptance towards product placement, Gupta and Gould (1997) reported that cars and guns are perceived as masculine; further, men display more positive attitudes towards tobacco, alcohol, cars, and guns compared with women.

Gould, Gupta, and Grabner-Krauter (2000) compared American (N = 1,012), Austrian (N = 240), and French (N = 204) consumers' attitudes towards placements. These countries belong to different historical-cultural backgrounds (Hofstede 2005), so it is

interesting to observe that there is a statistically significant country-effect on the acceptability of ethical/non-ethical products. Overall, US consumers are more willing to accept all such products, while ethically charged products tend to be less acceptable in the two other countries. Smit, *et al*. (2009) highlighted how European countries and their policymakers, e.g. the Netherlands, are more sceptical towards the adoption of product placement than the USA. For instance, Dutch public broadcasters are only permitted to use brand placement in cultural programmes and sports and charity events (Smit *et al.* 2009).

The foregoing discussion raises the question of how scepticism can be triggered by interactive placement and what its repercussions are for product placement recall and recognition. Interactive placement presents added information which may include ethically charged products. However, in principle, interactive placements in digital music videos are unobtrusive. A viewer can choose not to move the cursor around the video area; but if he or she does choose to do so, labels will highlight the presence of brands. The viewer then has to choose whether to interact with the brands; however, if he or she clicks on any elements within the video and expands the information about the items, this added information may 'inhibit persuasion if they [the items of information] are perceived to be distracting, irritating, distasteful, or self-serving' (Cowley and Barron 2008, p.23). This may lead viewers to be suspicious of the reasons behind a singer using certain products and integrating them into a music video's plot. For example, in 'The Man Who Can't Be Moved' video by The Script, the lyrics narrate how a man is hoping to see a woman again and decides to wait for her to come back to the place where they usually meet. Because he is waiting, it makes perfect sense that a watch is central to the plot and appears on three occasions. However, when moving the cursor, a viewer can see the watch's brand. This may trigger some suspicion about why, for example, the band is paying so much attention to the watch (see Figure 2.17). In this context, awareness of the placed brand could lead to scepticism which in turn could counterintuitively result in higher levels of placement recall and recognition

Figure 2.17 **How interactive placement may generate scepticism**

Source: Clikthrough (2014)

Overall, this discussion leads to the following hypotheses.

Hypothesis 7a: Interactivity moderates the influence of scepticism towards advertising on product placement recall.

Hypothesis 7b: Interactivity moderates the influence of scepticism towards advertising on product placement recognition.

Hypothesis 7c: Scepticism towards advertising has a negative effect on attitudes towards placement in general.

2.2.2.4 Attitudes towards placement in general

In general, viewers who hold positive attitudes towards placements hold a positive attitude towards a particular placement (Gupta, *et al*. 2000; Gupta and Gould 1997). Therefore, viewers who have positive attitudes towards placements in general do not develop resistance to product placement, thereby allowing harmonious processing of the stimuli which ultimately enable the transference effect related to media and brand (Gould, Gupta, and Grabner-Krauter 2000; DeLorme and Reid 1999; Gupta and Gould 1997). Attitudes towards placements in general are positive because audiences are now more sophisticated and more accustomed to being exposed to these stimuli (Gupta and Gould 1997; Nebenzahl and Secunda 1993). For example, Gupta *et al.* (2000) further analysed the data set of Gupta and Gould (1997) and conducted additional research in order to understand audience evaluations of product placement acceptability. Gupta *et*

al. (2000) found that those consumers who are less approving about advertising in general also exhibit less favourable attitudes towards product placements. Current frequent filmgoers report greater acceptance and more positive attitudes towards product placements than earlier cohorts of filmgoers (Gupta and Gould 1997; Nebenzahl and Secunda 1993).

Similar results were found in the study of Nelson *et al.* (2004) where participants with a positive attitude towards advertising reported favourable attitudes towards product placements in computer games. In another study, Glass (2007) asked participants about their attitudes towards a set of brands. Then, they played a video game which exposed them to a number of these brands. Following this, they answered questions about their experience. After being immersed in this virtual world (i.e. the video game) and stating their enjoyment of it, they also reported positive attitudes towards the embedded brands. The question of whether these participants were avid video gamers was not discussed. Similarly, Mackay *et al.* (2009) found that a shift in preconceived attitudes towards a brand is possible in a video game environment. Participants with previously high positive attitudes towards a brand displayed higher recall and recognition. Thus, the media effect mentioned in earlier sections seems pertinent with regard to attitudes towards placement in general. More immersive media seem to be linked to greater acceptance and more positive attitudes towards placement in general. This includes frequent filmgoers (Gupta and Gould 1997; Nebenzahl and Secunda 1993) and computer game players (Mackay *et al*. 2009; Glass 2007; Nelson, *et al*. 2004).

In principle, viewers can choose whether to interact with an interactive placement. When electing to interact, they decide their level of immersion (see Section 3.2.1). Moreover, viewers are aware of the commercial intent of interactive placement; in fact, an interactive music video presents a means of avoiding intrusive advertising strategies often used in other digital music videos (e.g. those on YouTube). Additional information is available when a user decides to click on an object, but users can also decide not to click or to move the cursor on the screen in order to avoid intrusiveness. In this regard, the persuasive intent is clear (see the Persuasion Knowledge Model), and following this logic, viewers are expected to display more positive attitudes towards brands than in classical non-interactive placements. Thus, the following hypotheses are postulated.

Hypothesis 8a: Attitudes towards placement in general have a positive influence on brand recall.

Hypothesis 8b: Attitudes towards placement in general have a positive influence on brand recognition.

Hypothesis 8c: Attitudes towards placements in general in an interactive placement context are more positive than in classical non-interactive product placement.

2.2.2.5 Involvement/ connectedness

Involvement refers to the personal connection between an individual and the stimulus to which he or she is exposed (Krugman 1965 cited in Barry 1987). This connection is 'a person's perceived relevance of the object based on inherent needs, values, and interests' (Zaichkowsky 1985, p.342). If an individual considers a stimulus personally relevant, he or she has more motivation to process the presented information, thereby resulting in greater involvement (Petty and Cacioppo 1986). Further, when there is more motivation to process the information, it is important for the individual to form his or her own opinion and evaluate the quality of the received information and its context. This increases the level of involvement with regard to learning as much as possible about the stimulus (Laurent and Kapferer 1985).

Three factors determine involvement: perceived importance, the media used, and personal relevance. These factors, in turn, produce different involvement levels. First, personal involvement relates to the experiences of a subject which shape interaction with a determined stimulus. Zaichkowsky (1985) demonstrated that different subjects perceive the same product in different ways and noted that the reason why subjects display different levels of involvement is mainly because of rationality and emotion. Laurent and Kapferer (1985) conceptualised this as the perceived importance of the product. Second, the media factor acts as a function of the different media used to communicate a message (e.g. television, radio, and PCs). These different media have been proven to affect the resulting levels of involvement; for example, printed media receive higher cognitive responses than audio because there is a higher need for cognition with printed rather than audio media (Grigorovici and Constantin 2010;

Zaichkowsky 1985; Wright 1973). Third, personal relevance addresses whether a certain stimulus appeals to a subject in terms of their self-concept. If a stimulus is deemed personally relevant, subjects will intensify cognitive processing and produce more critical judgements even when these tasks are interactive and require more effort (Petty and Cacioppo 1986). For instance, an advertisement for a car achieves a higher level of involvement if a subject is considering buying one (Zaichkowsky 1986; 1985).

A person can be involved with advertisements, products, and purchase decisions (Grigorovici and Constantin 2010; Zaichkowsky 1986; 1985). Research, synthesised by Zaichkowsky (1985) has attributed the levels of such involvement according to the class of product which is advertised. For example, cigarettes are considered low-involvement products, while diamond rings are considered high-involvement products. Information content is more important for high-involvement products than low-involvement ones (Bowen and Chaffee 1974 cited in Zaichkowsky 1986). Low involvement leads to passive learning, which reduces resistance towards advertising; and a passive learning condition usually avoids linking an advertising stimulus with a consumer's needs and wants (Barry 1987). With low involvement products, audiences remain more receptive because the products allow customers to consider more possibilities compared with higher involvement ones (Barry 1987). Finally, involvement affects cognitive and affective outcomes (Park and McClung 1986; Zaichkowsky 1986; 1985; Laurent and Kapferer 1985).

The means by which involvement is measured have remained consistent. The literature pertaining to products and involvement has considered two main factors which influence involvement: personal relevance, which has already been discussed here in the context of involvement, and the differentiation of alternatives (Zaichkowsky 1986). Personal relevance, in general, has been noted as an important condition to stimulate involvement; for example, if an advertisement is relevant for a subject depending on his or her current personal needs, values, and possible usage, the level of involvement is higher than if the advertisement is irrelevant. The differentiation of alternatives relates to the presence/absence of product substitutes. This determines the motivation of a subject to actually become involved with a product, allowing the subject to compare and evaluate distinctive characteristics. Zaichkowsky (1986) developed the Personal Involvement Inventory (PII) scale, which is designed to measure involvement with products and which acknowledges product differentiation and product categories. The

PII has since been updated to make it 'context-free' and to measure involvement with advertisements. It is also able to differentiate cognitive and emotional involvement.

Another approach to involvement was developed contemporaneously with Zaichkowsky (1986) by Laurent and Kapferer (1985), who conceptualised involvement in terms of its function regarding product category and purchase decision. They also conceptualised involvement on two dimensions: enduring and situational involvement. Enduring involvement relies on a product's perceived importance and on the hedonic value or emotional appeal of the product's class. Situational involvement relies on the symbolic value of a product for the consumer and on the perceived importance of the negative consequences of an incorrect purchase. The two dimensions and the four factors of involvement (perceived importance, the media used, personal relevance, and the differentiation of alternatives) were central to the level of involvement related to each product category when evaluated for purchase purposes. Zaichkowsky (1994) was considered particularly appropriate for the present study, first because her study is consistent with research which considers cognitive and affective involvement, and second because her work has been accepted and utilised widely in advertising (Reading *et al.* 2006; Sharma 2000).

The next question to be considered is how involvement affects recall. Two aspects of Programme Involvement Theory affect recall. The first posits that recall is enhanced when aired within an involving programme (Moorman, Neijens, and Smit 2007; Krugman 1983). Moorman *et al.* (2007) found that when exposure is not forced, programme involvement has a positive effect on advertisement recall. Further, evidence from computer-mediated communication (CMC) suggests that 'the context surrounding a communication in a CMC experience will have a positive effect' (Nicovich 2005, p.31). In this regard, product placement recall within computer games has proved to be higher if the placed brands are prominent (Nelson 2002). In addition, Nicovich (2005) noted that involvement and presence have a strong relationship. This could mean that involvement has a positive effect on presence. The second aspect of Programme Involvement Theory suggests that programme involvement has a negative effect on recall (Moorman *et al.* 2007; Levy and Nebenzahl 2006; Barry 1987; Kennedy 1971). Those academics who have argued in favour of this approach have used psychological theories to explain memory and attention. For example research has shown that if a person is highly involved with a television programme, his or her focus (i.e. cognitive

attention) is directed to the programme and is less likely to become involved with advertisements (Levy and Nebenzahl 2006). Following Nicovich (2005), the following hypotheses are posited.

Hypothesis 9a: In interactive product placement, higher involvement with a digital music video results in higher recall than in classical non-interactive product placement.

Hypothesis 9b: In interactive product placement, higher involvement with a digital music video results in higher recognition than in classical non-interactive product placement.

Research has suggested that involvement is an important mediating factor and motivational variable in advertising (Moorman *et al.* 2007; Laurent and Kapferer 1985; Zaichkowsky 1985). Using the Interactive Communication Behaviour Model (ICBM), Levy and Nebenzahl (2008) suggested that advertisers should seek ways to increase viewer involvement with advertised products and that different types of information should be presented for different product categories. They argued that viewer engagement with interactive advertising on interactive television facilitates higher levels of information processing because the viewer has the opportunity, motivation, and ability to process the information, a situation which is not available in traditional television advertising. This applies equally to interactive product placement (Lynn *et al.* 2014). Accordingly, the following hypotheses are proposed.

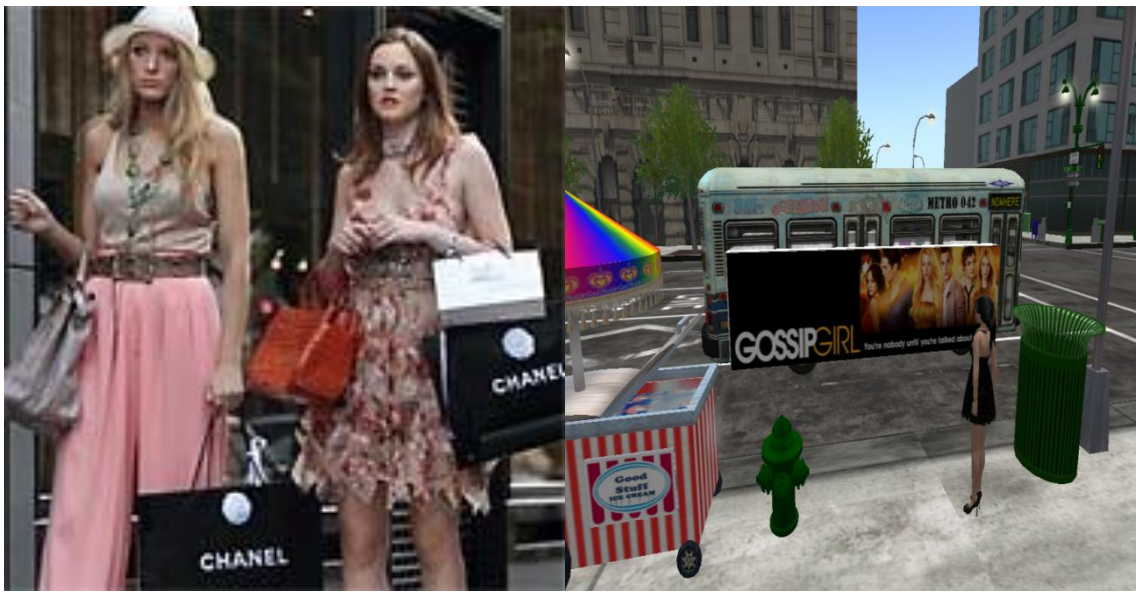
Hypothesis 9c: In an interactive product placement, involvement with a singer in a digital music video has a positive influence on recall.

Hypothesis 9d: In an interactive product placement, involvement with a singer in a digital music video has a positive influence on recognition.

Hypothesis 9e: In interactive product placement, involvement with a digital music video has a positive influence on perceived information of the placement.

The connectedness construct addresses the importance of the relationship between a viewer and a television show and how this is extended to and influences his or her personal and social lives. Russell (1998) coined the connectedness concept in the course of using Transformational Advertising Theory (Russell 1998; McCracken 1989; Puto and Wells 1984; Wells 1980) to develop a framework for product placement. The sense of connectedness resembles the interpersonal link developed between viewers and television shows, and between viewers and television characters (Russell and Puto 1999). Connectedness implies that a traditional consumer-brand relationship can be evoked by a viewer, thus generating feelings towards a television show (Fournier 1998). The extent to which the relationship is developed is calculated by the connectedness scale (Russell 1998). This scale is a continuum which measures general television habits, assesses the level of identification of a viewer with television, and considers how this identification contributes to developing a viewer's self and social identity (Russell, Norman, and Heckler 2004). Programmes which are more connected to an individual have a deeper influence on either the construction of self-definition through imitation of favourite characters, or the construction of social self as a means to share the connectedness with family and friends (Russell and Puto 1999). Following this reasoning, connectedness assesses the impact that the relationship between viewer and programme has on consumption experiences and purchasing behaviour. For instance, highly connected viewers accept product placements related to their shows and incorporate them into their lifestyles (Russell and Puto 1999). An example is the American television programme *Gossip Girl* in which it is common to see the main characters, Serena van der Woodsen (Blake Lively) and Blair Waldorf (Leighton Meester), portraying luxurious brands such as Chanel (see Figure 2.18). This television programme has proved successful among its target market, teenagers and young women. To catalyse the fans' desire to be part of the programme, CW (*Gossip Girl*'s producers) and Million of Us (An American company specialising in marketing within virtual worlds such as Second Life) created the *Gossip Girl* neighbourhood within the virtual world Second Life. In the virtual Upper East Side, fans can create an avatar and participate in the glamorous plot of the television programme (Stein 2009). Moreover, they have access to the clothing characters wear in the programme and can dress their avatars, attend parties, and follow what the characters do. Stein (2009) noted how important it is for fans to find the accessories and clothes portrayed in the programme's scenes. In fact, brands within Second Life offer free products to new players. All players can also buy items.

Figure 2.18 **An example of connectedness within a television programme**



Source: Lamb (2011) and Play As Life (2009)

Connectedness is perceived as analogous to immersive experiences (Balasubramanian *et al.* 2006) (see Section 3.2.1). Such immersion increases video gamers' affective connection with the received stimuli and the placed messages. Balasubramanian *et al.* (2006) argued that connectedness is better than involvement for analysing the degree of influence which a television programme has on a viewer because represents a more complete construct. This is despite the fact that Russell (2002), the creator of the connectedness construct, suggested that both connectedness and involvement deserve individual consideration because of their high impact on consumer behaviour.

Russell (1998) found a direct positive relationship between viewer, television show, and celebrity; as the degree of connectedness of the viewer with either the show or the actor becomes higher, so the affective transfer becomes greater and the transformational effect of the placement becomes stronger. Moreover, connectedness goes beyond audience measures because it assesses the level of engagement of a viewer with the television experience, the attitude towards the show, and the level of involvement (Russell *et al*. 2004; Russell and Puto 1999). In this regard, connectedness has psychological and social effects. It has psychological effects because it involves cognitive processing, how viewers connect to the television programme, and how this connection reflects viewers' sense of their selves. It has social effects because higher connectedness implies higher programme-related social interactions. Further, a higher degree of connectedness results in higher recall and enhanced long-term memory

(Russell, Norman, and Heckler 2004). Thus, connectedness has been studied in the context of viewers and the relationship they build with television shows. However, following Genre Theory (Russell and Stern 2006), it is worth studying connectedness within a different media channel (e.g. music videos) to explore whether its properties apply to different media channels. This leads to the following hypotheses.

Hypothesis 9f: Interactivity moderates the influence of connectedness on product placement recall.

Hypothesis 9g: Interactivity moderates the influence of connectedness on product placement recognition.

2.2.3 Processing depth

Following Balasubramanian *et al.*'s (2006) theoretical framework, execution and individual factors affect how an individual processes a placement. In this context, processing depth is the extent to which a viewer processes and evaluates stimuli during or after exposure. It reflects an individuals' level of retention and understanding; that is, how deeply subjects think about a particular matter (Nussbaum 2005).

Traditionally, the predominant assumption was that consumers pay attention to advertising stimuli and are ready to consciously process informative messages (Thorson 1989). However, to assume that processing is purely cognitive means that consumers are willing and ready to learn every time that they are exposed to advertisements in the same way that they would learn, for example, the capitals of Europe (Thorson 1989).

Cognitive processes assume that subjects consciously process the information to which they are exposed. In this regard, two main literature streams work under the assumption that subjects are rational and respond to advertising rationally: the Multiattribute Model (Ajzen and Fishbein 1977) and the Hierarchy of Effects Model (Lavidge and Steiner 1961). The Multiattribute Model suggests that the information received from advertisements is a summary of the information which a subject receives from other marketing channels, resulting in beliefs about product attributes. The Hierarchy of Effects Model assumes a series of steps which consumers follow from product

awareness to actual purchase. Both models imply that attitudes involve conscious and rational effort.

Non-cognitive processes rest on the assumption that subjects are consciously unaware of the stimuli to which they are being exposed. Research has shown that an advertisement can be perceived and remembered even at a subconscious level, but that its processing is not as elaborate as cognitive processes (Thorson 1989). Thorson (1989) conceived advertising as ubiquitous although consumers are not always interested in it; thus, any processing of exposure leads to low involvement (Krugman 1983) or peripheral processing (Cacioppo, Petty, and Kao 1984). Thorson (1989) identified three theoretical areas which address this: involvement models, conditioning processes, and critical processes. With regard to involvement-driven models, the Elaboration Likelihood Model (Cacioppo, Petty, and Kao 1984) posits that attitudes are formed according to two routes: central and peripheral. The central route focuses on arguments which follow cognitive reasoning and occurs in a high-involvement condition. The peripheral route corresponds to low consumer involvement. Conditioning models work according to the logic that people connect with stimuli based on proximity in time or space. When exposed to an advertisement, viewers may have certain feelings which in turn are transferred to the associations which they hold regarding the stimulus (Gorn 1982). Thus, conditioning models completely reject the existence of any cognitive processing (Thorson 1989) and memory models link experience with advertising.

Processing depth seeks to understand how memory is affected by advertisements. As discussed, processing depth can occur either at the conscious or subconscious level. Indeed, Balasubramanian *et al.* (2006) referred to processing depth (low/high) as a continuum between explicit and implicit memory. As such, it plays a key role in purchase decision-making. With the stimulus of a brand targeting implicit memory, information is available without the need for conscious retrieval. However, in the case of explicit memory, brand recall can be necessary in order to ensure a purchase (Shapiro and Krishnan 2001).

2.2.3.1 Implicit memory processing

Implicit processing occurs at a subconscious level. Subjects do not need to pay active attention to stimuli; in fact, passiveness, low attention, and even incidental exposure

trigger implicit processing (van Reijmersdal *et al.* 2010; Duke and Carlson 1993; Thorson 1989). Retrieval from memory happens without direct action or reference to the learning situation.

Different measures have attempted to capture the impact of implicit memory on people. Some measures focus on asking subjects to perform a task without explicitly requiring them to recall a particular previous event (Duke and Carlson 1993); others attempt to decipher non-cognitive processes (Thorson 1989) in order to evoke an individual's sensory inputs and perceptions (Duke and Carlson 1993). When exposed to these types of measurement, subjects may not be aware that they are remembering a stimulus, even at a subconscious level, and this is precisely the aim (Duke and Carlson 1993).

Implicit memory tests are implemented by asking participants to perform certain unrelated tasks. These tasks can include verbal tests such as word association, word and sentence completion, brand awareness, shifts in perception, and choice-based tasks (Scott and Craig-Lees 2010; Parker and Dagnall 2009; Yoo 2008; Yang *et al*. 2006; Shapiro and Krishnan 2001; Law and Braun 2000). None of these include direct brand reference because implicit tests intend to capture any subconscious memories which are held by subjects towards a specific stimulus.

If memories are held at the subconscious level, this necessarily implies that individuals have been exposed to stimuli without directly paying attention to them. In this regard, the mere exposure effect has been utilised in cognitive psychology in order to understand whether prior exposure to information increases subconscious learning (Zajonc 1968). Also known as the priming effect, this effect occurs without a subject being aware or directly exposed. If a subject is exposed on repeated occasions to a stimulus, this can create a sense of familiarity even though exposure is not received at a high attention level *(*van Reijmersdal *et al.* 2010). This sense of familiarity leads to a shift in positive attitudes towards the stimulus (Matthes *et al*. 2012; Cowley and Barron 2008; Zajonc 1968). For example, consumers with moderate knowledge of a brand undergo deeper processing than those who lack any prior knowledge (Bettman and Park 1980). Avery and Ferraro (2000) found, after studying brand appearances in prime-time programmes and brand occurrences in film reruns on television, that product placements which occur in television programmes have a greater impact than those of films because of repetition and, consequently, higher brand exposure. In fact, studies have shown that

implicit learning takes place even after a single exposure to an unfamiliar brand (Yoo 2008).

Positive attitudes towards a stimulus can change after a high number of repetitions, thereby generating counterarguments; but this also depends on placement prominence (Homer 2009; Cowley and Barron 2008; Russell 2002). The wear-out effect has been used to explain this change in attitudes (Zajonc 1968). However, for this effect to occur, individuals need to be exposed to the same stimulus a large number of times; for example, more than 200 times (Zajonc 1968).

The mere exposure effect has been explained in terms of perceptual fluency (Shapiro 1999). Perceptual fluency means that exposure to a stimulus leaves memory traces which are recognised as familiar cues during a second exposure (Shapiro 1999). High fluency leads to a positive affective reaction. However, individuals are unaware of their exposure and of how their reactions towards a stimulus change; they only extract information from the stimulus based on fluency (Matthes *et al.* 2012). Elsewhere, Janiszewski (1993) investigated the mere exposure effect in print advertisements and found that even without conscious recall, subjects can shift their attitudes towards a brand because of mere exposure. However, studies which reflect the mere exposure effect in product placement are relatively recent, as are the methodologies which are used.

The study of implicit memory effects is clearly relevant to the study of product placement. Because they are embedded in a main media channel (e.g. films, television shows, and video games), placements are not the main concern of an audience. This concern, of course, can vary according to a placement's centrality to the plot and its relevance to the storyline as discussed in earlier sections. In any case, even when individuals are not consciously aware of the presence of a placement, the effects of implicit memory can still occur (Matthes *et al.* 2012; van Reijmersdal e*t al.* 2010; Balasubramanian *et al*. 2006; Russell 2002; Law and Braun 2000).

Law and Braun (2000) studied the impact of placement prominence and repetition by comparing implicit and explicit memory measures. Participants were exposed to one of two experimental conditions and watched a 10-minute segment of the television show *Seinfeld.* They were then asked to perform a choice-based task by selecting brands

which they would choose for a friend. The results were higher for subjects who had previously paid attention to the stimulus. Interestingly, the results differed from the explicit recall test, in which audiovisual placements were recalled more successfully and at the same time were the least likely to be chosen in an implicit brand-choice task.

In an study to understand the influence of product placement on children in television shows and films, Auty and Lewis (2004) proposed that explicit and implicit memory influence brand choice. From a sample of 105 children, half were exposed to a scene of one minute and 50 seconds from the film *Home Alone* (1990) in which Pepsi Cola was mentioned and shown being spilled during a meal. The other half were exposed to a scene with unbranded macaroni and cheese where the main character, Kevin, drinks a glass of milk. After the experiment, children were invited to have a drink of either Pepsi or Coke. Children were more likely to pick Pepsi (38:62) in the treatment condition than in the second control group (58:42).

Homer (2009) conducted two studies in order to understand the effects of repetition and type of placement (subtle/prominent) in two media channels: television shows (N = 155), and films (N = 108). Repetition of a prominent placement for a familiar brand negatively affected brand attitude. Specifically, the repetition of prominent placements for known brands has a negative impact on brand attitude. With subtle cases of product placement, however, consumer attitudes are relatively positive and moderate levels of repetition have little incremental impact. The explanation proposed by Homer is that increasing exposure from low to moderate level gives an audience the opportunity to further process a message; thus, the audience becomes more familiar with the stimulus. However, there is a risk that at higher levels of exposure, viewers become too used to the stimulus and can become irritated and proceed to counterargue (Homer 2009). These results can be explained using the Persuasion Knowledge Model (van Reijmersdal *et al*. 2010; Cowley and Barron 2008; Friestad and Wright 1994) and the Elaboration Likelihood Model (Cacioppo and Petty 1984). In this light it makes sense to account for the mere exposure effect when conducting research in interactive product placement in order to explore further how this behaves when interacting with other variables.

Matthes *et al.* (2012) following the work of Law and Braun (2000) and Russell (2002) considered subtle placements as generators of mere exposure effect. Their study had five experimental conditions, one without placements (control condition), two moderate

(15 placements) and two high (30 placements) frequency, each condition composed of two subgroups featuring either prominent or subtle placements. Three versions of a rap music video were purposely designed manipulating placement prominence (Gupta and Lord 1998) and frequency. Each of the 266 Swiss students was exposed to one of the five experimental conditions. It was found that repetition has a positive impact on attitudes towards the placed brands only in the case of subtle placements. Repetition had no effect on prominent placements, arguably because they are processed by the explicit memory. Consistent with Grigorovici and Constantin (2005), Matthes *et al.* (2012) found that in a high-involvement condition, the mere exposure effect is strong for subtle placements, but has no effect in a low involvement condition. Prominent placements were more recalled and recognised than subtle ones in the moderate and high conditions. It is important to state three main observations of the Matthes *et al.* (2012) study. First, the implicit test that they used consisted of asking participants which brands they liked out of a list. Similar questions were utilised by Russell (2002) to assess attitudes towards the brand, not implicit memory. Second, involvement was assessed by asking whether participants 'liked' the music style using the item "I like Swiss rap music" (2012, p. 137). Arguably, this measurement is weak compared to other research measures which consider involvement as a more comprehensive construct (see Section 2.2.4.5). Third, Matthes *et al.* (2012) utilised fictional brands.

The mere exposure effect is related to familiarity (Law and Braun 2000). Because people tend to like familiar objects, the mere exposure effect leads to an increase in positive brand attitudes without placement recall (van Reijmersdal *et al.* 2010; Auty and Lewis 2004; Law and Braun 2000; Zajonc 1968). Gorn (1982) showed how people were more likely to select the colour of a pen that they had seen advertised with likable music (Thorson 1989). This affective transfer was studied by Russell (1998) following Classical Conditioning. Classical conditioning reinforces the emotion-eliciting outcomes of a stimulus, either in a positive or negative way by association. This effect was reproduced by Auty and Lewis (2004) in the case of children and product placement in movies. Following this reasoning, implicit memory is enhanced through emotional advertising (Mitchell 2014).

Interactive placements may generate high emotional charge depending on involvement with the band/singer and the music video (Mitchell 2014; Auty and Lewis 2004; Gorn 1982). Therefore high implicit memory can result. In fact, Rusell (1998) considered that

affective conditioning drives most of the product placement process. However, interactive placements contain a high amount of information too and are also likely to produce explicit processing. It is interesting then to speculate on how both types of processing might behave in this emergent media type by exploring the different hypotheses suggested by previous research, and how they apply in the case of digital music videos. This leads to the following hypotheses:

Hypothesis 10a: Implicit memory is higher for interactive product placement than for classical non-interactive product placement.

Hypothesis 10b: Involvement with the interactive digital music video has a positive influence on implicit memory.

Hypothesis 10c: Previous familiarity with the brand in an interactive digital music video has a positive influence on implicit memory.

Hypothesis 10d: Attitudes towards placement in general in an interactive digital music video have a positive influence on implicit memory.

Hypothesis 10e: Prominence in an interactive product placement has a positive influence on implicit memory.

Hypothesis 10f: Positive context-induced mood in interactive digital music videos has a positive effect in implicit memory.

2.2.3.2 Explicit memory processing

Placement literature focuses greatly on explicit processing and cognitive outcomes (Balasubramanian *et al.* 2006; Karrh 1998). The main reason is that placements processed at high levels of consciousness typically have a greater ability to generate marketplace impact in terms of affective and conative outcomes than those processed at lower levels (Lynn *et al.* 2014; Balasubramanian *et al.* 2006).

Explicit tests make explicit reference to prior exposure (Law and Braun 2000). Subjects have to conciously think back to a prior exposure and intentionally try to remember all

or part of the information they were exposed to (Shapiro and Krishnan 2001). The basic premise is that a viewer has to recall the experience a posteriori, retrieve the information from memory and develop a new linkage that associates the stimulus with a particular situation. The processing factors are counterargumentation, recall and attitudes (Thorson 1989). Because explicit processing is a concious effort, attention and involvement play an important role during exposure. Brand recall will remain effective only if audience engagement is reached during placement exposition (Shapiro and Krishnan 2001; Segupta *et al.* 1997).

Russell (2002) found both an increase in explicit recognition memory and a positive shift in brand attitudes after exposure to audio placements that were high in plot connection. More elaborate processing results in better recall. Presumably, exposure to the placements resulted in the creation and/or reinforcement of positive associations with brands (Cowley and Barron 2008).

Visual and auditory information are processed differently (Russell 2002). Shapiro (1999) found evidence that when ads present semantically related information, they activate the product concept in memory. Because of its visual nature, interactive product placement is processed centrally. Interactive placements are rich in information presented. In fact, viewers can expand product information of any placed brand. Following Shapiro's (1999) findings, interactive product placement would increase the likelihood of the activation of the product concept in memory.

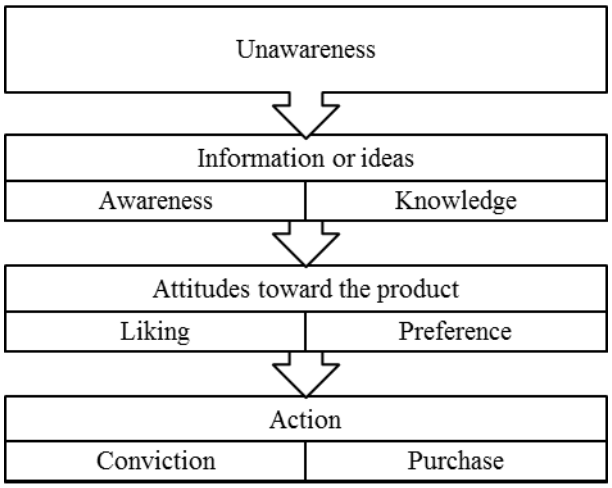
Under the explicit memory logic there is a potential long term effect on memory. If viewers are able to recall and recognise placements, it is because they are aware of their presence. This awareness creates a concious link with the associations held for the media and the actors involved which is meant to transcend the moment of exposure generating long term effects on memory and associations on consumer minds (Shapiro and Krishnan 2001; Segupta *et al.* 1997). Placement recall and recognition are discussed in detail in the section below.

2.2.4 Effects from Placements

The Hierarchy of Effects Model was developed in the context of the personal selling literature (Barry 1987). As early as 1961, Lavidge and Steiner questioned the functions

of advertising and the nature of the results that advertising is meant to produce. Advertising is not designed to produce immediate sales results but to generate a number of impacts from short to long-term to modify consumer behaviour. In a first attempt to measure advertising effectiveness, they proposed a model to understand the steps of advertising in modifying consumers' behaviour. These steps are further divided to indicate the three major advertising functions following a classic psychological model that divides behaviour into three components or dimensions (see Figure 2.19).

Figure 2.19 **Measurements of advertising effectiveness**



Related behavioural dimension
Cognitive component
Affective component
Conative component

Source: Lavidge and Steiner (1961)

Balasubramanian *et al.* (2006) contextualised the execution and individual factors outcomes of the Hierarchy of Effects Model. The Hierarchy of Effects Model studies the way an audience processes and uses an advertising stimulus to make brand choices (Barry and Howard 1990; Barry 1987). The Hierarchy of Effects Model states that subjects respond to advertising in a predictable way. That is, first they think (cognition), then they generate feelings toward their thoughts (affection) and finally, they make a choice (conation) (Balasubramanian *et al.* 2006; Barry and Howard 1990; Barry 1987; Lavidge and Steiner 1961).

Lavidge and Steiner (1961) acknowledged that consumers clearly do not switch from completely unaware to loyal customers in one step, but instead have to go through a series of steps that change their perception towards products. These steps can take a different amount of time depending on the nature of the decision. Evidently, if a product involves higher economic commitment it will take longer to evolve than if it was a more general purchase. Lavidge and Steiner (1961) further noted that not every advertising

campaign is aimed at developing cognitive, affective and conative outcomes, but instead they focused on a single, measurable objective at the time.

Cognition is the first mental outcome of the Hierarchy of Effects Model. This behavioural dimension refers to the creation of brand awareness and brand knowledge based on the information given by the advertisements (Barry 1987; Lavidge and Steiner 1961). Cognition has been defined as the 'mental activity as reflected in knowledge, beliefs or thoughts that someone has about some aspect of their world' (Barry and Howard 1990, p. 104). The referred mental processing incorporates the use of different skills that vary from person to person. Traditionally, advertising directed its primary efforts to impact consumers' cognitive processing (Zielske 1959).

Cognition has been studied as a factor which influences how subjects learn and process advertisements, fundamentally in terms of recall and recognition, and their exposure effects (Aylesworth *et al.* 1999; Barry and Howard 1990). In an aided recall study, Zielske (1959) rated the extent to which consumers remembered an advertising stimulus, finding that after thirteen exposures consumers remembered better than after just one. Interestingly, the effects of subliminal embeds has been found to have no effect on cognitive measures of the effectiveness of an ad, but to have a strong influence on feelings for it (Aylesworth *et al.* 1999). Thus, there is early evidence of how the three components of the Hierarchy of Effects Model impact each other in an holistic manner rather than functioning as isolated elements.

Affect is the second outcome of the Hierarchy of Effects Model. This dimension relates to the creation of consumer attitudes and feelings towards brands and the generation of preference towards a brand (Lavidge and Steiner 1961). Affect has been mainly equated with attitudes (Barry 1987). Authors have noted its influence in developing and changing attitudes towards brands, and its effects on forming a purchase decision (Barry 1987). People tend to develop affective reactions toward products and brands, expressing them in a change of mood and feeling (Lai-man and Wai-yee 2008). This construct, given the subjectivity of its conception, has been the most difficult not only to measure, but also to be clearly defined. Finally, conation has been understood as the 'realm of motives' that generates directly the purchase decision (Lavidge and Steiner 1961). Conation has been conceptualised not only as the behaviour that generates a purchase, but also as the actual act of purchasing (Barry and Howard 1990; Barry 1987).

Product placement literature has traditionally addressed the Hierarchy of Effects Model as follows. First, when product placement is explored within the context of a new media channel, tests to assess recall and recognition are performed. Cognitive outcomes of product placement include judgement about the placed brand's typicality and incidence, placement recognition, brand salience, and brand recall. The judgement about the placed brand's typicality and incidence is regarded as the degree to which a brand is deemed to represent a product category (Loken and Ward 1990), and can influence perceptions of brand position in the marketplace (Park, Stoel, and Lennon 2008; Zillmann 1999; Loken and Ward 1990). After these elements are understood, research moves on to study the effects on attitudes and feelings. Very few studies have addressed the conative effects and those who have done so, have addressed movies (Gould *et al.* 2000), television programmes or online games (van Reijmersdal *et al.* 2010).

The present research focuses on the study of product placement recall and recognition (see Section 4.1). Brand recall – unaided - involves consumers' ability to 'correctly generate the brand from memory' (Keller 1993, p. 3). The underlying logic states that when consumers think about certain product categories, they will pick those brands that they recall first, those that come 'top of the mind'. According to Keller (1993), brand awareness exerts a significant influence on consumer decision making, because it contributes to the formation and consolidation of brand association in the brand image.

2.2.4.1 Brand recall and recognition

There is an established literature on the short and long term memory effects of placements as measured through cognition (e.g. placement recall and recognition) (van Reijmersdal *et al*. 2010; Brennan and Babin 2004; Gupta and Lord 1998; Karrh 1998). Cognitive effects are studied because they are fundamental in generating and reinforcing brand awareness, and also because they influence purchase decisions (Scott and Craig-Lees 2010; Hong *et al.* 2008; Balasubramanian *et al.* 2006; Brennan and Babin 2004; D'Astous and Chartier 2000).

Brand awareness –brand recall and brand recognition- is the ability consumers have to identify and think of a brand under different conditions (Keller 1993). This is important because consumers are exposed to a number of different stimuli and brand messages on

a daily basis. Thus, brands aim to come first to mind for consumers. Brand salience, and brand typicality are also cognitive outcomes that build on brand awareness (Balasubramanian *et al.* 2006). Brand salience has been defined as 'the order in which brands come to mind… not to *what* consumers think about brands but to *which* ones they think about' (Miller and Berry, 1998, p. 78 in Hong, *et al*. 2008, p. 106). Brand salience is the strength by which a brand name is held in memory (Keller 1993); it increases a brand's popularity, and leads to the actual purchase of a product (Hong *et al.* 2008).

Brand recognition requires less cognitive effort. It basically requires consumers to be able to distinguish whether they have been exposed to a brand before they are given cues. Where decisions are made in-store, and where consumers are exposed to a range of options and have to select one, consumers should be able to 'correctly discriminate the brand as having been seen or heard previously' (Keller 1993, p. 3). Accordingly, product placement recognition implies short-term memory effects and is related to how placement recognition influences viewers' perception of a brand (Scott and Craig-Lees 2010; Brennan and Babin 2004; D'Astous and Chartier 2000).

Placement recall has been assessed on films (Gupta and Gould 1997; Gupta and Lord 1998; DeLorme and Reid 1999; Gould *et al.* 2000), TV programmes (Law and Braun 2000; Stern and Russell 2004; Lai-man and Wai-yee 2008) and video games (Nelson 2002). Product placement recognition has been studied on films (Scott and Craig-Lees 2010; Brennan and Babin 2004; DeLorme and Reid 1999; Gupta and Lord 1998), TV programmes Law and Braun (2000), video games (Nelson 2002) and Youtube videos (Verhellen *et al.* 2013).Product placements show better recall and recognition than advertisements (Gupta and Lord 1998; Karrh 1998). Nelson (2002) allowed gamers to play a video game for about 15 minutes and then answered a set of questions regarding recall and recognition. After exposure, gamers were able to recall about 25 to 30 percent of the placed brands.

Research on product placement has shown that other execution and individual factors can have an influence on placement recall and recognition. On the one hand, execution factors such as positive context-induced mood increases brand recall and recognition (van der Weele *et al.* 2009); prominent placements are better recalled than subtle ones in movies (Gupta and Lord 1998) and TV programmes (Brennan and Babin 2004; Law

and Braun 2000). Celebrity endorsement also enhances brand recall and recognition (Scott and Craig-Lees 2010; Russell 2002; D'Astous and Chartier 2000; DeLorme and Reid 1999). However, such endorsement has no significant impact on recognition in the case of user-generated videos (Verhellen *et al.* 2013). On the other hand, individual factors such as prior familiarity with the brand have a positive effect on placement recall and recognition in films (Scott and Craig-Lees 2010; Brennan and Babin 2004; DeLorme and Reid 1999), but impact recall negatively (Nelson 2002). Plot connection has a negative effect on placement recall and recognition (D'Astous and Chartier 2000), although Lehu and Bressoud (2009) found that prominent placements had higher recall when connected to the plot. Attitudes towards placement in general (Mackay *et al.* 2009) and connectedness (Russell *et al.* 2004) also have a positive impact on brand recall and recognition; however, when preference for the music genre is high, placement recognition is rather low (Schemer *et al.* 2008).

It is interesting to note that product placements are meant to be embedded in a media channel that is being enjoyed by the audience. This observation is based on the Need for Cognition Theory or the individual's 'disposition to engage in and enjoy effortful cognitive activity' (Cacioppo *et al.* 1996, p. 197). As Russell (2002) noted, more elaborated processing results in better recall. The principle is that audiences are more receptive and willing to become involved with the media vehicle; therefore, their cognitive levels are higher resulting in enhanced cognitive outcomes, such as recall (Gupta and Lord 1998), and recognition (Brennan and Babin 2004; D'Astous and Chartier 2000). A limitation to much of the foregoing experimental research on product placement is that artificial settings may result in more attention to the stimuli, which in turn can result in higher recall and recognition as people are devoting all their cognitive efforts while focusing on the stimulus of exposure (van Reijmersdal *et al.* 2010).

Finally, as discussed alongside each section of this review of classical non-interactive product placement, interactive product placement by definition increases cognitive outcomes, and is influenced by the 10 individual and execution factors outlined and discussed in this chapter. The specific characteristics and particularities of interactive placements stimulate favourable brand processing. These characteristics include media channel, extended information, and interactivity. The media channel, because it is of short duration, allows music videos to be viewed repeatedly. For instance, in a digital music video, viewers have the opportunity to play and replay a video creating a stronger

connection with the media channel. With such an increase in involvement, apparel the singer is wearing then becomes more prominent over time leading to higher recall and recognition. Extended information, as discussed in Section 2.2.3.6 concerning interactive product placements, displays brand-related information. However, this information is only available to viewers if they decide to interact and click on the embedded object. This discussion leads to the following hypotheses.

Hypothesis 11a: Interactive placement increases brand recall more so than classical non-interactive product placement.

Hypothesis 11b: Interactive placement increases brand recognition more so than classical non-interactive product placement.

Hypothesis 11c: Interactivity has a positive effect not only on short-term but also on long-term memory (e.g. recall and recognition).

Hypothesis 11d: Context-induced mood has a positive effect not only on short-term but also on long-term memory (e.g. recall and recognition).

H11e: The set of executional and individual factors have a positive effect on recall of interactive placement i) after exposure, and ii) week after exposure

H11f: The set of executional and individual factors have a positive effect on recall of interactive placement one week after exposure

H11g: Context-induced mood moderates the influence of the executional and individual factors on product placement recall.

H11h: Interactivity moderates the influence of the executional and individual factors on product placement recall.

H11i: The set of executional and individual factors have a positive effect on recognition of interactive placement

H11j: The set of executional and individual factors have a positive effect on recognition of interactive placement one week after exposure

H11k: Context-induced mood moderates the influence of the executional and individual factors on product placement recognition.

H11l: Interactivity moderates the influence of the executional and individual factors on product placement recognition.

Discussion and conclusion

This chapter has reviewed the literature pertaining to classical non-interactive product placement. The discussion addresses the 10 execution and individual level factors proposed by Balasubramanian *et al*. (2006) that theoretically impact product placement recall and recognition. The literature highlighted that not all the factors have been investigated in the context of product placement, something that may represent a limitation to Balasubramanian *et al*.'s (2006) theoretical framework (e.g. priming). In those cases where there are no studies in product placement, evidence from advertising and psychology domains is presented and utilised to serve as a basis for the discussion of classical non-interactive product placement. The review outlined a series of hypotheses regarding digital music videos and interactive product placement alongside each section to theorize the differences between interactive product placement and classical non-interactive product placement. This study investigates whether the same execution and individual factors affecting classical non-interactive product placement recall and recognition, as proposed by Balasubramanian *et al*. (2006), affect interactive placement in digital music videos.

For the purposes of the present study, not all the discussed execution and individual factors are investigated. For instance, on placement modality, only visual interactive product placement is analysed in detail because there are no available examples involving audio or audio-visual interactive product placement. In addition, there are no available examples of brand-priming in interactive product placement. This is not to say that priming could not have a positive impact on strengthening the link between a brand and a singer in an interactive music video. Both cases represent worthy areas for further research.

Finally, the conceptual model of the present study addresses 10 factors (see Section 3.4). This conceptual model incorporates the study of interactivity –execution flexibility- and predisposition towards interactivity. The impact of the presence of interactivity in product placements is central to the present research and is discussed extensively in the following chapter.

CHAPTER THREE
PRODUCT PLACEMENT AND DIGITAL TECHNOLOGIES

Introduction

This chapter discusses how digital technologies are changing the way product placements function. Digital technologies bring execution flexibility to placements (see Section 2.2.1.2). Execution flexibility is enhanced by interactivity. In order to understand how interactivity affects product placement it is worth exploring what interactivity is, whether media channels affect the way interactivity occurs, and how they may do so.

The chapter is divided into four sections. Section I discusses the evolution of the Internet and the interfaces utilised to share information online. Concepts are explored, from linear hyperlinking to a more sophisticated hypervideo which enables one type of multimedia to link simultaneously with another, including text, in a non-linear structure. Hypervideo and its characteristics are outlined as a core element of the present study. Finally, examples of hypervideo types are provided, and the advantages and limitations of their use are discussed.

Section II discusses interactivity and how it constitutes both an execution and an individual factor (e.g. perceived interactivity). The existence of different levels of interactivity is discussed and how these affect users. Section III reviews the current research on the integration of product placement with digital technologies, and the 'media type effect'. This prompts the question whether product placement effects could vary according to the medium in which they are embedded. Special mention is made of current research on product placement in video games and how such placement relates to interactivity. This thesis postulates that there are different degrees of interaction among media channels because each type of medium allows a different type of interactivity. Section IV concludes the chapter by introducing the conceptual framework for the study of interactive product placement in digital music videos.

The core of this study is to discuss whether interactive product placement in digital music videos enhances product placement cognitive outcomes, specifically recall and

recognition. The research builds on Balasubramanian *et al.* (2006) theoretical framework, which identifies how audiences respond to product placement based on three sets of factors: execution factors, individual factors, and processing depth. Following the discussion of the 12 model components in Section 2.2, the difficulty of understanding these components in one study is noted. This research work discusses the advantages which interactivity brings to placements, how it can improve the classical concept of product placement, and why it is different from other advertising strategies.

3.1 The impact of digital technologies and web standards on video

In 1994, Little and Venkatesh prophesised what probably sounded unimaginable at the time:

> If you believe the recent claims about interactive multimedia technology, we will soon be able to view movies, play video games, browse libraries, order pizza, and participate in office meetings (in our bare feet!) from within the confines of our homes. (1994, p. 14)

Indeed, digital technologies have come a long way, surpassing Little and Venkatesh's (1994) prediction. Technological evolution has enabled the World Wide Web to improve its infrastructure (e.g. the bandwidth, which allows the faster transmission of data) in order to support audio- and video-based applications.

Digital video is an essentially different media to analogue video. Digital technologies store video information as binary digits whereas analogue technologies store such information as a continuous range of values (Hilbert and López 2011). The characteristics of the digital storage mechanism change the utility and the capacity of sharing a video (Balfanz *et al*. 2001). The utility of sharing a video has changed because electronic digital signals can be used to break the digital video and images into smaller parts (e.g. pixels) which can be easily identified, processed and modified by computers. The capacity of being shared is linked to digital compression. The binary system allows data storage to be quantized and have discrete compression. Compression means that a video file can be small enough to be sent and shared over the Internet, which implies ubiquitous access (Balfanz *et al.* 2001). Digital videos can also be accessed with a number of different devices (e.g. TV, computers, and smartphones) (Athanasiadis and Mitropoulos 2010; Liu 2003; Ariely 2000). For instance, analogue cannot be compressed and it is limited to the magnetic storage mechanism in which it is packaged.

It can neither facilitate access to nor interact with other external content (digital or otherwise); nor can other external content or users interact with it.

The following sections describe how technologies, specifically hypervideo technologies, have affected media. Interactivity and how this affects consumer behaviour are also discussed in the context of digital technologies and their impact on product placement. These considerations lead to an understanding of interactive digital video and interactive product placement in digital videos.

3.1.1 Evolution of Web architecture and applications

Web architecture, design, and applications have evolved alongside technology, thereby making the different types of information which are shared online ubiquitous. The Internet has come a long way from the dot-com boom and the ARPANET, developing from linked basic Hypertext Markup Language (HTML) documents with page-like constructions arranged under a linear structure to more dynamic forms which allow non-linearity (Han 2010). In an effort to regulate and extend the function of the Web, the World Wide Web Consortium (W3C) emerged. W3C is the coordinating working body which publishes recommendations to ensure a standard for content providers. These standards can be seamlessly applied to the different devices which are utilised to access the Internet from different latitudes (W3C 2014). This implies that protocols, languages (e.g. HTML and CSS), and data formats should transcend devices regardless of screen size, memory, and data transference (Lie and Saarela 1999).

HTML is one of the two fundamental technologies used to develop Web pages. The other is Cascading Style Sheets (CSS). HTML is utilised to build web pages and enclose links which allow navigation from text (i.e. hypertext), images, and other audio-visuals (i.e. hypermedia) to other web pages. Hypertext is static (Weston 2013) and links documents and keywords (Bieber 1995), allowing structures in the form of a hierarchy with sections, subsections, and cross-referencing among pages. This hierarchy often appears on websites in the form of a site map to facilitate users' navigation (Bra and Ruiter 2001). The inclusion of in-text hyperlinks encourages selective scanning of content and non-linearity (Eveland and Cortese 2004). This means that users can decide whether to interact with web content or not (Sicilia *et al.* 2005; Ariely 2000). In

accordance with this logic, users can decide to click and expand certain information and dismiss other data.

In its early days, HTML consisted of a 'simple format to provide linked information' (Hors and Jacobs 1999). It aimed to build structured documents with in-lined graphics which enabled hypertext news, mail, online documentation, collaborative hypermedia, menus of options, and database query results (Berners-Lee and Connolly 1993). Then, as HTML developed, it improved semantic mark-up and, more importantly, accessibility and internationalisation features (The Web Standards Project 2003). For instance, HTML5, the fifth and latest major revision of HTML, brings features to the Web which enable richer browser build-on applications of video and audio (W3C 2014). In addition, the W3C announced its aim to facilitate the development of open Web platform cross-platform applications. In the words of its director:

> Today we think nothing of watching video and audio natively in the browser, and nothing of running a browser on a phone. We expect to be able to share photos, shop, read the news, and look up information anywhere, on any device. (W3C 2014)

Another core standard for the web is Cascading Style Sheets (CSS). CSS helps with the presentation of documents; for instance, it codes pictures and helps to convey colours and fonts utilising less network bandwidth (Lie and Saarela 1999). In addition, CSS has evolved to enable media-specific style-sheets which can adapt to smaller displays. When combined, HTML and CSS enable the same document to be presented on a variety of Web devices.

Languages such as HTML5, CSS3, and JavaScript enable more sophisticated forms of hyperlinking such as hypermedia and hypervideo. Hypermedia enables connectivity, linking one document to the annotations which it contains. In this way, users can interact with the content inside a document or video, whether through a link to another site or a display of additional information (Han 2010; Finke and Balfanz 2004). More sophisticated forms of hypermedia enable hypervideo. One of the earliest definitions of hypervideo is as follows.

> Digital video and hypertext, offering to its user and author the richness of multiple narratives, even multiple means of structuring narrative (or non-narrative), combining digital video with … linked text. (Sawhney *et al.* 1996, p.1)

This definition implies structured formats with temporal and spatial link opportunities, in other words, a video stream which contains embedded user-clickable anchors which enable browsing. It also means that narratives can be customised, which implies the existence of multiple narratives that suit different user experiences. However, Sawhney *et al.*'s (1996) definition only considers the combination of digital video with hypertext, a rather outdated definition as technology has made possible a wider range of media combinations. A more recent description of what hypervideo is corresponds to Moos and Marroquin's (2010) understanding of hypervideo as the technology linking digital videos with a more sophisticated multimedia which supports and further expands the information contained inside the videos. An area of the digital video (also called the 'hotspot') has to be defined and connected with secondary content (Finke and Balfanz 2004). Clicking on the defined area can activate a hotspot, which leads to the linked content (Sadallah *et al.* 2011; Moos and Marroquin 2010; Finke and Balfanz 2004). Such annotations break the linearity of a video and enrich the video-related information (Hoffmann and Herczeg 2006). Although analogous to hyperlinking, hypervideo overcomes certain media-specific challenges, for example, the way in which video content changes with time and is dynamic. With interactive video, viewers can connect with video content by rolling over video elements or clicking on them (e.g. products, people, and places). By clicking, a banner pops up next to the video expanding the information about the item which has been clicked on without interrupting the video streaming. Interactive objects are denoted by a persistent visual label on the object or merely by a change in the cursor icon when the viewer rolls over the object.

With past HTML versions, users needed plug-ins (e.g. Adobe Flash) in order to stream videos online (Weston 2013). HTML5 introduced a video tag which enables video and browser interaction and can be integrated across platforms seamlessly. Because of the evolution of Web standards, complex hypervideos can be created as standard Web documents, styled with CSS, and controlled by JavaScript (Sadallah *et al.* 2011).

Perhaps the main advantages of hypervideo are the additional interaction and navigation alternatives and the additional information levels it offers (Sadallah *et al.* 2011). Thus, the media format of documents linked to a hypervideo is not restricted to discrete media (i.e. text documents and pictures), or continuous media (i.e. audio recordings, animations, and other video sequences). Moreover, once a hypervideo is generated, there are still plenty of opportunities to change the presentation. Additional information

and non-linearity make it possible to enrich video content by linking material which expands video content (Sadallah *et al.* 2012). A hypervideo is interactive and, as such, allows a customised navigation and active viewing where users choose the information they want to retrieve and the order, which leads to customised narratives (Sadallah *et al.* 2012; Chambel *et al.* 2011; Beacham 1995). Hypervideo gives users the opportunity to convert linear videos in non-linear videos creating a new story not only limited to the primary media channel (Sadallah *et al.* 2011; Shipman *et al.* 2008; Beacham 1995). Some characteristics of a hypervideo (Sadallah *et al.* 2012, 2011; Chambel *et al.* 2011; Shipman *et al.* 2008; Finke and Balfanz 2004; Balfanz *et al.* 2001; Sawhney *et al.* 1996) are summarised below.

i) More than one annotation can be made in the same video sequence.
ii) A sequence of images can highlight different annotations.
iii) With a click on one hotspot, the associated content can be activated, either within the video or in a connected frame.
iv) Users determine the information which they want to retrieve.
v) Annotations and links can be embedded during the video creation, or after.

However, hypervideo has its limitations. First, Sadallah *et al.* (2011) noted that with the option of a customised video browsing experience comes the risk of overloading the user's cognitive capacities and adding 'time pressure during navigation, provoking user disorientation' (p. 2). Second, an important difference between hyperlinking and hypervideo is that the latter cannot be indexed. Thus, video fragments cannot be retrieved and therefore found via online search engines (Weston 2013; Lie and Saarela 1999). To overcome this limitation, Weston (2013) foresaw the importance of a framework which would enable video fragmentation for referencing or storage in a database. A third and final limitation is that, regardless of bandwidth improvement, not all users have devices which support such data volumes.

> The possible data throughput can be a bottleneck for any Internet application dealing with media content that consists of a large volume of data ... Nevertheless, with the evolution of technology (higher bit rates, compression), the use of the … 'video' has become … popular. (Finke and Balfanz 2004, p. 180).

This chapter has already discussed how Web standards and platforms helped hypervideo to evolve. Examples of the evolution of hypervideo online include from basic YouTube annotations (YouTube 2015) to more sophisticated interactive video such as Popcorn.js,

which integrates the HTML5 media components to connect video and enable "time-based interactive media on the web" (Mozilla 2015). Other examples of hypervideo systems are HyperCafe (Sawhney *et al.* 1996), Advene (Aubert and Prie 2005), and HyperHitchcok (Shipman *et al.* 2008). These systems have been designed according to different levels of navigating complexity. HyperHitchcok (Shipman *et al.* 2008) only supports one hyperlink at a time per video scene, and discloses labels during the viewing denoting the links available. In this context, Web standards and digital technologies have made possible the evolution from hypertext to hypervideo and from basic forms of interactive video to more sophisticated ones. Digital technologies have also made interactivity possible, for example, with the use of hyperlinking within digital videos. This is explained in more detail in the following section.

3.2 Interactivity

The use of interactivity has been studied by academics and practitioners who work in the disciplines of psychology, human computer interaction, advertising, and marketing. Approaches have been different, but the aim has been the same: to understand what interactivity means and to assess its effects on people (Park *et al.* 2008). Interactivity has been defined as the ability of a subject to interact with a medium (machine interactivity) and to be in charge of the amount of information displayed (communication process perspective) (Hang and Auty 2011; Sicilia *et al.* 2005). As digital technologies and new media channels have evolved, so too have modes of interactivity (Liu and Shrum 2002; McMillan and Hwang 2002). For this study's purpose, interactivity is defined as:

> The degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronised. (Liu and Shrum 2002, p. 54)

After an extensive analysis of the literature, McMillan and Hwang (2002) and Liu and Shrum (2002) identified three main dimensions which shape how interactivity is understood: control, communication, and time. Control is defined as the power of choice which interactivity gives to users so that they can manipulate the information they access (Liu and Shrum 2002; McMillan and Hwang 2002). Communication, or two-way communication, allows reciprocal information exchange and control. Time,

also referred to as synchronicity, enables communication to occur almost in real time (Liu and Shrum 2002; McMillan and Hwang 2002).

The study of interactivity has been important in the context of marketing communications and Internet advertising (Kim and McMillan 2008; Novak and Hoffman 1996). Studies have focused on understanding how interactivity affects consumer behaviour in web sites (van Noort *et al.* 2012; Jiang *et al.* 2010; Liu and Shrum 2009; Hoffman and Novak 2009; Raney *et al.* 2003; Coyle and Thorson 2001).

Media with which a person can interact

Interactivity can be considered according to whether it focuses on user-to-user interaction, user-to-message interaction, or user-to-machine interaction (Liu and Shrum 2002). User-to-machine interaction refers to the media and media characteristics which enable interaction. For instance, a user's computer enables two-way communication and also enables the user to control the information he or she accesses (Hang and Auty 2011). In this regard, websites have been particularly advanced by interactivity, providing brands with longer, customized scenarios tailored to a consumer's personal experiences (van Noort *et al.* 2012; Liu and Shrum 2009; Sicilia *et al.* 2005; Coyle and Thorson 2001). In the case of e-commerce, interactivity explores a user's interaction with a website and the need to design guidelines in order to enhance two-way communication and influence a user's decision to interact with the medium (Jiang *et al.* 2010). Nevertheless, when studying interactivity in the context of a web site, it is important to determine the purpose of user's interactivity (e.g. searching or browsing), which is also related to the time invested and the level of involvement (Schlosser 2003). When searching, a user focuses more on the information which is available whereas while browsing, the user focuses on the experience and thereby places a greater value on the presence of interactivity.

It is also interesting to note that thanks to the advancement of HTML5, CSS, and JavaScript, as discussed earlier, Web streaming platforms (e.g. Netflix) have been enabled (Perakakis *et al.* 2012). In this context, interactive video has been made possible (see Section 3.1). Individuals can also interact with TV, video game console systems (e.g. Xbox), computers playing CDs, online video games, online television and more sophisticated forms of interactive digital video. For instance, interactive television (ITV) translates the Internet's two-way communication features to TV media in such a

way that the TV screen replaces a PC monitor and the remote control enhances interaction in a similar way to a mouse (Sperring and Strandvall 2008; Cauberghe 2008; Levy and Nebenzahl 2008, 2006; Lee and Lee 1995).

Execution factors which determine interactivity

Interactivity has been measured and defined in different ways by academics. Liu and Shrum (2002) provided a comprehensive analysis of the techniques used to measure the different dimensions of interactivity as follows.

Active control, the first interactivity dimension, is the capacity of a user to participate in and instrumentally influence a communication (Liu 2003). Such capacity has been 'operationalised' by allowing subjects to choose the way they use and access information online; thus, they own the communication experience (Liu and Shrum 2002; McMillan and Hwang 2002). Liu and Shrum (2002) divided the relevant studies according to the effects measured, which are attitudes and decision making, and telepresence. With regard to attitudes and decision making, Ariely (2000) found that when subjects have a high degree of control, memory and learning increase. However, he informed the participants in his study that they would be asked about specific issues. In this context, telling participants what they will be asked about, or not telling them, makes a significant difference to the effects (Liu and Shrum 2002). In contrast, Sicilia *et al.* (2005) allowed subjects to be 'free' while browsing and clicking wherever and whenever they wished when exposed to an interactive website. As a result, the participants were more likely to process a message in a more favourable manner than those exposed to the non-interactive condition. Another study manipulated control with regard to the number of possible clicks within the additional programme information (Cauberghe 2008).

The second dimension, two-way communication, has been characterised by discourse, the capability to provide feedback, and interpersonal two-way communication on websites via chats (McMillan and Hwang 2002). However, research on the appropriate techniques to measure how a user perceives facilitated two-way communication has been inconclusive (Liu and Shrum 2002). Nonetheless, it does show that while reciprocal communication does not affect cognitive involvement it does have an impact on affective involvement in the absence of active control (Jiang *et al.* 2010). Further, the conceptualisation of website interactivity involves user participation in modifying the form and content of a website in real time (Jiang *et al*. 2010). In addition, Cauberghe

(2008) manipulated two-way communication through the opportunity to participate in a quiz show, an opportunity which was considered to be a way of providing feedback (Cauberghe 2008).

Synchronisation (also referred as time), is the third dimension of interactivity, and denotes whether the communication occurs in real time or incorporates some speed of response. It has been assessed by the time delay incurred when, for example, a user downloads information from a website (Liu and Shrum 2002). Research found that delays have a negative influence on the evaluation of the experience, and that this negativity transfers to the actual website evaluation, unless users are told in advance that delays can be expected (Dellaert and Kahn 1999 cited in Liu and Shrum 2002).

In sum, because all three dimensions are important, it is up to the marketer to determine those which are more valuable for the promotion of a particular brand online. In the case of interactive product placement in digital music videos, interactivity enables active control, two-way communication, and synchronicity. Active control because users decide whether to interact or not with the hyperlinked data. Two-way communication with an interactive placement gives viewers further information of any specific hyperlinked spot within the digital video. Synchronicity is a function of data transfer speed. When a viewer clicks on a hyperlinked element within a digital video, the expanded information and opportunity to interact with the content will occur in real time depending on the speed of the Internet connection. However, while an interactive placement is interactive, there are individual factors which will also affect the perceived interactivity. Individual factors may include involvement with the music video, age/generation, Internet experience, and task involvement.

Individual factors which determine interactivity

Using the Elaboration Likelihood Model (ELM) of persuasion (Petty and Cacioppo 1986), Liu and Shrum (2009) proposed that people react in different ways to interactivity according to individual factors (e.g. their level of experience with using the Internet) and situation factors (task involvement). In both cases, involvement also plays an important role. The ELM also suggests that the impact of interactivity can vary according to motivation and the ability to process information. For instance, high involvement will lead to the actual use of interactivity, and low involvement will see

interactivity as a positive peripheral cue. However, in both circumstances, interactivity needs audiences to focus.

Involvement plays an important role in interactivity studies. In this context, findings are not conclusive. For instance, in the case of interactive television, Schlosser (2003) found that object interaction engaged the user, increased involvement, and enhanced learning. Similarly, Sperring and Strandvall (2008) found that viewer interactivity increased involvement. However, Levy and Nebenzahl (2006) found a negative relationship between programme involvement and interactivity. In the case of Web Sites, after conducting a study with 186 samples for website interactivity, Jiang *et al.* (2010) found that websites with high active control stimulate higher cognitive involvement regardless of product type. However, in the absence of reciprocal communication, such websites enhance affective involvement.

Experiential interactivity, as perceived by users, has shown a positive effect on users and constitutes a more accurate measure to understand interactivity (Liu and Shrum 2002). Other studies have found that perceived interaction positively influences attitudes towards a website, a brand, and purchase intention (Raney *et al.* 2003; Sicilia *et al.* 2005). In this context, the measures of perceived interactivity developed by McMillan and Hwang (2002) are relevant. The authors' 18-item scale addresses communication, the time to load and find information, and the control of navigation and choices. However, the constructs overlap as follows: time and control, communication and time, communication and control. In another study, after evaluating user reactions to a non-interactive and an interactive website through a manipulation check of five questions, Sicilia *et al.* (2005), found that users perceived interaction as significantly higher in an interactive web site compared to a non-interactive one. Therefore, there is a difference between the actual level of interactivity and the interactivity perceived by users. Perceived ease of use has also been considered when determining the effects of interactivity on users (Chang and Wang 2008). Perceived ease of use is related to how viewers perceive control and synchronicity, and influences flow (and disposition to get involved) (Hoffman and Novak 2009).

Levy and Nebenzahl (2006) counted the times a user clicked on an interactive advertisement. The aim was to measure the likelihood of interactive behaviour happening and to record the total time spent interacting. The authors exposed viewers to

an edited 12-minute video extracted from a TV show simulating ITV, with four interactive commercials (a commercial appeared at the start of the TV show and then every five minutes). The ads selected featured four product categories: consumer durables (a car), non-durables (perfume), clothing (jeans), and services (a car repair service). The authors went on to 'measure' levels of *enduring involvement* by utilising TV shows, one targeting males and one targeting females. The level of *situational involvement* was manipulated by telling half of the sample that they would be asked about the TV show which they were about to watch. *Perceived programme involvement* was measured by using Sharma's (2000) scale combined with Mano and Oliver's (1993) interest evaluation scale. Finally, the authors assessed product involvement with the PII scale (Zaichkowsky 1994). Levy and Nebenzahl (2006) found a negative relationship between programme involvement and interactivity. Other studies have supported the relevance of age in the sense that younger generations are more interaction-avid than older ones (Sperring and Strandvall 2008). Prior studies have also shown that age has an important impact on IT adoption and online community participation (Okazaki and Yagüe 2012; van Reijmersdal *et al.* 2010).

In this context, the present study addresses interactivity and perceived interactivity from two main perspectives: individual factors and how individuals respond to interactions; and execution factors and how technology enables interactivity. The following hypotheses are posited:

> *Hypothesis 12a: Perceived interactivity in an interactive product placement has a positive effect on product placement recall.*
>
> *Hypothesis 12b: Perceived interactivity in an interactive product placement has a positive effect on product placement recognition.*
>
> *Hypothesis 12c: Perceived interactivity in an interactive product placement has a positive effect on attitude towards the placement.*

Interactivity effects

Interactivity increases cognitive elaboration (Sicilia *et al.* 2005; Liu and Shrum 2002). In this context, cognitive elaboration leads to learning and to the recall/remembrance of

engaging experiences. For example, under a condition of high involvement, interactivity tends to facilitate central processing and persuasion (Liu and Shrum 2009). When a message is persuasive in both content and execution, cognitive elaboration will lead to positive attitudes to that message (Schlosser 2003). For example, object interactivity enhances mental imagery because of the active and direct manipulation of interactive objects (Schlosser 2003). Along these lines, van Noort *et al.'s* (2012) found that high perceived web site interactivity positively influences affective, cognitive, and behavioural outcomes, mediated by flow. The concept of flow is explored in the following section (Section 3.2.1). However, programme involvement was found to be negatively related to interactivity (Levy and Nebenzahl 2006). For example, under a high involvement condition, interactivity can be overwhelming to users, distracting them and preventing them from properly processing the information to which they are being exposed (Ariely 2000). Individuals have the option of deciding when to interact with content, and this option is called selective interactivity (Sicilia *et al.* 2005).

3.2.1 Flow, presence, and interactivity.

As technology evolves, it changes the way that we behave and communicate. Technology enables the creation and recreation of mediated experiences which seem and feel as reality does, giving the impression of being present. Lombard and Ditton (1997) referred to presence as 'the perceptual illusion of non-mediation' which occurs when an individual does not notice the medium and acts as if the experience was real. Such presence is an important concept in psychology, computer science, and communication because it attempts to conceptualise and understand how people perceive mediated experiences as real or close to reality.

One of the key elements which enables users to be present and to interact with a medium is what has been called 'machine interactivity' (Steuer 1992). Machine interactivity gives users the power to be in control of their navigation experience, the information which they access, the sequence that the information follows, and the time which they devote to it (Sicilia *et al.* 2005; Liu 2003; Liu and Shrum 2002; Ariely 2000). However, having a customised interactive experience does have its downsides. The most notorious disadvantage was noted by Glorianna Davenport, founder of the Interactive cinema research group and the MIT Media Lab:

> The problem with most conventional interactive experiences is they are one-on-one. You can go into an arcade with lots of video games and lots of people are running around screaming, but everybody is playing their own game. (Beacham 1995, p. 38)

For instance, while watching TV can lead to presence and a state of flow even if it does not allow interaction, digital media can lead to presence as a result of media interaction. Presence, also referred to as telepresence in the context of a digital environment, has been conceptualised as 'the extent to which one feels present in the mediated environment, rather than in the immediate physical environment' (Steuer 1992, p. 79). ‘Telepresence’ was coined to refer exclusively to presence in online digital environments where users feel that they are in control (interacting), thereby increasing a sense of 'being there' (Faiola *et al.* 2013). For example, in a video game, a player who is completely focused on the gaming experience can experience flow. In this state of flow, the player feels 'present' in the virtual environment (Faiola *et al.* 2013).

As Grigorovici and Constantin (2010) noted, presence, or immersion, varies along a continuum (low to high) which is determined by the level of interactivity a technology supports. Hence, there are different degrees of flow and presence (Faiola *et al.* 2013). In fact, presence increases as the degree of interactivity with the medium increases (Mollen and Wilson 2010; Nelson *et al*. 2006; Lombard and Ditton 1997). The interaction can be as mundane as clicking on a website banner or as elaborate as creating an individual version of reality in a virtual world such as Second Life (Papagiannidis *et al.* 2008; Nicovich 2005). For instance, games provide different levels of interactivity where gamers can modify and control events (Lee and Faber 2007; Nelson *et al.* 2006; Nicovich, 2005). Interactivity affects the degree of presence depending on how willing a gamer is to interact and get involved with the videogame. In an online game, a player can feel present and part of the game (Nelson *et al.* 2006; Steuer 1992). As the player becomes more present within the virtual environment, he or she becomes more focused to the point of immersion in virtual reality (Faiola *et al.* 2013; Grigorovici and Constantin 2010). For example, Portal 2 is a complex game where a player has to be attentive and focused in order to progress from one level to another. As the machine interacts with the player, the latter becomes immersed and loses a sense of time. Lombard and Ditton (1997) considered that presence leads to perceptual and psychological immersion. Perceptual immersion implies that senses are immersed, as when 'the ears are covered by headphones; ambient sound is muffled'.

Psychological immersion implies being involved, absorbed, and engaged. After conducting a study to understand the effects of presence, involvement, and ad judgement in a computer game, Nicovich (2005) found a strong direct relationship between involvement and presence in a video game environment. These results suggest that a higher level of involvement leads to a higher degree of presence.

Being present in a virtual environment leads to a state of flow and a sense of being immersed in that environment. A state of flow occurs when a person is completely involved in the activity which they perform. They engage with all their senses to the point of absorption where they pay little attention to anything which could bother them, thereby increasing their enjoyment (Csikszentmihalyi 1998). As Csikszentmihalyi depicted it, flow is the effortless, ecstatic state which can lead someone to lose him or herself completely in the performed activity; for example, watching a favourite programme on TV, reading a book or practicing a sport. Flow has been studied in the context of computer-mediated environments such as web sites (van Noort *et al.* 2012; Hoffman and Novak 2009; Sicilia *et al.* 2005), and blogs (Chang and Wang 2008). The presence of interactivity (e.g. in web sites) seemed to increase individual's state of flow (Sicilia *et al.* 2005). For example, control and synchronous communication, key dimensions of interactivity, were found to increase the state of flow in a web site (Hoffman and Novak 2009). More recently, Faiola *et al.*'s (2013) study provided evidence from the virtual world *Second Life* that a state of flow is a significant cognitive state in online activities. Specifically, they proposed that both flow and telepresence are experienced, and can be measured, in virtual worlds, and that 'flow can be positively associated with degrees of immersion and telepresence in a 3D virtual world such as SL (Second Life)' (p. 1119).

It has been noted that different media channels create a different type of experience and flow, and presence, and interactivity. In this context, the success of a medium depends on users' predisposition to get involved (Levy and Nebenzahl 2006). In this regard, individual preferences are a critical factor to be taken into account in any related future research. Further research needs to be conducted in different media channels because not all interactive media enable users to fully experience presence to the same level (Grigorovici and Constantin, 2010). This means that results cannot be generalised from one medium to another. For example, an interactive music video does not allow the

same level of presence as an online video game, a *Second Life* environment, or a text-based website.

3.3 Product placement, the impact of digital technologies and media type

Traditionally, product placement has been studied in the context of passive, non-interactive media such as films and television or a mix of these (van Reijmersdal *et al.* 2010; Kureshi and Sood 2010; Nelson *et al.* 2006). However, product placement has expanded into every form of media, offline and online (Hudson and Hudson 2006; Kretchmer 2004) and has featured in interactive environments such as *advergames*, computer/video games, online games, simulation games, digital music videos, and the virtual environment (Kureshi and Sood 2010; Karrh 1998; Gupta and Gould 1997).

Ultimately, consumption cannot be generalised among media vehicles, as each media context carries a unique cultural significance and has different socio-cultural connotations. Mass media vehicles, according to Hirschman (1988), express and represent the values of the social and historical context that created them, and of the audiences that shaped them. In other words, different media vehicles are products of culture. For example, the particularity of television programmes is that they develop a character-audience relationship that is strengthened with repetition; for this reason their cultural meaning and type of relationship with the audience differ from game shows and one-time-seen movies (Gould and Gupta 2006). One consequence of Hirschman's (1988) view is that research results cannot be generalised from one medium to another. Program context influences promotional impact. Consumers react to each medium in terms of its own particular set of meanings (Gould and Gupta 2006).

Similarly, Russell and Stern (2006) utilised genre theory to understand how different media vehicles produce different audience outcomes because of their specific genre-related characteristics. For example, during a sitcom such as *Friends*, viewers develop long-lasting relationships with the characters. Meaning is reinforced with repetition, thereby creating a sense of familiarity and identification which transforms the characters into stereotypes to whom audiences can relate (Russell and Stern 2006). Such relationships do not necessarily develop with films or video games. For instance, game shows create a different link between audience, participants, and brands. After interviewing undergraduate students regarding their thoughts after exposure to one of

four game shows, Gould and Gupta (2006) found that they perceived placements as part of the context, as unobtrusive, and even as an opportunity to compare brands. It remains to be seen whether similar attitudes toward brands may develop in the case of music videos.

3.3.1 Product placement, video games, and interactivity

In the product placement literature, a number of studies have analysed the effects of interactivity on product placement within video games (Hang and Auty 2011; Grigorovici and Constantin 2010; Lee and Faber 2007; Nelson et al. 2006; Yang *et al.* 2006). These studies have recognised the positive impact interactivity and presence (i.e. immersion) within video games can have on product placement (Hang and Auty 2011; Grigorovici and Constantin 2010; van Reijmersdal *et al.* 2010). While different media enable different type of interaction and presence, digital games add complexity by incorporating different types of product placements in-game. All of this affects recall and recognition of the placed brands, the upshot of which is discussed below.

Hang and Auty (2011) found enhanced placement recall in interactive video game environments compared with non-interactive environments. They placed brands in the form of logos on the t-shirts of the team players in the game. Characteristics such as being an assiduous gamer positively affect interactivity. For example, experienced players show a greater recall of brands than non-experienced ones (Lee and Faber 2007). However, there are also studies which demonstrate that interactivity negatively affects the cognitive outcomes of product placement in game environments (Nelson *et al*. 2006). Nelson *et al.* (2006) placed in-game billboards of existing and fictional brands within a computer racing game. Evidently, playing the game is the primary activity, whereas processing placements embedded in the game is a secondary issue. This observation is shared by Grigorovici and Constantin (2010) and Lee and Faber (2007). These negative findings suggest that interactivity can prove overwhelming to users, preventing them from properly processing the information to which they are being exposed (Ariely 2000). For example, highly immersed gamers recall fewer brands than ‘watchers’ during racing games (Grigorovici and Constantin 2010; Nelson *et al.* 2006). However, these studies addressed in-game billboards or brand logos embedded in avatars’ clothing where no further brand information is disclosed (Grigorovici and Constantin 2010; Lee and Faber 2007; Nelson *et al.* 2006). In other words, no

participant actually clicked on a logo and no additional brand information was disclosed. Grigorovici and Constantin (2010) concluded that not all interactive media channels enable users to experience presence to the same degree.

van Reijmersdal *et al*. (2010) noted that current research in video games and product placement refers predominantly to passive in-game placements which do not allow interaction with the brand. Research has shown that brands can participate in gaming environments in different forms, from passive placements to more active forms (Nelson 2002). Passive placements include in-game billboards, static logos, and branded products (e.g. Grigorovici and Constantin 2010; Lee and Faber 2007; Nelson *et al*. 2006; Yang *et al.* 2006). Not all studies which have addressed interactivity and product placement conceive interactivity in the same way. Because research on in-game advertising has focused on passive placements in racing, sports, and shooting games, van Reijmersdal *et al.* (2010) considered that the findings could not apply to other game genres (e.g. fantasy and role-playing) or to interactive placements (see Section 3.3). First, not all genres may be suitable for product placement (e.g. Fantasy game) (Molesworth 2006). Second, different media and genres enable different degrees of presence and immersion, as noted in earlier sections of this chapter. Finally, van Reijmersdal *et al.* (2010) singled out three key studies which address interactive placements (Mackay *et al.* 2009; Yang and Wang 2008; Mallinckrodt and Mizerski 2007). These studies are discussed below.

Mallinckrodt and Mizerski (2007) conducted a study to explore *advergames*' effects on children's preferences for a brand. *Advergames* are 'online computer games that promote brands' (Kretchmer 2004, p. 47) and have a higher level of interactivity and presence within the virtual world because, by definition, the player interacts with the brand and the brand's advertising. They utilised a Froot Loops Toss advergame (www.FrootLoops.com) where the logo, trademark, and the Toucan Sam spokesperson were central to the game. In accordance with this chapter's earlier discussion on how interactivity varies from medium to medium, in an advergame gamers are immersed in a virtual world which revolves around the brand. Overall, the study found that children exposed to the advergame had a higher preference for the brand than those who were not exposed.

Yang and Wang (2008) conducted an experiment to investigate more elaborate product placement differences, including product type, and the fit within video games. They considered that product placement within video games should be classified according to the extent to which it fulfils the player's desire to succeed within the game, in terms of goal, feedback, or operator. They also classified placements according to product type (tool, enhancement and symbolic products). The study utilised branded products and their unbranded counterparts. In the "branded condition", gamers interacted with the placements as follows.

> A McDonald's Big Mac was applied as the 'operator' and had to be fed to aliens who then tried to return to outer space. Each time a player clicked on the correct target, a Big Mac was provided as feedback. If players completed the mission (identifying differences between two pictures), a Big Mac was given as the final reward (goal). (p. 400-401)

In the "unbranded condition", participants were exposed to plain products. The branded condition produced better advertisement effectiveness than the unbranded one. This study suggests that brand names are more effective than unbranded products.

Mackay *et al.* (2009) explored product placement and its effects on recall and pre-existing brand attitudes. They found that *active* placements in computer games increase both pre-existing attitudes towards the brand and spontaneous brand recall. They conducted their study in the game Gran Turismo 4 (Polyphony Digital 2005), produced for the Play Station 2 platform. Gran Turismo 4 is a video game that recreates real-life driving. To enhance the in-game experience, the game includes branded cars. It must be noted that while participants drove a branded car in the video game environment, no further information is displayed.

In addition to the three studies above, van Reijmersdal *et al.* (2010) investigated the effects of interactive placements in online games on children's cognitive, affective, and conative brand responses. The interactive placement consisted of a Dutch bank which was placed within the virtual game GoSuperModel and which gamers, represented by their customised avatars, could visit. On the main page of the game there was a logo of the bank which participants could click on and thereby be led to the bank's office. This office recreated the activities one would normally perform in a real-world bank such as opening a bank account and making enquiries regarding savings schemes and interest rates. Such interactive placement is highly immersive and interactive (i.e. it involves

real-time two-way communication), and can even be compared to the type of experience a player has in the virtual world *Second Life*. Their findings showed that interactive placement has a positive effect on Top of Mind Awareness (TOMA), brand image, and behavioural intention. Attitudes toward the game are also more positive in the presence of interactive placement. These effects are moderated by prior brand use. For instance, children with no prior experience of the bank were more influenced by the placement. Age was a moderator, but only for behavioural intention.

It is worth noting the differences amongst the interactive placements utilised in each of the aforementioned studies (see Table 3.1). The placements enable different types of interactivity, presence, and immersion within video games. First, as van Reijmersdal *et al*. noted 'the effects of interactive brand placements differ from those of static (passive) placements' (2010, p. 1788). Billboards within the game do not present the same level of interactivity as an advergame, which places the brand at the centre. Following this logic, the present thesis argues that the level of interactivity in an interactive product placement in digital music videos will also differ from that of an advergame or an in-game billboard. Second, based on prior studies, this thesis maintains that different interactive placements embedded in different media types will yield different effects (Russell and Stern 2006; Nelson 2002). These differences in effect are the outcome of different degrees of interactivity (see Section 3.2) which in turn can lead to different degrees of presence and immersion (see Section 3.3.1). The following section discusses the conceptual framework in which the present study situates interactive product placement in digital music videos.

Table 3.1 **Product placement in digital games**

Author	Product placement description	Information	Involvement/ Presence/ Immersion	Flow	Cognitive outcomes	Findings
Nelson (2002)	Media: Console-based game Type: Car-racing game Product placement: billboards and signs In study 1, gamers could select the brand of their car.	No	No	No	Recall (directly after game and long term) Recognition	Gamers were readily able to recall placements in both studies. Brand centrality and gamer active involvement enhanced short-term recall. Brand relevancy enhanced short and long-term recall.
Nelson *et al.*(2004)	Media: Computer game Product placement: players customise their car (e.g., choice of race car or sponsors on the race car) and their avatar (e.g. branded clothing).	No	Yes	No	Recall Recognition	Higher involvement led to lower recall.
Nicovich (2005)	Computer videogame. Placement form: in-game billboards.	No	Yes	No	No	The higher the involvement the stronger the evaluation of the communication
Molesworth (2006)	Media: Digital games (Qualitative study) Placements such as in-game billboards were investigated.	No	Yes	Yes	Recall	Players easily recall placements. Interactivity enhances information processing
Nelson *et al*. (2006)	Computer racing game: in-game billboards of existing and fictional brands.	No	Yes	No	Recall	Interactivity has a negative effect on recall
Lee and Faber (2007)	Online games. 10 brand appearances (brand names, a picture of the product, and a label indicating the product category)	No	Yes	No	Recall Recognition	Experienced players have higher recall
Mallinckrodt and Mizerski (2007)	*Advergames* – role-playing game Kellogg's brand, Froot Loops logo, trademark, and its spokesperson (Toucan Sam) were central to the game.	No	No	No	No	Exposure increased brand preferences

Author	Product placement description	Information	Involvement/ Presence/ Immersion	Flow	Cognitive outcomes	Findings
Yang and Wang (2008)	Media: shooting and puzzle computer games. Placement form: a McDonald's burger was fed during the game, as feedback, and as reward.	No	No	No	Advertisement effectiveness (AIDA)	Different forms of product placement result in different advertisement effectiveness
Mackay *et al.* (2009)	Media: racing game Placement form: branded cars	No	No	No	Recall	Interactive placement increased brand recall
Cauberghe and De Pelsmacker (2010)	Advergame. A subtle brand appears in the background of the game. A prominent brand is central and moves on screen. (Snag mobile game).	No	No	No	Recall	Brand prominence had a positive effect on brand recall
Grigorovici and Constantin (2010)	Media: 3D gaming Virtual Environment. Product placement: 3D billboards vs. brand logos as part of avatar's clothing	No	Yes	No	Recall Recognition	In-game advertisement was better recalled than product placement. Higher involvement led to lower recall and recognition.
van Reijmersdal *et al.* (2010)	Media: Online role-playing game Interactive placement: a Dutch bank – players could click on the logo, visit the offices, and recreate in-bank experience	Yes	No	No	Top of Mind Awareness (TOMA)	Positive attitudes towards the game, higher TOMA, brand image and behavioural intention.
Hang and Auty (2011)	Brand logos in the t-shirts of the team players.	No	Yes	No	Recall	Interactivity enhances recall
Okazaki and Yagüe (2012)	Advergame- advertising messages and logos. A potato chip brand was represented as an in-game character embedded in a popular game.	No	No	No	Yes	Judgement to fit enhances eWOM. eWOM is higher when brands are embedded within games.

3.4 Conceptual framework for the study of interactive product placement

The worth of a brand for a firm hinges upon brand equity and its financial worth (Keller 1993). The customer is at the centre of marketing mix efforts, therefore it is relevant to look at the customer-based brand equity model created by Keller (1993). The model focuses on understanding how brand knowledge develops and why this is relevant for brand managers. Keller defines brand knowledge as a 'brand node in memory to which a variety of associations are linked' (1993, p.3). Brand knowledge consists of brand awareness and brand image, both of which directly affect whatever comes first to mind each time a consumer thinks about a brand.

In the product placement realm, academics and practitioners have been interested mainly in assessing brand awareness (Karrh, McKee and Pardun 2003; Nelson 2002; Karrh 1998). Product placement by itself has been studied because it is a powerful instrument to make consumers remember a brand (Karrh 1998). This is similar to exposure to advertisements where cognitive outcomes, that is, recall and recognition, affect attitudes, intentions, and behaviour towards brands (Barry 1987). Karrh *et al.* (2003) found that practitioners deemed recall and recognition to be the most appropriate measure of product placement effectiveness. Studies have shown that placements generate higher short-term and long-term memory effects compared to traditional advertisements (Karrh 1998). Accordingly, the present research studies those factors in Balasubramanian *et al's*. (2006) theoretical framework which affect the cognitive outcomes – recall and recognition - of a placement. Balasubramanian *et al.* (2006) proposed that each execution/stimulus and individual factor should be further studied to understand its effects on processing depth, which in turn would have an effect on the viewer's final perceptions. This model is relevant because it incorporates a substantial body of literature up to 2006 involving both qualitative and quantitative approaches. In addition, the framework bases product placement effectiveness and outcomes on the Hierarchy of Effects Model which involves cognition, affect, and conation as possible outcomes (Barry 1987). The present study focused on the literature addressing the factors which affect recall and recognition of product placement.

Because Balasubramanian *et al.'s* (2006) theoretical framework is based only on prior research; it has not been tested fully, not even for classical non-interactive product placement. One possible reason for this is the complexity of the model and the way in which the different model constructs affect each other as well as the way they affect brand recall and recognition. It would also be interesting to see how the mix of qualitative and

quantitative approaches blend together once the factors are combined in a sole integrated study on recall and recognition. The first research objective of this study is to empirically test the key factors which influence recall and recognition of a classical non-interactive product placement in digital music videos and the moderating effects of positive/negative context-induced mood.

The use of digital technologies enhances execution flexibility and affects placement outcomes positively (McDonnell and Drennan 2010; Balasubramanian *et al.* 2006). While Balasubramanian *et al.* (2006) see digital technologies as a topic for future research, they do not recognise the role digital technologies can play in making product placement interactive. Specifically, they do not account for interactivity in digital video (e.g. hypervideo) and the opportunity to interact with placements within such videos. Just as digital technologies have shown a positive effect on placement outcomes, one can expect that interactivity would affect cognitive outcomes in the same way. Brand recall of product placements has been shown to be higher in the presence of interactivity than without (Nelson 2002). For example, the recall of virtual placements in interactive TV has been shown to be higher compared to classical non-interactive placements (Grigorovici and Constantin 2010; McDonnell and Drennan 2010; Cauberghe and de Pelsmacker 2006). However, with an interactive product placement, the outcomes could be different and result in fewer recalled brands.

User-computer interaction allows users to decide on the information which they access, thereby giving them control over their viewing experience because they interact with and expand on the information about those products and brands in which they are interested. This increases engagement, involvement, and learning (Hang and Auty 2011; Schlosser 2003; Ariely 2000). Finally, as posited by Lynn *et al.* (2014), it is worth noting that:

> By enabling the audience to actively react to and interact with the brands embodied in the video, hypervideo-based placement creates a de facto gap in the literature. (p.7)

Accordingly, the notion of interactive product placement in digital music videos should be incorporated into product placement literature. In order to do this, further issues need to be considered.

Balasubramanian *et al.* (2006) replaced *involvement* with *connectedness* as they deemed it a stronger construct. While this could be the case for television programmes, not all media

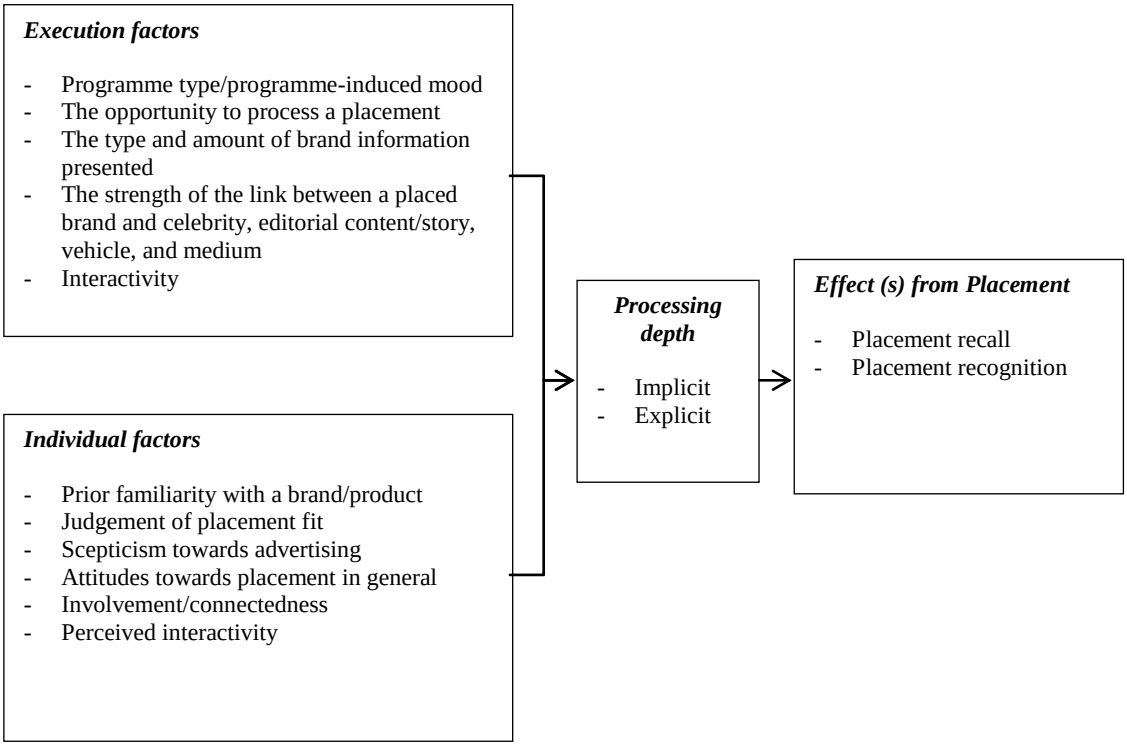
vehicles allow for connectedness (Russell *et al.* 2004; Russell and Puto 1999). Indeed, Russell *et al.* (2004) included involvement as a key element of their connectedness scale, because involvement with a singer/video/brand influences programme-relationship, affecting product placement outcomes (e.g. recall and recognition).

Balasubramanian *et al.*'s (2006) work did not consider the importance of interactivity (as an execution factor) and how different media affect embedded product placements (see Section 3.2). Interactivity is perceived differently by individuals, and as such is worth including as an individual factor (see Section 3.2). For this reason both interactivity and perceived interactivity were added to the conceptual model of the present study (see Figure 3.1). Consistent with the objectives of the present research (see Table 3.3); the present thesis studied only those execution and individual factors cited in the literature that affect product placement recall and recognition. Executional flexibility was omitted as digital technologies make it possible to embed objects and hyperlinks before and after video creation (Sadallah *et al.* 2012, 2011; Chambel *et al.* 2011; Shipman *et al.* 2008; Finke and Balfanz 2004; Balfanz *et al.* 2001; Sawhney *et al.* 1996). Placement modality was not included because no examples were available with audio interactive product placement to conduct further analysis. Interactive placement adds temporal flexibility too (Lynn *et al.* 2014) and in such a case asynchronous information can be added within a digital music video and represents an area for further research (see Section 2.2.1.4). Finally, priming of brand appearance was also excluded (see Section 2.2.1.5).

The presence of interactivity in digital music videos gives users the option to interact selectively by expanding the brand information of a given element within the video. It also enables viewers to make a purchase decision or expand information concerning the elements portrayed (e.g. places, brands, and people) with the goal of enriching the viewers' experience without interrupting the video *per se.* Placements are hyperlinked spots which viewers can click on in order to display hyperlinked labels. These contain information about the portrayed brands in an unobtrusive way without interrupting the viewing experience. Such embedded interactivity could increase the likeability of brands by making them less intrusive while simultaneously increasing the amount of information presented. Interactive digital music videos also enable social media sharing (e.g. Twitter and Facebook). Other placement types such as those in interactive TV, films, TV shows, video games, and songs, differ from placement in this thesis in three main ways. First, these other media allow subjects to skip the advertisements; second, they do not offer further

information about the products/brands portrayed; and third, the featured placements can be unrecognised.

Figure 3.1 **Conceptual model of the present study**



Following this rationale, this study's second research objective seeks to analyse how the factors of Balasubramanian *et al.*'s (2006) theoretical framework for classical non-interactive product placement apply in the case of interactive product placement. The moderating effects of positive/negative context-induced mood and interactivity (presence/absence) are also explored. It can be argued that the factors influencing classical non-interactive placement will differ from those influencing interactive product placement. Using a renovation approach (Buckley, Buckley and Chiang 1976), this study analyses whether digital technologies have modified the classical non-interactive product placement theoretical framework as proposed by Balasubramanian *et al.* (2006). Finally, research objective three observes whether recall and recognition levels for product placement in an interactive online medium are greater than those for product placement with the moderating effects of interactivity and positive/negative context-induced mood (see Table 3.2).

Table 3.2 **Research objectives**

i) To empirically test the key factors which influence recall and recognition of a classical non-interactive product placement in digital music videos and the moderating effects of positive/negative context-induced mood.
ii) To analyse how the factors of the theoretical framework for classical non-interactive product placement apply in the case of interactive product placement and the moderating effects of positive/negative context-induced mood.
iii) To test whether recall and recognition levels for product placement in an interactive online medium are greater than those for product placement with the moderating effects of interactivity and positive/negative context-induced mood.

3.4.1 Hypotheses

A summary of the hypotheses and measurements of this study is presented in Table 3.3. The scales are discussed in detail in Section 4.5.2.

Table 3.3 **The hypotheses of the study**

Factor	Hypotheses	Scale
Execution factors		
Programme-induced mood	H1a: Positive context-induced mood in digital music videos produces higher recall of interactive placement than positive context-induced mood in classical non-interactive product placement. H1b: Positive context-induced mood in digital music videos produces higher recognition of interactive placement than positive context-induced mood in classical non-interactive product placement. H1c: High arousal in digital music videos produces higher recall of interactive placement than high arousal in classical non-interactive product placement. H1d: High arousal in digital music videos produces higher recognition of interactive placement than high arousal in classical non-interactive product placement. H1e: Positive context-induced mood in digital music videos produces higher recall and recognition than negative context-induced mood. H1f: Interactivity has a positive effect on the change of viewers' mood before and after stimulus exposure. H1g: Context-induced mood has a positive effect on the change of viewers' mood before and after stimulus exposure.	8- item scales: Strong disagreement/strong agreement (7-point)
The opportunity to process a placement	H2a: Prominent interactive product placements achieve higher recall and recognition than prominent classical non-interactive product placements. H2b: Interactivity has a positive effect on recall and recognition of prominent product placements. H2c: Subtle interactive product placements achieve higher recall and recognition than subtle classical non-interactive product placements. H2d: Interactivity has a positive effect on recall and recognition of subtle product placements.	4-item scale: Strong disagreement/strong agreement (7-point)
The type and amount of brand information presented	H3a: Interactive product placement is perceived as more informational than classical non-interactive product placement. H3b: Interactive product placement is perceived as more transformational than classical non-interactive product placement. H3c: The type and amount of brand information presented has a positive effect on product placement recall and recognition in interactive digital music videos. H3d: Product placement is perceived as more transformational when embedded in a positive context-induced mood media vehicle than when embedded in a negative context-induced mood media vehicle.	8-item scales: Strongly disagree/strongly agree (7-point)
The strength of the link between brand and story character/editorial content/ vehicle/ medium	H4a: The perceived fit of a celebrity endorser with brands in a digital music video has a positive influence on recall. H4b: The perceived fit of a celebrity endorser with brands in a digital music video has a positive influence on recognition.	6-item scale: Totally dislike it /I really like it/ (7-point)
Prior familiarity with a) brand, b) video, and c)	H5a: Previous unfamiliarity with the brand has a positive effect on placement recall. H5b: Previous familiarity with the brand has a positive effect on recognition.	I have never seen it/ very often

Factor	Hypotheses	Scale
singer	H5c: Previous familiarity with the digital music video has a positive effect on placement recall. H5d: Previous familiarity with the digital music video has a positive effect on placement recognition. H5e: Previous familiarity with the singer has a positive effect on recall. H5f: Previous familiarity with the singer has a positive effect on recognition.	Very unfavourable/ very favourable (7-point) Yes/no
Judgement of placement *fit*	H6a: Congruence with the plot has a negative effect on interactive placement recall. H6b: Congruence with the plot has a negative effect on interactive placement recognition. H6c: An interactive placement in digital music videos is perceived as more incongruent than a classical non-interactive product placement.	3-item scale: Strong disagreement/strong agreement (7-point)
Scepticism towards advertising	H7a: Interactivity moderates the influence of scepticism towards advertising on product placement recall. H7b: Interactivity moderates the influence of scepticism towards advertising on product placement recognition. H7c: Scepticism towards advertising has a negative influence on attitude towards placements in general.	3-item scale: Strong disagreement/strong agreement (7-point)
Attitudes towards placement in general	H8a: Attitudes towards placement in general has a positive influence on brand recall. H8b: Attitudes towards placement in general has a positive influence on brand recognition. H8c: Attitudes towards placement in general in an interactive placement context are more positive than in classical non-interactive product placement.	3-item scale: Strong disagreement/strong agreement (7-point)
Involvement/ Connectedness	H9a: In interactive product placement, higher involvement with a digital music video results in higher recall than in classical non-interactive product placement. H9b: In interactive product placement, higher involvement with a digital music video results in higher recognition than in classical non-interactive product placement. H9c: In interactive product placement, involvement with a singer in a digital music video has a positive influence on recall. H9d: In interactive product placement, involvement with a singer in a digital music video has a positive influence on recognition. H9e: In interactive product placement, involvement with a digital music video has a positive influence on perceived information of the placement. H9f: Interactivity moderates the influence of connectedness on product placement recall. H9g: Interactivity moderates the influence of connectedness on product placement recognition.	8-item scale: Strong disagreement/strong agreement (7-point) 12-item scale, 6 sub factors
Implicit	H10a: Implicit memory is higher for interactive product placement than for classical non-interactive product placement. H10b: Involvement with the interactive digital music video has a positive influence on implicit memory. H10c: Previous familiarity with the brand in an interactive digital music video has a positive influence on implicit memory. H10d: Attitudes towards placement in general in an interactive digital music video have a positive influence on implicit memory. H10e: Prominence in an interactive product placement has a positive influence on implicit memory. H10f: Positive context-induced mood in interactive digital music videos has a positive effect in implicit memory.	Word completion

Factor	Hypotheses	Scale
Explicit	H11a: Interactive placement increases brand recall more so than classical non-interactive product placement. H11b: Interactive placement increases brand recognition more so than classical non-interactive product placement. H11c: Interactivity has a positive effect not only on short-term but also on long-term memory (e.g. recall and recognition). H11d: Context-induced mood has a positive effect not only on short-term but also on long-term memory (e.g. recall and recognition). H11e: The set of executional and individual factors have a positive effect on recall of interactive placement H11f: The set of executional and individual factors have a positive effect on recall of interactive placement one week after exposure H11g: Context-induced mood moderates the influence of the executional and individual factors on product placement recall. H11h: Interactivity moderates the influence of the executional and individual factors on product placement recall. H11i: The set of executional and individual factors have a positive effect on recognition of interactive placement H11j: The set of executional and individual factors have a positive effect on recognition of interactive placement one week after exposure H11k: Context-induced mood moderates the influence of the executional and individual factors on product placement recognition. H11l: Interactivity moderates the influence of the executional and individual factors on product placement recognition.	Yes/No
Perceived interactivity	H12a: Perceived interactivity in an interactive product placement has a positive effect on product placement recall. H12b: Perceived interactivity in an interactive product placement has a positive effect on product placement recognition. H12c: Perceived interactivity in an interactive product placement has a positive effect on attitude towards the placement.	9-item scale Strong disagreement/strong agreement (7-point)

Discussion and conclusion

This chapter has discussed how digital technologies affect classical non-interactive product placement. Web architecture has evolved, leading to better telecommunications and sharing platforms which enable people to connect in real time. From traditional hyperlinks to hypervideo, the Web has aimed to standardise the usage of platforms and programming languages to facilitate information sharing among different screens and media devices, including personal computers, laptops, tablets, and smartphones. Digital media have evolved in an almost parallel way to the evolution of the Internet and in response to contemporary society's need to communicate in real time. In doing so, it has enabled *machine interactivity*, thereby giving users the power to manage and control their interaction with media (Sicilia, Ruiz and Munuera 2005; Liu 2003; Liu and Shrum 2002; Ariely 2000). Digital technologies also allow the creation of mediated experiences which seem and feel real (Lombard and Ditton 1997). In this sense, interactivity creates involvement or a sense of presence in the media channel, which in turn may generate a state of flow.

Digital technologies have permeated product placement in the form of virtual, online, and retrospective placements (see Section 2.2.1.2). These placements have been considered as a form of passive placement which takes place in new media (e.g. the Internet) (van Reijmersdal *et al.* 2010). Passive placements in video games include placed brands which are part of the video game in the form of in-game billboards, static logos, and branded products (e.g. Grigorovici and Constantin 2010; Lee and Faber 2007; Nelson *et al.* 2006; Yang *et al.* 2006). *Advergames*, digital video games where brands are central, have been considered as interactive placements (Mallinckrodt and Mizerski 2007; van Reijmersdal *et al.* 2010). Despite being interactive, *advergames* do not provide the same level of interactivity as interactive placement in digital music videos.

As previously discussed (Section 3.3.1), different media offer different levels of interactivity (Nelson 2002; Nelson *et al.* 2006; Russell and Stern 2006), presence (Grigorovici and Constantin 2010), and flow (Csikszentmihalyi 1998). Minimal research has been conducted on music videos and their growing adoption of product placement (Schemer *et al.* 2008; Plambeck 2010; Burkhalter and Thornton 2012; Hudders *et al.* 2012). Music videos' popularity has grown precisely because of technological advancements and such videos have now moved from traditional

television to the Web (e.g. YouTube and Vevo). Multi-screening also allows flexibility with regard to sharing.

The literature has been reviewed and hypotheses have been generated to guide an empirical study with two goals: (i) to extend the understanding of the factors which affect classical non-interactive product placement and (ii) to extend the understanding of the impact of interactivity and digital technologies (e.g. hypervideo) on product placement. Thus, the theoretical positioning is situated at the confluence of research on product placement and its effects on memory, specifically recall and recognition, and research on interactivity.

In order to theoretically frame and support its objectives and hypotheses, this study has addressed the following themes in relevant literature.

(i) The study of product placement, from a classical perspective in films to the different media in which products are placed, and the advantages and disadvantages of such placements.

(ii) Product placement effects, specifically brand recall, and the set of execution and individual factors which influence product placement recall as portrayed in Balasubramanian *et al.*'s integrative conceptual model (2006).

(iii) Interactivity theory, hypervideo technology, hypertext to hypermedia, the technical approach, and related advantages and disadvantages.

The review facilitated a hypothetico-deductive approach where theory is used to develop and support hypotheses prior to experimental testing (Colquitt and Zapata-Phelan 2007). The literature review gathers information from related disciplines (i.e. marketing, advertising, psychology, and computer science). It also identifies the relationship among the theoretical ideas developed to contextualise the research, and the managerial and practical repercussions on product placement and interactivity theories (Hart 1998). Overall, the literature review aims to examine and forefront a previously unexplored relationship between product placement and interactivity (Colquitt and Zapata-Phelan 2007).

The conceptual framework of the present research draws upon Balasubramanian *et al.*'s (2006) literature framework. This framework addresses individual and execution factors, their effects on viewers' processing depth and how this affects product

placement outcomes at a cognitive level. Here, emphasis is placed on understanding how product placement research has dealt with these factors and how this corpus of research can be drawn upon to develop an understanding of interactive placements in digital music videos. The present research focused on the execution and individual factors which affect placement recall and recognition. The following execution factors were addressed: programme-induced mood; the opportunity to process a placement; the type and amount of brand information presented; and the strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium. The following individual factors were also studied: prior familiarity with a brand/product; judgement of placement fit; scepticism towards advertising; attitudes towards placement in general; and involvement/connectedness. Executional flexibility, placement modality, and priming of brand appearance were excluded. Executional flexibility was excluded because digital technologies imply *de facto* the opportunity to place brands and links within digital music videos during the creation process or after (Sadallah *et al.* 2012; 2011; Chambel *et al.* 2011; Shipman *et al.* 2008; Finke and Balfanz 2004; Balfanz *et al.* 2001; Sawhney *et al.* 1996). Placement modality and priming of brand appearance were omitted because examples of either phenomenon could not be located in the case of digital music videos. Both factors do however constitute an area for future research. The conceptual framework of the present research included the study of interactivity and perceived interactivity and are reflected in the research objectives. Finally, the hypotheses of the study were presented as suggested by gaps and recommendations in the literature. The following chapter will explore the research methodology and the research process.

PART TWO
METHODOLOGY

CHAPTER FOUR
RESEARCH METHODOLOGY

Introduction

This chapter provides an overview of the methodological strategy and design utilised to investigate the research questions and hypotheses outlined in previous chapters. The chapter is organised into seven sections.

Section I covers the research philosophy and provides an overview of the research paradigms and methods. The section also discusses the need for renovation as an appropriate strategy to examine the research problem of the study.

Section II presents the research design, research problem and objectives, research strategy and the rationale for their selection. A discussion of the experimental designs pursued in product placement and interactivity is presented. This discussion serves as a basis for the selection of the experimental design, presented in detail in Section III.

Section IV discusses the sampling design process. This research centres on the digital music video industry. Accordingly, the target market is identified. As the offline music video industry is decreasing and the digital music industry is increasing, it is worth noting that brands are part of this shift. Musical groups are integrating brands as sponsors. The user profile of brands must match the audience of the music videos for an optimum reach. This section evaluates the use of students as a convenience sample. While students match the digital music video target criteria, they are also readily available for the purposes of this study.

Section V presents the design and development process of the research instrument. It outlines the questionnaire development by discussing the frameworks and methods utilised to address each of the 10 factors of the conceptual framework model of the study. Section VI outlines the stimulus selection and the rationale behind this decision. Section VII presents the Pilot Study and its preliminary results. The Pilot Study was important to identify shortcomings of the research and experimental design. The main study was modified in light of the pilot study findings.

4.1 Research paradigms and methods

In social research, it is important to understand the philosophical assumptions underpinning the research process. Philosophical assumptions influence the researcher's vision and predisposition towards adopting specific methodologies and research tools significantly. These assumptions shape how the contribution to, and appreciation of knowledge are understood.

Converse (1945) initiated a discussion of what marketing was about. Over the years, this debate has incorporated a mix of different views from both academics and practitioners regarding the nature of marketing as science or art. Brown (1996) depicted the evolution of marketing in three stages. Stage One corresponds to the period between 1945 and 1983, and started following the publication 'The Development of the Science of Marketing' (Converse 1945), which appeared in the first issue of the Journal of Marketing. Stage One features marketing as a nascent science. Some academics advocated marketing being an analytical, research-oriented science with methodologically sophisticated methods, testable hypotheses, and principles (Alderson and Cox 2006): others were in favour of modelling it on pure social sciences such as economics, psychology, and sociology (Brown 1996). As it turned out the former group carried the day (Anderson 1983), and, in keeping with the positivist mind-set, marketing came to see itself primarily as a science (Hunt 1976).

Positivism seeks prediction, to identify behavioural patterns by using 'external factors and/or internal states' (Ozanne and Hudson 1989, p. 3), patterns which can be replicated and applied to other contexts. For positivists 'a phenomenon is explained and understood if one can demonstrate an underlying systematic association of variables' (Ozanne and Hudson 1989, p. 2). Reality is *knowable* in the positivist paradigm, and researchers can unfold the unknown by applying theories and rules (Zina 2004). The ontological view of positivism is objectivist (Bryman 2008). Positivism holds that propositions are meaningful only if they can be empirically verified. It is critical to avoid all researcher biases, as positivism perceives knowledge as generalizable and not based on any personal understanding of reality (Ozanne and Hudson 1989). Positivism follows the quantitative research tradition using methods such as experimentation, theory verification, reductionism and causal comparison. Findings are expected to be statistically significant and generalizable beyond a sample to a population (Zina 2004). Its methodology is hypothesis-driven, and deductive (Zina 2004). For positivists, it is

important that a methodological procedure can be reproduced and that it leads to findings that are reliable, valid, and replicable. At the time, positivism was embraced 'to differentiate scientific (meaningful) statements from purely metaphysical (meaningless) ones' (Anderson 1983, p. 19). Positivism had traditionally been the leading paradigm within the natural sciences where quantitative methods and the search for causality were the norm (Brown 1996; Hunt 1994). However, positivism increasingly was seen as being too rigid; it was forcing marketing to fit into a narrow scientific straight-jacket. As a result, it began to lose followers and relativism, followed by constructionism and subjectivism (Feyerabend 1970) together with a growing preference for qualitative methods, came to the fore (Hunt 1994).

Stage Two (1983-1999) started with a challenge to the philosophical premises of marketing as a science (Brown 1996). Anderson (1983) questioned the positivistic or logico-empirical mind-set upon which marketing had hitherto rested, and asked whether all its findings could be empirically tested and generalised. He suggested that a relativist approach would suit the study of marketing better than the traditional positivistic approach. This relativist approach to 'reality', under which there were no universal standards for scientific knowledge, claimed that different disciplines could conform to different ontological and methodological commitments (Anderson 1983). Research findings and foci should evolve because they are part of ongoing human consensus, so change can take place in methodology, conception and values. According to this relativist viewpoint, marketing should aim primarily at social consensus, a viewpoint that was accepted such that only practical and successful theories were deemed as acceptable bases for knowledge (Peter and Olson 1983). Notions of methods as universally applicable were increasingly discarded and concepts and theories were allowed to evolve.

The existential-phenomenological view was also seen as an alternative to logical positivism in consumer research (Thompson, Locander and Pollio, 1989). Existential phenomenology seeks to describe a first person experience as it emerges and to recreate happenings as they occur without empirically questioning the underlying assumptions (Thompson *et al.* 1989). As an example, Csikszentmihalyi (1998) utilised this methodology to understand people's 'flow experiences' which makes people happy, such as composing music or writing poetry. Existential phenomenology aims to understand consumers' experiences coupled with their emotional responses towards

those experiences rather than their cognitive reactions to them. Examples of existential-phenomenology methods include phenomenological interviews and analyses of written statements (Thompson *et al.* 1989). The main difference with positivism is that for existential phenomenology "experience emerges in a contextual setting and, therefore, cannot be located 'inside' the person nor 'outside" (Thompson *et al.* 1989, p. 136).

In this context, interpretivism was also presented as an alternative to positivism. Interpretivists seek to achieve an understanding of consumer behaviour, and this understanding is never fully attained, because human behaviour evolves, and because of the existence of different realities which reflect different individual and group perceptions (Ozanne and Hudson 1989). The main characteristic of interpretivism is that subjects 'actively create and shape their environment, rather than merely reacting to their environment and internal states' (Ozanne and Hudson 1989, p. 3). Because of this, researchers immerse themselves in consumers' natural setting to understand why they behave the way they do, and the effects of social context on this behaviour. Some of the interpretive methods have been usitiled in ethnographic (Hirschman 1986), and grounded theory (DeLorme and Reid 1999; Hirschman and Thompson 1997) studies. The difference between interpretivism and an existential-phenomenology approach is that while for the former an individual's behaviour is shaped by the environment and social interaction, for the later, behaviour depends on how it is perceived and experienced, being a function of the individual and social context.

The main critique of relativism was presented by Hunt (1994), supporter of the positivist philosophical position in marketing. He argued that the similarity between relativism, constructivism and subjectivism, which he categorises as 'the same thing', made qualitative studies in marketing seem too uncertain and unreliable. If these theories maintained that knowledge 'depends on' the circumstances of each event, there was very little left for qualitative studies to offer by way of certainty compared to their quantiative counterparts (Hunt 1994).

Stage Three, 2000 to the present, opened the door to postmodernism (Venkatesh 1999). Postmodernism also abandoned the ideal of marketing as a science and rejected the scientific principle of fixed and everlasting truths. Postmodernism acknowledges science as contributing to human advancement and a better society, but also recognises

it as its biggest enemy. Postmodernism maintains that reality, including the social condition of consumers, is in fact hyperreal. In the words of Brown (1995):

> A hallucinogenic simulation of the non-existent, a place where boundaries collapse, opposites coalesce, fact and fiction are fused, and theory and practice metamorphose p. 80-81).

Consumers are seen as more sophisticated than given credit for hitherto. They can choose and decide to shape their identities through consumption (Firat *et al.* 1994). In this sense, postmodernism emphasises the transition from *homo economicus* to *homo consumericus* (Firat and Shultz II 1997). It suggests that relatively mundane products and services can be proactively adopted by consumers as they construct and modify central elements of their personal identities. For example, rather mundane products are often marketed using group identity ideologies which individual consumers can co-opt in their own identity-creation projects. The main criticism of postmodernism is the chaos it supposedly gives rise to. Markets become so fragmented and consumers so idiosyncratic that it is almost impossible to make any general prescriptions for marketing practice.

Finally, after discussing the evolution of paradigm adoption in marketing, one may agree with Hunt (2003) that marketing is not dominated by any one paradigm. Instead, it is an admixture of them all, each attempting to illuminate and recreate different aspects of reality.

The present study aligns itself with the positivist mindset. Positivists typically seek to measure, explain, quantify, compare, usually with a view to finding some causal relationship through controlled experimentation (Bryman 2008; Zina 2004; Ozanne and Hudson 1989; Hunt 1976). The positivistic worldview is one where the researcher sees the research domain as one populated by discrete quantifiable variables and where research objectives and outcomes are articulated in terms of testable relationships and correlations between these variables. If a systematic association can be demonstrated between any two variables, then predictions can be formulated relating to their future occurrence. The positivist research paradigm involves the identification of a conceptual framework and the use of an experimental controlled environment. Care is taken to avoid researchers' bias, because positivists seek to find relationships amongst variables to predict reality (Ozanne and Hudson 1989).

Product placement research has positioned itself for the most part firmly in the positivist tradition (Chan 2015) laying particular emphasis on the study of the execution and individual factors that affect cognitive, affective or conative outcomes of product placement (Hudders *et al.* 2012; Lehu and Bressoud 2009; Balasubramanian *et al.* 2006; Gupta and Lord 1998). In keeping with a positivist orientation, product placement studies have tried to measure a number of possible outcomes (e.g. recall, recognition, attitudes) in order to predict when these outcomes would be high or low, positive or negative. To measure these cognitive, affective and conative outcomes, product placement research has employed either real-life (Bressoud *et al.* 2010), or experimental settings (see Section 4.2.1). The present study utilised an experiment to measure the effects of Balasubramanian *et al.*'s factors on recall and recognition in both interactive and non-interactive product placement in digital music videos. A conceptual framework was identified and tested looking for cause and effect relationships in an experimental setting. The factors affecting product placement outcomes were determined to explain current memory results, and to improve results in future.

4.2 The research strategy and design

There are three broad classes of behavioural research: descriptive, relational and experimental (Rosenthal and Rosnow 2008). Descriptive research focuses on observing and describing an event by using surveys, focus groups, and observations. Relational research investigates the relations between factors, and experimental research studies the causal effect between two factors (Lazar *et al.* 2010). Kuhfeld *et al.* (1994, p. 545) noted, 'the design of experiments is a fundamental part of marketing research' and it is critical to select the research design which best suits the experimental purpose. The present research adopts an experimental research design and, in doing so, adopts the prevailing paradigmatic and methodological approach within the body of product placement research.

4.2.1 Experimental research in product placement

In their review of product placement literature, van Reijmersdal *et al.* (2010) noted that 75 per cent of product placement studies were empirical. From these, 80 per cent were quantitative, and more than two-thirds of these were experiments. Experimental designs in product placement studies have been conducted in both laboratory (Grigorovici and Constantin 2010; Mackay *et al.* 2009; Schemer *et al.* 2008; Cowley and Barron 2008;

Law and Braun 2000; D'Astous and Chartier 2000; Gupta and Lord 1998) and real-life settings (Verhellen *et al.* 2013; Dens *et al.* 2012; Bressoud *et al.* 2010; Lehu and Bressoud 2009; Homer 2009; Gould and Gupta 2006) (see Table 4.1).

Research on product placement has been predominantly laboratory-based (Balasubramanian *et al.* 2006), with few studies in simulated theatrical settings (Brennan and Babin 2004; Auty and Lewis 2004; Babin and Carder 1996). A review of the experimental designs featuring in product placement research is depicted in Table 4.1. These studies include seminal papers in placement literature, which served as the basis for understanding the dynamics of experimental design in product placement literature. Studies up to 2012 were included featuring experimental designs whose research objectives included investigating placement recall and/or recognition. These studies were analysed to understand the nature of the research stimuli utilised, the type of sample employed (students or otherwise), the experimental setting, the experimental procedure and the specifics of the experimental design. Table 4.1 presents the studies arranged by media type (e.g. music videos, video games, films, and television programmes). Overall, experimental designs have been utilised in order to ensure that subjects are (i) exposed to a stimulus, and that they are (ii) exposed to the research instrument. In the case of the present thesis, a total of 82 product placement studies were reviewed, of which 22 were purely theoretical and 60 empirical. Among the empirical studies, 42 were quantitative. Of these, 33 were experiments, 7 surveys and 2 were content analyses.

Experimental research in product placement does not come without limitations. Some limitations are method-based, such as lack of control groups; small, non-random samples; use of biased measurements; and lack of control over the experimental procedure. For example, Verhellen *et al.* (2013) asked participants (via e-mail hyperlink) to watch a YouTube video of a cooking tutorial allowing participants to watch the stimulus as many times as they desired. Participants were asked to complete an online questionnaire following exposure, and were given three weeks to complete the study. While Verhellen *et al.* (2013) aimed to allow participants to become familiar with the cooking tutorial by watching it more than once, there is no evidence of participants completing the questionnaire right after exposure. In such a case, students presumably could have glanced surreptitiously at the questionnaire to get an idea of what was expected from the experiment beforehand, thus priming their responses.

Another method-based difference amongst product placement studies is their experimental procedure. Some studies utilised pre and post research instruments (Hudders *et al.* 2012; Mackay *et al.* 2009; Yang and Wang 2008; Yang *et al.* 2006), others utilised post research instruments only (Nicovich 2005; Nelson *et al.* 2004) (see Table 4.1). The decision of using pre-stimulus exposure, and/or post-stimulus exposure questionnaires depends on the specific research objectives.

Stimulus exposure (full versus partial) constitutes another limitation in product placement studies. As Balasubramanian, *et al.* (2006) noted, participants should not be tested using partial exposure because this condition could lead to biased results. This situation may limit both findings and ecological validity (Verhellen *et al.* 2013). For example, in a digital games context, Cauberghe and De Pelsmacker (2010) allowed students to play the game as many times as they wanted, yet Lee and Faber (2007) only allowed participants to play an average of 6 minutes. However, exposure to a full-length stimulus may not be possible in all experimental conditions. Exposure to a sitcom episode, a film, a video game, or a music video, all entails differing length and viewing conditions. Russell (2002) introduced the use of a theatre methodology to simulate real-life viewing conditions and full-length stimulus exposure. This methodology involved films and exposed subjects to an hour long stimulus. In the case of experimental research conducted specifically on product placement in music videos (Matthes *et al.* 2012; Hudders *et al.* 2012; Schemer *et al.* 2008) and Youtube digital videos (Verhellen *et al*. 2013), participants are more easily exposed to the complete stimulus without the need for long experimental exposure. With complete stimulus exposure in a manageable time-frame the likelihood of boredom for participants is minimised. Examples of studies involving complete exposure in modest time-frames include Schemer *et al.* (2008) and Verhellen *et al.* (2013). Schemer *et al.* (2008) conducted an experimental study on a sample of 78 undergraduate students, in four conditions (positive/negative attitude towards a rapper x with/without placement). First, participants were given a newspaper article to prime them about the rapper. Participants were then exposed to one of four music videos for about four minutes on a personal computer. Finally, they filled out an online questionnaire. Verhellen *et al.* (2013) utilised four versions of a digital video of a cooking class uploaded on Youtube. The videos had duration of two minutes and nine seconds. The Youtube link was embedded in an online survey and emailed to the students, giving them a three-week period for completion. Although the stimulus exposure itself was relatively brief in this study, the criticism could still be made that

allowing participants three weeks to complete a questionnaire about the video was unnecessarily generous as some participants may have displayed stronger views than others based on how vivid their memory of the event was.

Table 4.1 **Comparison of different types of experimental designs in product placement**

Study	Stimulus	Sample	Experimental setting	Procedure	Experimental design
Schemer *et al.*(2008)	Rap music video Placement form: 1 fictional clothing brand placed (29 brand appearances)	University students	Classical conditioning (simultaneous) Computer lab	Four conditions 1. Exposure to newspaper article to manipulate the image of the rap singer 2. Exposure to stimulus 3. Online questionnaire	2 (Singer's image: positive/ negative) x2 occurrence of placement (present/absent) between-subjects design
Hudders *et al.* (2012)	8 music videos Placement form: 4 prominent, 4 subtle placements.	19 years to 28 years	Computer lab	1. Stimuli exposure 2. Online questionnaire	2 (prominence: prominent vs. subtle) x2 (artist connectedness: low vs. high) between subjects factorial design
Matthes *et al.* (2012)	Rap music video Placement form: 1 unknown clothing brand placed (0, 15 and 30 brand appearances)	University students	Computer lab	Conditions 1. Exposure to stimulus 2. Online questionnaire	Frequency (none/moderate/high)x prominence (obtrusive/unobtrusive) 2x2 factorial between-subjects design + control group
Verhellen *et al.* (2013)	Youtube video Cooking tutorial Placement form: Leading brand	University students	Online setting	1. Exposure to stimulus (as many times as wanted) 2. Online questionnaire	2 (prominent vs. subtle endorsement of focal brand) x2 (celebrity expert vs. amateur endorser)
Nelson (2002)	Console-based game - car-racing game Placement form: billboards and signs	Mixed 18-25 years (Study 1) 20-25 years (Study 2)	Computer lab	1. Exposure to stimulus. In study 1, gamers could select the brand of their car. In study 2, players could not select their car brand there were billboards or advertisements were placed within the game. 2. Questionnaire 3. Questionnaire (5 month delay)	Dependent variable: attitudes toward the placement (free and aided). Brand centrality and gamer active involvement enhanced short-term recall. Brand relevancy enhanced short and long-term recall.
Nelson *et al.*(2004)	Computer game Product placement: Logos surrounding the auto race track.	Non-students 18-30+ years	Online gaming facility open to the public	1. Stimulus exposure (3 min) 2. Post-questionnaire	2 experimental conditions: play/watch. Measurements: Attitudes towards advertising and product placement

Study	Stimulus	Sample	Experimental setting	Procedure	Experimental design
Nicovich (2005)	Computer game: role-playing game. Placement form: billboard advertisements.	University students	Computer lab	1. Stimulus exposure (30 min) 2. Post-questionnaire	Relationship between involvement, presence and ad judgement.
Yang *et al.* (2006)	Video games 2 sports video games (13 and 11 placements)	University students	Computer lab	1. Pre-questionnaire 2. Stimulus exposure 3. Post-questionnaire	2 (game condition: a racing game versus a soccer game) x2 (memory measure: implicit versus explicit) mixed experimental design plus control group (no game).
Nelson et al. (2006)	Computer gamer. 2 existing brands consumed by the target group plus 2 fictitious brands.	Non-students	Computer lab	1. Stimulus exposure (3 min) 2. Post-questionnaire	2 (media context: play versus watch) x2 (brands: real versus fictitious) factorial design. Media context: between-subjects factor. Brand: Within-subjects factor.
Mallinckrodt and Mizerski (2007)	Advergame The advergame revolved around the brand and its spokesperson	Children	Computer lab	Control and treatment condition 1. Exposure to stimulus 2. Questionnaire	The experiment had 1 treatment group (exposed to advergame) and a control group. They measured responses to the brand, and persuasion knowledge.
Lee and Faber (2007)	Online game Placement form: 3 product categories (gasoline, deodorant, and pet food) 10 brand appearances (brand names, a picture of the product, and a label indicating the product category)	University students	Computer lab	1. Stimulus exposure (12 conditions): 6 min average 2. Questionnaire	Recall and recognition Two independent and two moderating variables were used in this study. These were product placement proximity, game– product congruity, game involvement, and prior game-playing experience. Prior game-playing experience was measured, while the other three variables were manipulated.
Glass (2007)	Video games	University students	Computer lab	1. Pre/questionnaire 2. Stimulus exposure 3. Exposure to a list of 4 in-game brands	Participants had to retrieve from memory brand and product category.

Study	Stimulus	Sample	Experimental setting	Procedure	Experimental design
				and their equivalents 4. Post-questionnaire	
Yang and Wang (2008)	Computer games	University students	Computer lab	1. Pre questionnaire 2. (2 months delay) Stimulus exposure 3. (2 weeks delay) Post-questionnaire	Placement form and product type Dependent variable: advertising effectiveness
Mackay *et al.* 2009	Racing game Placement form: branded cars	University students	Computer lab	2 conditions(experimental and control) 1. Questionnaire 2. Stimulus exposure 3. Questionnaire	Spontaneous and prompted recall Attitudes
Cauberghe and De Pelsmacker (2010)	Mobile game	University students	Online	1. Stimulus exposure. In Experiment 1, game repetition was manipulated by requesting the respondents to play the game either two or four times. In Experiment 2, the respondents could freely decide how often they wanted to play the game. 2. Post-questionnaire	2 (brand prominence) ×2 (game repetition) ×2 (product involvement) between-subjects factorial design.
Grigorovici and Constantin (2010)	3D gaming Virtual Environment. Placement form: 3D billboards vs. brand logos as part of avatar's clothing Eight 3D-VRML immersive Web-based IVE	University students	Computer lab	3. Pre- questionnaire 1. Stimulus exposure 2. Post-questionnaire	2 (ad type: product placement/on-set screen placement vs. billboard/creative screen placement) x2 (level of arousal: high vs. low) mixed design Dependent variables: presence, cognitive load, object recall, brand recall and recognition, and brand preference.
van Reijmersdal, Jansz, *et al.* (2010)	Online role-playing game Placement form: Dutch bank – players could click on the logo, visit the offices, and recreate in-	Children	Online	1. Stimulus exposure 2. Questionnaire	Quasi-experimental design with two experimental conditions and a control group.

Study	Stimulus	Sample	Experimental setting	Procedure	Experimental design
	bank experience				
Hang and Auty (2011)	Football game Placement form: brand logo in the t-shirts	Children	Computer lab	1. Children were exposed to a FIFA game, with branded t-shirts for their team (1 brand) 2. Children selected the branded t-shirt of their team on the game out of three options.	2 (exposed to product placement/not exposed) ×2 (interact with placement/not interact) ×2 (memory-based test/stimulus-based test) between- subjects design. Dependent variables: 1) children's choice of brand in either of two types of choice tasks and 2) brand recall, with exposure to product placement and interactivity as the independent variables.
Babin and Carder (1996)	Films. - Full exposure. 2 films (36 brand appearances each)	Students	Simulated theatrical setting	1. Exposure to stimulus Treatment and control group. 2. Questionnaire Duration of the study: 2 hours	2 (ad type: product placement/on-set screen placement vs. billboard/creative screen placement) x2 (level of arousal: high vs. low) between groups design
Gupta and Lord (1998)	Films Brands exposed during 30 seconds.	University students	Simulated real setting	1. Exposure to stimulus in small groups. 30min movie excerpt: product placement or ad. 2. .Questionnaire	Factorial design (movie x product x stimulus condition) between subjects.
(D'Astous and Chartier 2000)	Film Placement form: 18 product placements from 11 different movies	University students	Laboratory	1. Exposure to stimuli. The data were collected individually or in small groups. 2. Questionnaire 3. (One-week delay) Recall test	Placement acceptability, appreciation of the placement, manifestness of the placement and integration of the placement within the movie. Dependent variable: Recall
Johnstone and Dodd (2000)	Film Placement form: 6 branded product categories	Non-students	Simulated real setting	1. Pre-questionnaire 2. Exposure to stimulus (33 min segment) simultaneously. 3. Post- questionnaire	Brand salience.

Study	Stimulus	Sample	Experimental setting	Procedure	Experimental design
Auty and Lewis (2004)	Film excerpt Placement form: audio-visual placement.	Children	Simulated real setting	1. Exposure to stimulus Treatment: 1 min 50 sec with a brand audio-verbal placement Control group: similar scene. No placements. 2. Questionnaire	Type of exposure (branded or unbranded). Independent variable: age group Dependent variable: choice of soft drink after exposure
Brennan and Babin (2004)	Film Placement form: prominent/ subtle, visual/ audio-visual	Students	Simulated real setting	1. Exposure to stimulus (full-length film): Treatment and control group 2. Recognition test	2 Centrality(prominent/subtle)x 2 Familiarity (familiar/unfamiliar) Between-subjects design.
Nelson and Devanathan (2006)	Film Placement form:	Students	Simulated theatrical setting	1. Exposure to stimulus. 3 hours film with an intermission. Participants watched the film simultaneously. 2. Questionnaire	Dependent variables: Recall and attitudes towards product placement Independent variables: brand consciousness, film involvement,
Hong *et al.* (2008)	Film Placement form: well-integrated/poorly integrated; positive/negative context; demonstrative/non-demonstrative	Students	Laboratory	1. Pre-exposure questionnaire (one-week before exposure) 2. Exposure to stimuli: 5 movie clips of 5 min each. 3. Post-exposure questionnaire	2(well-integrated/poorly integrated) x 2 (positive/negative context) x 2 (demonstrative/non-demonstrative) between groups experimental design.
Homer (2009)	Film Placement form: subtle placements (only visual) (e.g., food and drinks, employee uniform worn by one character); and prominent/obvious placements (verbal brand references).	Students	Simulated real setting	1. Pre-questionnaire 2. Exposure to stimulus: Four movie clips (15 min) 3. Post-questionnaire	2 (subtle/ prominent placement type) ×2 (low/moderate placement repetition) between-subjects factorial design.

Study	Stimulus	Sample	Experimental setting	Procedure	Experimental design
Park and Berger (2010)	Film (3 genres)	Students	Theatre Methodology	1. Exposure to stimulus (30 minutes): 12 films (4 for each genre). 2. Questionnaire Duration of the experiment: 40 min.	Dependent variables: recall and recognition.
Dens *et al.* (2012)	Film Placement form: subtle and prominent placements.	Non-students	Movie theatre	1. Exposure to stimulus (1 of 2 films) 2. Questionnaire was sent to participants by email 'few days' after exposure.	2 (prominence: subtle, prominent) ×2 (plot connection: weak, strong) full-factorial design.
Law and Braun (2000)	Television programme (10 min segment)	Students		1. Exposure to stimulus in groups to 1 of 2 television programmes' clips (10 min segment). 2. Questionnaire Duration: 45 min	Seen-only/heard-only/audio-visual x explicit/implicit memory
Russell (2002)	Television Placement form: Visual/ Audio placements with Low/High connection to the plot	University students	Theatre methodology	1. Exposure to stimuli. Three 27 min short-programmes 2. Questionnaire 1 3. Questionnaire 2 4. Recognition test Duration: 1hr.	2 (Modality: Visual-Audio) x2 (Plot: Lower-Higher) full factorial within subjects design
Russell *et al.* (2004)	Television programme	University students	Theatre methodology	1. Exposure to stimulus (excerpt of Seinfeld) 2. Short-term recall test	Connectedness(high vs. low)x Involvement (high vs. low)x Pervious exposure (seen/non-seen) between subjects design.
Cowley and Barron (2008)	Television programme Placement form: prominent and subtle	Students	Simulated real setting	1. Exposure to stimulus in groups of 4-6 participants. 2. Program-liking measure 3. Unrelated questionnaire 4. Programme liking 5. Recall test	2×2×2 design was used for the study. The factors were product placement (present, absent), prime (present, absent), and placement prominence (prominent, subtle). Participants were divided into program liking (high, low) on the basis of a program liking scale.

4.2.2 Experimental research in interactivity studies

Experimental research on interactivity has been conducted on interactive television (Sperring and Strandvall 2008; Cauberghe and Pelsmacker 2006), websites (Jiang *et al.* 2010; Liu and Shrum 2009; Sicilia *et al.* 2005; McMillan and Hwang 2002), and digital games (Hang and Auty 2011; Grigorovici and Constantin 2010). For interactivity studies, experimental research has been mainly laboratory-based because this environment can best capture subjects' behaviour in an online environment (Jiang *et al.* 2010; Sicilia *et al.* 2005; Ariely 2000). A computer-laboratory is arguably close to a real-life setting for the study of online environments, and it also allows control over the subjects ensuring appropriate exposure to the stimulus (Lazar *et al.* 2010). For these reasons, this has been the most common experimental setting utilised in interactivity studies (see Table 4.2). Table 4.2 presents a comprehensive summary of the interactivity studies that utilised experimental design to investigate recall and recognition in an interactive environment. The table presents an analysis of the constructs studied, the research methods employed, the research procedures and findings. As discussed earlier (see Section 4.2.1), experimental designs vary according to the specific research objectives pursued. While experiments are usually conducted in two phases, (i) exposure to a stimulus and (ii) measurement instrument completion (Jiang *et al.* 2010; Liu and Shrum 2009; Sperring and Strandvall 2008; Sicilia *et al.* 2005; Ariely 2000) (see Table 4.2), other experiments may involve three phases, including an after exposure to stimulus measurement (Liu and Shrum 2009). Particularities such as timing depend on the specific research objectives. Experimental phases, however, could be conducted straight before/after exposure (Sicilia *et al.* 2005) or allowing periods of time between phases (Raney *et al.* 2003).

As with product placement research in general, interactive experiments involve different levels of stimulus exposure depending on the research objectives. For instance, Ariely (2000) exposed participants to interactive home shopping simulation and gave information about 9 cameras for 10 minutes; Raney *et al.* (2003) exposed participants to 4 websites and 5 different questionnaires over 45 minutes. Sicilia *et al.* (2005) conducted an experiment to analyse two versions of a Web site, with and without interactivity with product information. In the first stage, subjects were exposed to one of two versions of the website for five minutes, similar to Ariely (2000). Subjects in the interactive condition were completely free to choose what to click on. Subjects in the

non-interactive condition could only scroll down the Web site without seeking any additional information. In the second stage of the experiment, participants reported all the thoughts they had while watching the stimulus, responded to a flow-state measure, and expressed attitudes towards both the website and the featured product.

Another particularity of experimental design in interactive placement studies is that they typically allow for freedom of navigation (see Table 4.2). For example, participants are either free to interact with the website content (Sicilia *et al.* 2005) or are instructed to click on certain elements that would later be compared (Schlosser 2003). These two options allow researchers investigate the difference between participants browsing a website without a particular purpose and browsing with a purpose (e.g. searching a specific product) (van Noort *et al.* 2012; Schlosser 2003) and ultimately depends on specific research objectives. For example, van Noort *et al.* (2012) studied whether online flow influenced cognitive, affective and behavioural outcomes in a website environment. They primed participants to become immersed in the website. In doing so, they were told that their input would be taken into account. Participants decided on the pace and flow of their browsing and, consequently, on the time dedicated to this task. Levels of interactivity were manipulated by exposing them to high and a low interactive websites.

Finally, another particularity observed was the use of different variables to measure a phenomenon in interactivity studies (see Table 4.2). Different variables are utilised according to specific research objectives, and according to how developed the research area is. For example, Jiang *et al.* (2010) utilised active control, reciprocal communication, product type as independent variables and involvement (cognitive/affective) as a mediator variable to understand purchase intention in websites; Liu and Shrum (2009) on the other hand chose to use consumer attitudes, Internet experience, and involvement (task/website/product) to investigate perceived interactivity and its effects on elaboration.

Table 4.2 **Experimental research in interactivity studies**

Author	**Constructs**	**Method**	**Operationalization**	**Findings**
Levy and Nebenzahl (2006)	Stimulus: iTV ▪ Enduring involvement ▪ Situational involvement ▪ Perceived programme involvement ▪ Product involvement	Stimuli= 12 min TV show extract 8 film combinations N=243	1. Interactivity was defined as a dichotomous variable: interactive behaviour and otherwise. 2. Extent of interactive behaviour was measured by the number of clicks and the total number of seconds that each respondent spent interactively. 3. Tested 2 types of programme involvement: situational and enduring. 4. Products, for each of 4 product categories.	a) There is a negative relationship between programme involvement, and interactivity: the higher the level of programme involvement, the lower the likelihood of entering interactive behaviour b) Involvement with the program does not affect the extent of interactive behaviour.
Cauberghe and De Pelsmacker (2008)	Stimulus: iTV ▪ Perceived interactivity ▪ Brand recall ▪ Brand recognition ▪ Attitudes toward the brand ▪ Attitude towards banners ▪ Arousal and valence ▪ Programme involvement	Stimuli: a non-interactive and an interactive TV program 2 banners for 2 different product categories: toothpaste and cars N=281	Degree of product involvement (low-high) x degree of programme interactivity (low-medium-high).	a) Recall and recognition are higher in banners present in non-interactive conditions b) General attitude toward banner advertising has a significant positive effects on the attitude toward the brand
Sperring and Strandvall (2008)	Stimulus: iTV Audience's affective responses Interactivity of the programme: usability (design and tech features), enjoyment (suspense and tension),	Stimuli: IDTV game show that enlarges interactivity by mobile N=35 divided in 7 groups Mixed method Quasi-experimental study Eye tracking camera	Before the experiment, researchers showed how to use the equipment. Group 1 watched the show individually, with no interactivity. Group 2 watched the MHP version of the program individually.	a) Involvement and attention in the game and the TV program were greater in the interactive than in the non-interactive peer groups. b) Interactivity add value to the viewing experience in general among young adults c) Interactivity raises involvement, enjoyment and excitement.

Author	Constructs	Method	Operationalization	Findings
	involvement (behaviour in group and alone), appeal (interest in participating again, attitudes toward ITV), effort (costs, rewards for participating) Emotions and affections interactivity provoked	Photoelectric plethysmograph measuring blood flow and electrodes for measuring skin conductance	Group 3 played the mobile java version of the program individually. Group 4 tried all ways of watching the program individually (no interactivity, MHP interactivity, and Mobile Java interactivity). Group 5 watched the show as a group, with no interactivity. Group 6 watched the MHP version of the program as a group. Group 6, played the mobile java version of the program influenced by the group presence.	d) Enjoyment was measured with eye-tracking, psycho –physiological measuring, questionnaires and semi-structured interviews.
Lee and Lee (1995)	Experiences of programs watched, including escape, excitement, cognition, identification with the TV characters, curiosity.	1. Exposure to stimulus: traditional TV 2. Measurement 18 focus groups= 1872 viewers Qualitative	Respondents were asked to describe the program and how they felt while watching it	Four levels of viewing were identified: a) TV is the sole activity and concentration is high, the viewer is in front of the set b) TV is one of 2 activities and concentration is divided; the viewer is in front of the set but visual focus is divided between viewing and another task such as reading the newspaper c) TV is a peripheral activity, an accompaniment to a primary activity; the viewer is not in front of the set but is in contact with it. d) TV is a background noise; the viewer may or may not be in the same room.
McMillan and Hwang (2002)	Stimulus: website. ▪ Consumer perception	Stimuli: context of WWW Pertest n=60	**Measures of Perceived Interactivity (MPI)**	Communication Time

Author	Constructs	Method	Operationalization	Findings
	▪ Perceived interactivity ▪ Flow ▪ Direction of communication, (com) ▪ User control (con) ▪ Time (t)	N=126	Real-time conversation (com and com/t) * Enables two-way communication (com) * Enables concurrent communication (t/com) Non concurrent communication * Is interactive (all) Primarily one-way communication * Is interpersonal (com) Enables conversation No delay Loads fast Loads slow Operates at high speed Engaging (con and t) Variety of content (con of choices) Keeps my attention (t/con) Easy to find my way through the site (con of navigation) Unmanageable (con of navigation) Doesn't keep my attention Passive Immediate answers to questions Lacks content	Time to load Time to find information Control Control of navigation Control of choices
Raney *et al.* (2003)	Stimulus: website. • Perceived interactivity • Attitude toward the site, the advertisement and the brand • Purchase intention • Enjoyment	1. Pre-test questionnaire 2. Exposure to stimuli Stimuli: 4 websites of automotive manufacturers Website 1: video without	The homepage included a brief set of instructions and 9 hyperlinks: 4 to automotive websites, 4 to the corresponding web surveys, and 1 about demographics. pre-test questionnaire: 3-7 days before, subjects answered the attitude toward	Perceived interactivity have a positive influence on attitudes toward the website, attitude toward the brand, and purchased intention, arousal and intent to return to a website. Hierarchy of preferences: consumers prefer film-based site, interactive site,

Author	Constructs	Method	Operationalization	Findings
	• Arousal • Likelihood of an individual returning to a website	audio; Website 2: video and audio; Website 3: Interactive brand ad; and Website 4: Film brand ad 3. Post-test questionnaire Duration: 45 min	brand and purchasing intent surveys. Participants were randomly assigned to one website. Post-test. Survey about the viewed website, attitude toward the brand, purchasing intent, attitude toward the ad,	site with video product footage and audio, and site with video footage only.
Schlosser (2003)	Stimulus: website. a) Object interactivity b) Imagery c) Purchase intention d) Attitudes towards the website e) Involvement	Stimuli: website Pre-test N= 75, divided in search and browse modes of users. Test 1n= 56 Test 2 n= 128 Test 3 n= 151 Test 4 n= 101 a. Manipulation check: participants reported whether their behaviour could be described as searching and / or browsing	Participants were assigned to a condition (either searching or browsing), then visited the website for 6 minutes. After, filled in a survey Exp 1) effect of site and goal on brand attitudes, purchase intentions, and attitudes towards the site Exp 2) measured product rather than brand level, participants also were asked to write down their thoughts about their website experience (cognitive-response measure by Cacioppo and Petty, 1981). Exp 3) the measures were applied 3 weeks before the main experiment	a) Object interactivity will produce vivid mental images for both searchers and browsers b) The impact of object interactivity is likely to influence purchase intentions more than attitudes c) Mental imagery is superior to cognitive elaboration in influencing intentions d) Perceived object interactivity was significantly related to purchase intentions.

Author	Constructs	Method	Operationalization	Findings
Sicilia *et al.* (2005)	Stimulus: website. ▪ Recall ▪ Interactivity ▪ Flow ▪ Attitude toward the website and the advertisement • Dimensions of interactivity: control, two-way communication and synchronization • Product knowledge: (Smith and Park 1992) • Navigation experience: asking participants how many hours spend online • Need for cognition	Stimuli: 2 website environments, 1 interactive and 1 non interactive. Time of exposure: 5min. Manipulation checks Perceived interactivity: 7-point Likert scale (interactive, enables 2-way communication, active, keeps my attention) N=213 Product: PC Full experiment: 20min	1. Participants were "free" to click on any link they wanted to. 2. After exposure, participants reported all the thoughts they had while watching the stimulus 3. Participants completed the flow state and the attitudes toward the website and the product measurements.	a) Interactivity leads to favourable attitudes, because of the influence of interactivity on information processing and flow intensity. b) Interactivity increases involvement c) Processing increases as interactivity increases d) Interactivity produces higher flow state intensity.
Liu and Shrum (2009)	Stimulus: website. • Involvement (task/website/product). • Experience using nternet • Attitudes toward the brand and toward the site. • Perceived interactivity	Stimuli: website for a fictitious portable audio company (MP3 players). 2 websites, 1 for high interactivity and 1 for low interactivity N= 80 Time= 30-45 min **Interactivity experimental manipulations** (p58): Product catalogue (low	1. Questionnaire measuring participants' Internet experience and involvement with MP3s 2. After 2-weeks delay, participants were assigned to 1) high involvement condition (they were told that they were among a small group of consumers chosen for the study and that their inputs were very important) or 2) low involvement condition (were told that they were part of a large-scale study involving many consumers and that their individual input would be averaged in the final analysis).	a) Interactivity improves brand and website attitudes b) Participants in high-involvement conditions reported more involvement with the site c) Participants in high-involvement conditions used significantly more interactive features d) For experienced users, high-interactivity website produced more positive brand attitudes e) In the low involvement website group, there was no interaction between interactivity and user experience

Author	Constructs	Method	Operationalization	Findings
		interactivity: linear product catalogue, users need to go back to a main product list page to jump to another product; high interactivity: nonlinear product catalogue, where users can easily jump from one product to the other) Product choice FAQ Special announcement Navigation guide Fun stuff Customer stories	Participants browse the Internet, then wrote down the thoughts that came across their mind, then filled out a survey containing attitude, experience, and perceived interactivity.	f) For inexperienced Internet users, the inhibiting role of interactivity dominates, resulting in less positive attitudes in high-interactivity than in low-interactivity conditions. g) High-interactivity website is more persuasive than a low-interactivity one for both types of consumers.
Jiang *et al.* (2010)	Stimulus: website. • Website interactivity (high vs low) • Involvement (cognitive and affective) • Product type • Purchase intention • Interactivity: active control, reciprocal communication	N=186 Participants were assigned to one of the 8 treatment conditions 20 min Manipulation checks for active control, reciprocal communication, product type Product type: Functional/ Expressive.	***Manipulation checks*** Active control was manipulated in two levels (high vs low): High active control: items were categorised and presented in a meaningful manner, they could select the order of info they wanted to see at each moment. Low active control: websites did not include product categories. Reciprocal communication was manipulated: in the "present" condition, participants were able to communicate with the sales representative via live chat.	a) Active control positively influences cognitive involvement and affective involvement b) Cognitive involvement will positively influence purchase intention
Ariely (2000)	Stimulus: Interactive Home Shopping Simulation Interactivity: active	Between subjects design Experiment 1 N=36 2 experimental conditions: Low/High Control Info	Experiment 1. Is information control useful? Interactive Home Shopping simulation, subjects were given information about 9 cameras and were asked to rate the	a) when subjects are in high control, memory and learning increase b) Increased information control leads to increased performance c) The increase in performance

Author	Constructs	Method	Operationalization	Findings
	control Attitudes and decision-making	High InfoControl: subjects had freedom in selecting the sequence characteristics in which the info was displayed Low InfoControl: subjects had no freedom, and viewed the info in a manner similar to viewing a movie Experiment 2. N=40 No task was assigner Examined and rated 36 different cameras Experiment 3. N= 144 Experiment 4. N=72 Cognitive load (low-high) (p242) Experience manipulation, and hence the interface manipulation Involved the length of the task and the number of trials Experiment 5. test long-term implications N=40 Implicit memory Implicit knowledge	overall quality. (10 min) Experiment 2. Self-expression experiment Subjects were asked to make judgements for them. Subjects examined and rated the 3 sets of 3 cameras twice, making it a total of 18 Subjects' own ratings were used as benchmark for their own performance Experiment 3. Benefits of information control Known-InfoControl condition. Subjects knew in advance the search strategy Self-InfoControl. Subjects were asked to indicate their search strategy for each next trial, and this strategy was carried out for them Experiment 4. Costs of information control? Experiment 5. Memory and knowledge experiment	associated with increased information control generalizes to expressions of both utilities for one's self and others d) Neither knowing the structure of the information flow, nor being able to control it a priori matters. e) Demonstrates the benefits of high levels of information control (replicating previous experiments and extending the results to subjective measures) but also its associated processing costs. f) Subjects in the high InfoControl condition had both better memory and knowledge

Author	Constructs	Method	Operationalization	Findings
		Incidental memory task and a correlation knowledge task		
Grigorovici and Constantin (2010)	Stimulus: digital games Information processing • Presence • Immersion • Effectiveness of pp • The effects of 3D ad type and IVE arousability on brand recall, recognition and preferences • Arousal • Cognitive load • Object recall • Brand recall and recognition • Brand preference Dependent variable Presence	8 3D –VRML immersive web –based IVE (4 arousing and 4 calming) N= 144	Interactivity was measured with the 53 items related to Presence	a) There was a significant effect of ad type on object recall, so that objects seen on billboards were better recalled than pp. b) No effect of arousal was found on brand recall and recognition c) The more arousing an IVE is, the higher the involvement, the lower brand recall and recognition
DeHaan *et al.* (2010)	• Interactivity • Recall • Cognitive load measure • Learning a second language • Degree of interaction (watching or playing): the condition was set for the researcher • Attitudes	Music video game 20 min N= 80 2-week delayed recall test	For the interactive condition, 40 subjects played the video game. For the non-interactive condition, 40 subjects watched the video of the video game. After being exposed to the stimuli, subjects were asked to remember the lyrics of the game	Interactivity was not conducive to learning and seems to have unnecessarily diverted the player's attention from the vocabulary and hindered recall

Author	Constructs	Method	Operationalization	Findings
	• Vocabulary written recall (2-week delay)			
Hang and Auty (2011)	Stimulus: digital games • PP effectiveness • incidental exposure • brand recall • mood • Product involvement Dependent variables children's choice of 1) brand in either of two types of choice tasks and 2) brand recall, with exposure to product placement and interactivity as independent variables	Stimuli: 4 video game conditions, 1 non interactive, 1 interactive but without pp, 3) interactive with pp, 4) no interactivity, no instructions and no pp. N= 207 children Experimental design 2 (Exposure to pp vs not exposed) x 2 (interact with pp vs not interact) x 2(memory-based test vs stimuli-based test)	Stage 1) children played for 10-12 min in their school pc Stage 2) questionnaire (half of the sample were asked to make a stimulus-based choice and the other half, a memory-based one) choose 1 brand for each product category from a set of brand names (stimuli-based) or from unaided recall (memory-based)	Prior incidental exposure to the pp can have a clear impact on children's choice. Interactivity enhances recall

4.2.3 The research problem

The aim of this thesis is to examine whether interactivity increases brand recall and recognition of product placement embedded in interactive digital music videos. Following a renovation approach, which involves analysing the literature pertaining to product placement to ascertain whether classical non-interactive product placement literature should be updated, the present study proposes a conceptual model clearly identifying its theoretical components and the relationships among them. The objective is to update the components of classical non-interactive product placement theory that have become outdated due to technological change. In doing so, the research seeks to add insight to product placement and interactivity theories. The technological change in this case is the emergence of user interactivity on digital platforms (e.g. digital music videos). A reworked conceptual framework was formulated accordingly, and its components were tested with and without the presence of user interactivity (see Section 3.4).

The specific objectives of this thesis are:

i) To empirically test the key factors which influence recall and recognition of a classical non-interactive product placement in digital music videos and the moderating effects of positive/negative context-induced mood.
ii) To analyse how the factors of the theoretical framework for classical non-interactive product placement apply in the case of interactive product placement and the moderating effects of positive/negative context-induced mood.
iii) To test whether recall and recognition levels for product placement in an interactive online medium are greater than those for product placement with the moderating effects of interactivity and positive/negative context-induced mood.

Music videos were selected because this media vehicle is already being used as a digital resource to promote brands, and research literature featuring them is relatively scarce (see Section 3.4.2) (Lynn *et al.* 2014; Matthes *et al.* 2012; Hudders *et al.* 2012; Burkhalter and Thornton 2012; Schemer *et al.* 2008). Research on classic product placement in music videos is similarly under-developed (Burkhalter and Thornton 2012; Plambeck 2010; Schemer *et al.* 2008). Music videos bring distinctive characteristics to the product placement debate since they create a distinctive 'media context effect' (Aylesworth *et al.* 2011; Russell and Stern 2006; Gardner 1985) (see Section 3.4.1). It can argued for example that the music video, as a vehicle for product placement, may

give rise to altered levels of involvement and meaning transference, characteristics and outcomes that merit further investigation.

4.2.4 The research strategy

The present study follows the research process outlined by Lazar *et al.* (2010). The research is experimental, incorporating a survey element. It is also descriptive because it draws conclusions and theoretical implications based on the results of a questionnaire (Malhotra 2009). The study followed a hypothetico-deductive research mode to identify the factors influencing the recall of product placement and to determine whether previously established relationships among variables are still pertinent in an interactive context (Buckley *et al.* 1976). Finally, the research strategy to gather and analyse the data was empirical and was based on direct access to facts and observations in a laboratory-based environment (Buckley *et al.* 1976). This thesis incorporated a human-computer interaction remote observation recording software called Morae Recorder. Morae software consists of an action tracker which can keep a record of the 'clicks' of each subject. Morae Recorder provides researchers with additional data to understand participants' behaviour. The use of Morae Recorder is discussed in Section 4.2.5.

A laboratory experiment was chosen to control the settings of the test and to maximise internal validity. Specifically, the experiment was designed to meet the following criteria:

i) Full exposure to the music video;
ii) To ensure that subjects answered the web-based survey immediately after stimulus exposure;
iii) To ensure that subjects had no major difficulty following the experiment on their PCs;
iv) To minimise contamination of their responses by sharing the content of the survey informally with one another

To reproduce true experimental conditions, the test took place simultaneously in three computer laboratories. In a natural setting, a digital music video is typically watched online and individually. The laboratory conditions for this test aimed to replicate this natural setting as far as possible.

4.2.5 The research design

This research followed a 2 (interactive/non-interactive) x 2 (*programme-induced mood*: positive/negative) between-groups factorial experimental design. The three experimental components, treatment, units and assignment method, are discussed below.

The treatments are the conditions and the procedures which the researcher wants to investigate (Lazar *et al.* 2010). The treatments in the present experiment are interactivity (present/absent) and mood (positive/negative). The units are the objects to which the researcher applies the treatments. In the case of human-computer interaction, as is the case here, the units correspond to human subjects (Lazar *et al*. 2010). In this study the units are students drawn from the same population. The sampling strategy and supportive considerations are discussed in the following sections. Finally, the assignment method is 'the way in which the experimental units are assigned to different treatments' (Lazar *et al.* 2010, p. 27). Subjects were assigned randomly to one of the four conditions: interactive/positive, non-interactive/positive, interactive/negative or non-interactive/negative. The specifics of the treatments, units and the assignment method utilised in this study are discussed below.

4.2.5.1 Conditions

An experiment involves multiple conditions and participants are randomly assigned to them (Lazar *et al*. 2010). Consistent with the research objectives, this study compares product placement embedded in digital music videos with and without interactivity, and the effects of context-induced mood (positive/negative). Therefore, four conditions featured in this experiment.

In Conditions One and Two, the control conditions, participants were exposed to a linear digital music video stimulus (non-interactive) in either a positive or negative context-induced mood video. Consequently, participants in these conditions had no opportunity to interact with the product placements within the videos they viewed. In Conditions Three and Four, the interactivity conditions, subjects were exposed to a digital video with enhanced interactivity using hypervideo, in this case available through Clikthrough Technologies, in either a positive or negative context-induced mood video. Here, participants had the opportunity to interact with the placed brands.

The between-groups design compares the results of different experimental conditions allowing participants to be exposed only to one experimental condition (Lazar *et al.* 2010). The main advantage of the between-group design over the within-group design is the absence of a learning effect. Users do not learn from repeated exposure to different task conditions (see Table 4.3). This is relevant in comparing interactive versus non-interactive product placement because it can be argued that placements that were not noticed during the first exposure could be noticed during a second exposure, thus affecting the results in terms of brand recall and recognition. Another advantage of the between-group design is avoiding the fatigue of being exposed to the two different context-induced videos and answering the measurement instrument for each.

Table 4.3 **Types of experimental design**

Type of design	Between-group design	Within-group design
Focus	A participant is only exposed to one experiment condition.	Each participant is exposed to multiple experiment conditions.
Disadvantages	Users do not learn from different task conditions	Learning effect
Advantages	Time to complete an experiment its shorter	It takes longer to complete the experiment

Based on Lazar *et al*. (2010, p. 46)

Four versions of the digital music videos were prepared using Morae Recorder. Morae Recorder allows the experiment to be automated, thus no intervention on the part of the researcher is required, only machine-participant interaction. Each stage of the experiment was divided into clear tasks. Once the relevant digital material has been manually configured by the researcher, the recorder displays the session and task instructions to the participants automatically, logging the start and end of each task. All this information is presented step-by-step using dialog boxes on each participant's PC screen. The use of Morae Recorder was important in avoiding researcher bias, and it also allowed the sample to undertake the study simultaneously. Morae Recorder could also be used for remotely deployed studies. One of the limitations of remote experiments (and quasi-experiments) is the inability of the researcher to ensure that participants have completed the experimental tasks in order and without inconvenience. Morae Recorder software can be set up remotely so that participants can open the study configuration online – with or without the presence of the researcher, and can be guided by the machine to complete the experiment. At the end of a Morae Recorder session, sessions can be saved, giving researchers the opportunity to study participants' behaviours during the experiment. For instance, the movements of the cursor can be

recorded; the clicks, the time spent in a particular task, or whether the participant actually watched and completed the tasks can be tracked. Morae Recorder provides digital product placement studies with a rich data field to assess digital consumer behaviour: however, the present study only utilised Morae to automatise the experiment.

Subjects, chosen from the same population, were assigned randomly to one of the four conditions. Participants were only exposed to one experimental condition. Each condition was allocated to a different computer laboratory to reduce inter-group contamination (Lazar *et al.* 2010). Great care was taken not to disclose the presence of interactive product placements to participants beforehand. Finally, the experiment was applied simultaneously to the entire sample.

4.3 Experimental procedure

Four study configurations were prepared using Morae Recorder activity tracker software, corresponding to an equal number of experimental conditions. The software was set up previously on the computer labs and programmed to run on autopilot, so that subjects were guided step-by-step by instructions via the computer on which they were exposed to the digital music video. Hence, once guided to set up and start the software, participants did not require further assistance from the researcher.

The experimental procedure was organised in two stages for each condition (see Figure 4.1). In Stage 1, subjects were exposed first to the music video stimuli and then asked to complete a questionnaire. The questionnaire design and development is presented in detail in Section 4.5.2. The duration of this stage averaged 40 minutes. Stage 2 was conducted one week later. Subjects returned to the laboratories to complete a follow-up questionnaire assessing brand recall and recognition and whether their perception of the video and the brands had changed. In accordance with similar research (Cauberghe and De Pelsmacker 2008; Shapiro and Krishnan 2001), the duration of this stage was approximately 10 minutes.

In Stage 1, upon arrival, subjects were allocated a personal computer and wore headphones with volume set at medium. Once they were all seated at their computer, participants received an explanation of how to open the Morae Recorder autopilot study configuration, and were instructed to follow the instructions presented on their screens.

The initial dialog box introduced the study and explained the procedure to follow in-test. The set of instructions is laid out in Figure 4.2.

Figure 4.1 **Experimental procedure**

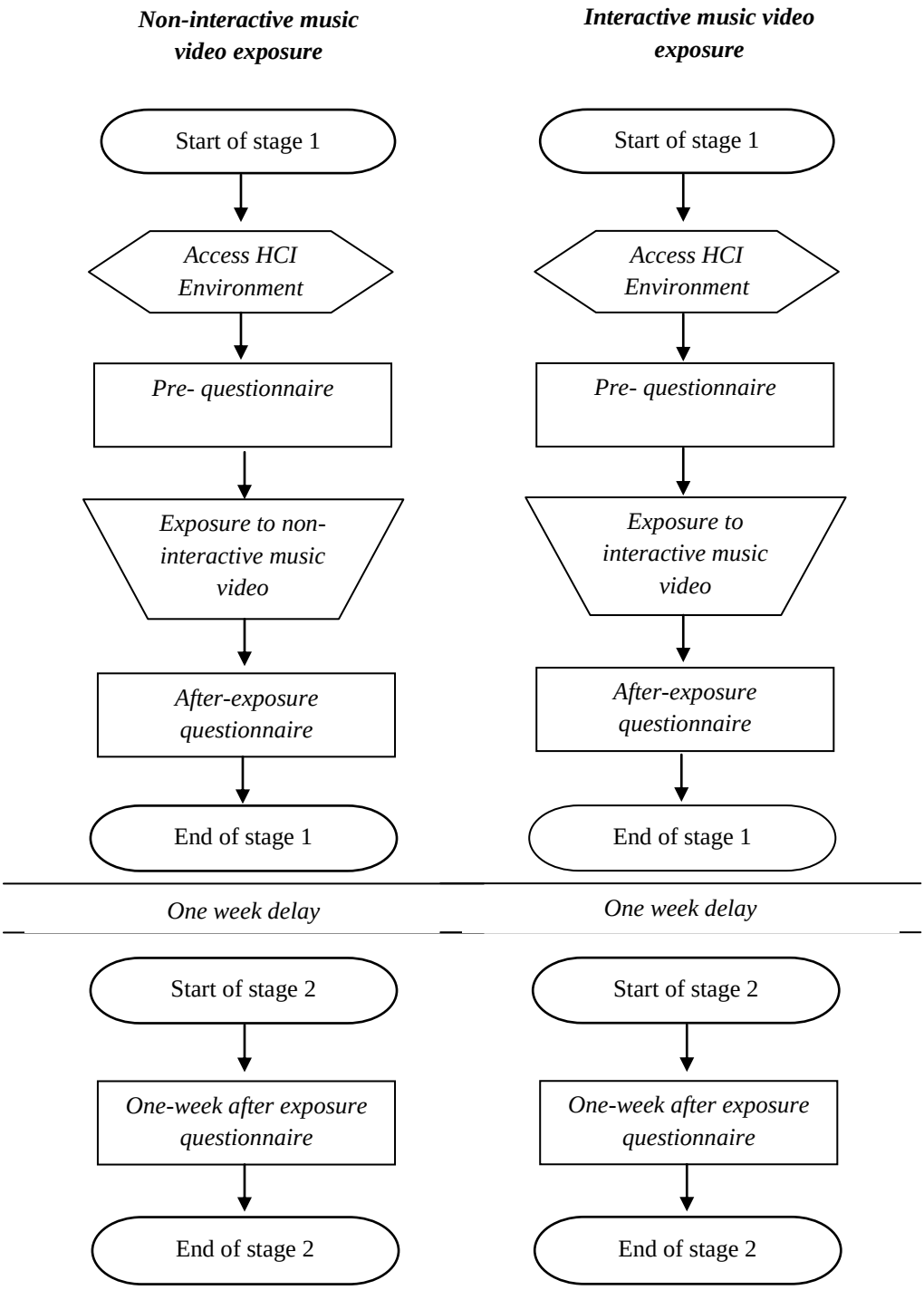
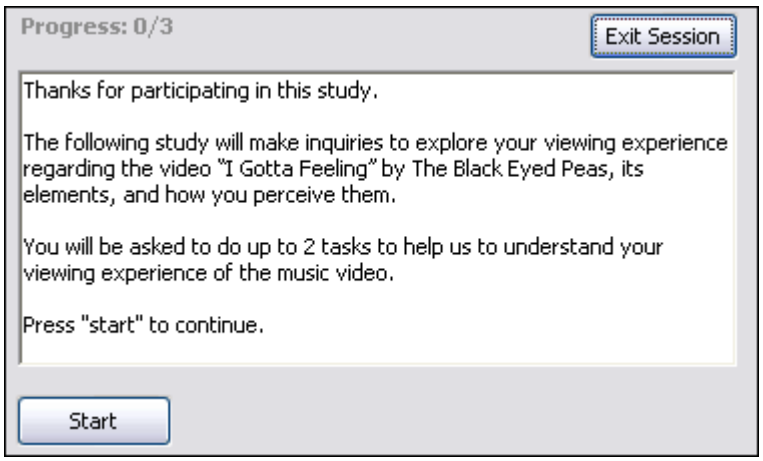


Figure 4.2 **Experiment instruction chart**



Following this, Task Number 1 was introduced. This task consisted of answering general demographic questions. This task was exactly the same for each experimental condition (see Figure 4.3).

Figure 4.3 **Experimental Task Number 1**

To begin with, we would like you to answer some general questions about yourself.

Please follow the URL http://www.surveymonkey.com/s/Pre_BEP

You can work through these questions quickly. We are looking for your initial thoughts and impressions.

Please press 'start' when you are ready to commence this task.

Once this task is complete click 'end task'.

Task Number 2 required exposure to the stimuli. In Condition One and Two, the control conditions, participants were exposed to a linear digital music video stimulus in either a positive or negative context-induced mood video and had no opportunity to interact with the product placements (see Figure 4.4). Participants were exposed only once to the entire music video.

Figure 4.4 **Experimental Task Number 2: Conditions One and Two**

Condition One
Please follow the URL http://www.youtube.com/watch?v=uSD4vsh1zDA. Please pay attention to the details and elements contained within the video. Your impressions while watching the video are important for us. Notice that you can play the video only one time. If you feel ready to commence this task, please click the 'start' button and 'play' on the music video. When you finish watching the video, press the 'end task' button.

In Conditions Three and Four, the interactivity conditions, subjects were exposed to a digital music video with enhanced interactivity using hypervideo, in this case available through Clikthrough Technologies, in either a positive or negative context-induced mood video. The hypervideo allowed viewers to watch and click on video content. When moving the cursor over the video, a label appears next to brands, people, products and places featured. Participants interested in anything that was hyperlinked on screen could simply click on it. This action would display additional information in a separate panel, contemporaneous with the music video screening - without interrupting the flow of the video (see Figure 4.5). Subjects exposed to this condition were instructed, via Morae Recorder autopilot, to explore the first 10 seconds of the music video and to notice the specifics of utilising this media type. Participants were told that, if desired, they could interact with the video by moving the cursor and clicking on the clickable areas. As an example, they were instructed to place the cursor in the first frame and click on one of the hyperlinked labels to observe what happened. After this demonstration, they were instructed to stop the demo, play the video and commence the task (see Figure 4.6 and Figure 4.7).

Task Number 3 was labelled 'Answering the Questionnaire'. This task presented a link to an online survey containing the measurement instrument and was administered using Survey Monkey (see Appendix B). The set of instructions are presented in Figure 4.8.

Figure 4.5 **Experimental Task Number 2: Conditions Three and Four**

Condition Two
Before clicking on 'start the task' read the following: Please open Mozilla Firefox web explorer and follow the URL http://www.clikthrough.com/theater/video/55//en-US. Please, take a few minutes to explore this interface. Note that you can interact with the video. Move the cursor around the music video. Notice that hyperlinked areas are activated. This means that you can 'click' on the clickable areas of the video, and interact with the information contained within it. You could click on persons, products and places. Press 'Click to watch now' in the video window. Place the cursor on top of the street displayed at the beginning of the video. The cursor immediately displays 'Hollywood Blvd'. Then, click on it to further expand the information about this place. You will get a contiguous frame with the information referring to the Hollywood Blvd (e.g. interesting facts). Discard this information. During the time that you are noticing this new window, the video keeps playing. You could click on as many clickable spots as you wanted. Your turn. Stop the video demonstration now. Before clicking 'start the task' notice that you can play the video only one time. Now restart the video and enjoy watching. Once this task is complete, press the 'end task' button. Please, press 'start the task' when you are ready to commence this task.

Figure 4.6 **Example of cursor rollover and product placement label**

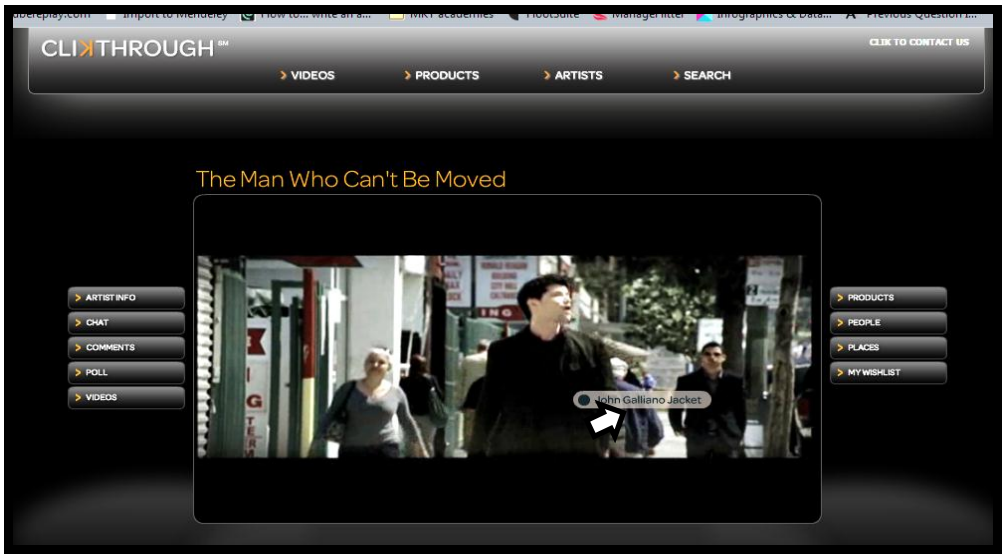


Figure 4.7 **Example of interactive placement and expanded information**

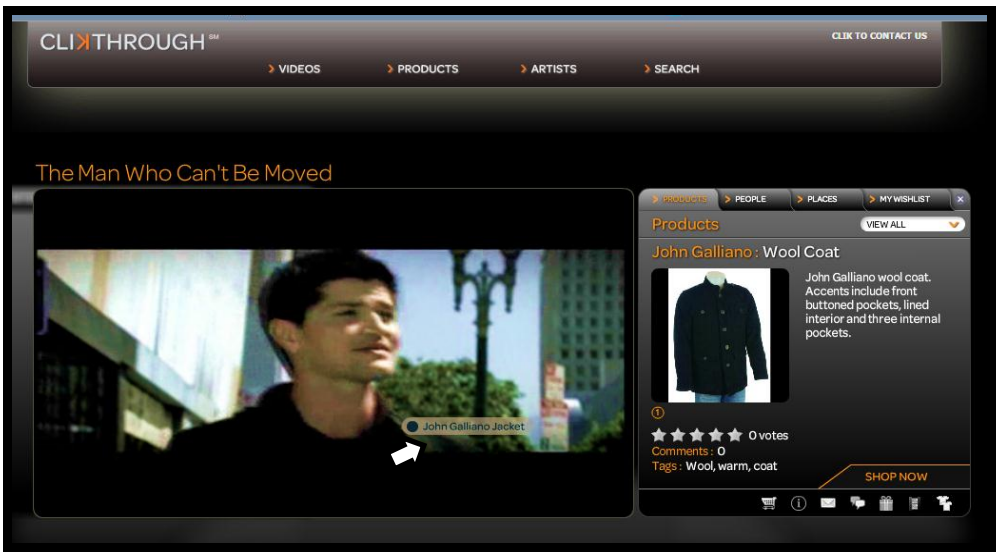


Figure 4.8 **Experimental Task Number 3**

Conditions One and Two
Now that you have viewed the 'I Gotta Feeling' video, we would like to ask you to complete an online questionnaire. First, close the video window. Now, follow the URL http://www.surveymonkey.com/s/_BEP You can work through these questions quickly. We are looking for your initial thoughts and impressions. Please, press 'start' when you are ready to commence this task. Once this task is complete, press the 'end task' button.

The final task of Stage 1 instructed participants how to close Morae Recorder and save the data file. The set of instructions is outlined in Figure 4.9. Stage 2 was conducted one week after exposure to the digital music videos in computer labs. Upon arrival, subjects were allocated a personal computer and instructed to follow a URL. This link led to an online questionnaire. After completion, participants were debriefed and their participation was acknowledged.

Figure 4.9 **Experimental Task Number 4**

Both Groups
Thank you for completing the questionnaire. Now we will tell you how to save your recordings: Once you finish reading this Dialogue Box, press 'start task' and immediately after press 'end task' button. A window will pop up, and you will be asked to save the recording. Please, save it on the desktop and name it with your name_surname plus '_MV2_BEP' (e.g. Ciara_Oneill_MV2_BEP) Once you have done this, copy the file to your USB key. Now, press 'start task' and immediately press 'end task' button.

4.4 Stimulus selection mechanism

Digital music videos were chosen as the stimulus mechanism. First, the model videos were chosen as they met the interactivity criteria and were readily available from www.clikthrough.com. Clikthrough provides interactive media technology via object-tagging software which enables hypervideo and turns content into points of interaction and sale within digital videos (Clikthrough 2014). Their product proposition consists of video viewing and interactive shopping experience thereby enabling consumers to interact with the music videos. Clikthrough's clients include Giorgio Armani, BMW, Bulgari, Steve Madden, Topshop and Tommy Hilfiger. Clikthrough hyperlinks digital music videos retrospectively, allowing viewers to get more information about the hyperlinked brands and to purchase without interrupting the viewing experience.

Second, two digital music videos were selected: one portraying positive mood and one portraying negative mood. A negative programme induced mood prompts more thoughtful problem solving (Aylesworth and Mackenzie 1998). Programme-induced mood valence was manipulated by using two music videos to assess their impact on product placement recall and recognition (van der Weele *et al.* 2009): 'The Man Who Can't Be Moved' by The Script (negative mood) and the 'I Gotta Feeling' video by the Black Eyed Peas (positive mood).

The pilot study assessed the 'I Gotta Feeling' video by the Black Eyed Peas (positive video-induced mood). The music video features 27 hyperlinked product placements (see Table 4.4).

Table 4.4 **Brands featured in the 'I Gotta Feeling' video by the Black Eyed Peas**

1. Nokia*	2. BCBG	3. MAC*
4. Hdmini Emerito	5. Cosabella	6. Minx Nails
7. American Apparel	8. Elegant Moments	9. Monster
10. Steve Madden	11. Burberry	12. Obey
13. HP *	14. Frederick's of Hollywood	15. Paul Smith
16. Joe Heart Collection	17. Hot Topic	18. Theory
19. Nike	20. WeSC	21. Brian Lichtenberg*
22. Marc Jacobs	23. Andreani Gioielle	24. Amiclubwear
25. Guess	26. Forever 21	27. Avalon

Prominent brands are denoted with an (*)

The main study also included 'The Man Who Can't Be Moved' digital video by The Script (negative video-induced mood). The digital music video features 21 hyperlinked product placements (see Table 4.5).

Table 4.5 **Brands featured in 'The Man Who Can't Be Moved' video by The Script**

1) DW Drums	8) Marshall *	15) Ticketmaster
2) Shure	9) Epiphone	16) Les Paul
3) Sabian	10) Nice Collective	17) Nixon*
4) All Saints	11) Ask the Missus	18) Jaxon
5) Dior	12) G-Star	19) American Apparel
6) John Galliano	13) Famous Stars and Straps	20) Unconditional
7) Firetrap	14) REI	21) Photogenic records

Prominent brands are denoted with an (*)

The present research utilised existing interactive digital music videos as the stimuli. Therefore, it was not possible to control all influencing factors (e.g. time, prominence). The advantage of using these stimuli is that they add realism to the experimental setting. Selection criteria also included: 1) videos would portray a similar number of brands, and 2) videos should portray a similar number of prominent placements.

4.4.1 Placements prominence

The prominence of the brands placed was evaluated by two independent researchers, other than the author; results are shown in Table 4.5 and Table 4.6. Both agreed that, among the placed brands in the 'I Gotta Feeling Video', four are prominent: MAC cosmetics, Nokia, HP and Brian Lichtenberg. In 'The Man Who Can't Be Moved' video, only two placements were prominent: Nixon and Marshall.

4.5 Design and development of the research instrument

Three questionnaires were designed to collect quantitative data, one pre-questionnaire, an after-exposure questionnaire and a one-week after exposure questionnaire. The purpose of the questionnaires, consistent with the research objectives, was to assess the key factors that influence recall and recognition of a classical non-interactive product placement and, in the case of digital music videos, their effects in the presence of interactivity. These factors and the questionnaire development are described in detail in the following section.

4.5.1 Questionnaire design

Two questionnaires were developed and tested in a pilot study to ensure validity; clarity and ease of use (see Section 4.7). The questionnaires were designed in an electronic format.

The questionnaire instrument was developed based on the conceptual framework discussed in Section 3.4. Overall, 10 factors were utilised. Although each of them has been analysed in detail in the literature review, the main methodological procedures utilised in the study are reviewed in this section (see Figure 4.10). Special attention was given to ensure that the constructs were reliable, measured, generalized and controlled (Alasuutari *et al.* 2008).

A pre-questionnaire was used because of (i) the pertinence of measuring three factors prior to stimulus exposure and (ii) to simplify the post-exposure questionnaire. This pre-questionnaire (see appendix A) consisted of demographics, general music video viewing questions, mood prior to stimulus exposure, prior familiarity with the band and the video, and involvement with the band and the video. This section was administered before stimulus exposure.

In the after-exposure questionnaire (see appendix B), special attention was given to the flow of the questions to avoid priming participants and to avoid inducing false recall. The questionnaire firstly asked respondents to indicate their mood after exposure to the digital music video. After this, they were asked how many brands, products, persons and/or places they recalled from the music video. Participants were also asked about their connectedness with the video to distract them from focusing their cognitive efforts on the brands. Following this, they were assessed for implicit memory processing, type

and amount of presented brand information, and placement recognition. The opportunity to process a placement and judgement of placement fit were asked only for those brands that individuals had recognised during the music video, followed by questions measuring scepticism towards advertising and attitudes towards placement in general. Finally, there was a question asking the type of music video participants had been exposed to – interactive or non-interactive. Only those participants who were exposed to an interactive music video answered questions regarding perceived interactivity.

The one-week after exposure questionnaire (see appendix C) included measures for product placement recall and recognition. Strength of the link between brand and music video, and involvement with the brand were only assessed for recognised brands. Next, prior familiarity with brands was investigated. Finally, a control question was utilised to find out whether participants had watched the music video at all during the week since they first watched the video in the experiment.

Figure 4.10 **The questionnaires of the research**

Pre-questionnaire	***After-exposure questionnaire***	***One-week after exposure questionnaire***
Demographics ***General music viewing questions***		
Execution factors - Programme-induced mood after exposure	***Execution factors*** - Programme-induced mood after exposure - The opportunity to process a placement - The type and amount of brand information presented	***Execution factors*** - The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium
Individual factors - Prior familiarity with a singer/musical group - Involvement	***Individual factors*** - Judgement of placement fit - Scepticism towards advertising - Attitudes towards placement in general - Connectedness - *Perceived interactivity	***Individual factors*** - Prior familiarity with a brand/product - Involvement
	Memory - Implicit memory - Placement recall - Placement recognition	***Memory*** - Placement recall - Placement recognition

*This set of questions was only applied to the interactive condition.

4.5.2 Questionnaire development

The questionnaire instrument was developed based on the conceptual framework presented in Section 3.4. The survey consisted of three main sections: (1) pre-questionnaire, (2) after-exposure questionnaire, and (3) one-week after exposure questionnaire. Copies of each of these questionnaires are reproduced in appendices A, B and C respectively.

Product placement research literature was used to identify optimal measurement and scaling tools for each of the factors in the model being tested. Preference was given to those measurements and scales that have been theoretically supported and that have been shown to yield results that are valid and reliable. Finally, these factors were combined in a measurement instrument to test the scales' validity in the context of interactive product placement in music videos.

4.5.2.1 Demographics

Demographics in the pre-questionnaire included gender, age, level of education, employment status and income. Demographics were collected to afford an overall understanding of the sample. The demographics section is followed by a section addressing the music genre preferences; how much they like listening to music, watching music videos, how often they are exposed to music videos, and the medium used to view it - television, Internet or mobile Internet. These questions were asked prior to the music video stimulus.

4.5.2.2 Execution factors

This section discusses the execution factors consistent with the conceptual framework for the study of interactive product placement (see Section 3.4).

Programme-induced mood

The PAD (Pleasure-Arousal-Dominance) scale was used to measure programme-induced mood. An adaptation of Mehrabian and Russell's (1974) original scale was taken from Aylesworth and Mackenzie (1998). The present study utilised four items to assess the sub construct *pleasure*: happy/unhappy, pleased/annoyed, satisfied/unsatisfied, and contented/feeling down (coefficient alpha of .91). The sub construct *arousal* included the following items: stimulated/relaxed, exited/calm,

jittery/dull, and wide awake/sleepy (coefficient alpha of .83). The scale is deemed valid and reliable.

The PAD scale was first developed to contextualise how environmental situations may affect a subject's emotional state. The scale was refined by Mehrabian and Russell (1976) in three studies on scale development and validation and evolved from an original scale of 28-items to a 23-item scale and a final version of 18-items on a +4 to -4 basis. Each of its three factors is assessed by six items. The item scores are summed within dimensions to form indices of positive versus negative moods. In addition, the correlations among the three factors ranked from -.07 to -.26 providing evidence that the dimensions are distinct. This scale was later reduced to 12-items, with four items for each construct, and was utilised to measure the consumption experience of a consumer by Havlena and Holbroook (1986), with a coefficient alpha higher than .90 for each dimension. However, their scale was only tested on a sample of 10 students.

The Mood Scale developed by Peterson and Sauber (1983) and the scale developed by Belk (1984) were considered. However, it was felt that they assess mood as an unidimensional construct, which corresponds more to pleasure (Shapiro *et al.* 2002). Their scales overlooked that while mood can be either positive or negative, it depends for its intensity on whether an individual is alert or not (Goldberg and Gorn 1987). An adaptation of the Aylesworth and Mackenzie (1998) scale was considered particularly appropriate for the present study, first because it is a condensed and acceptable application of the famous PAD of Mehrabian and Russell (1976), and second, because it was cited as an exemplar adaptation by Balasubramanian *et al* (2006) and has been utilised in related product placement studies (Scott and Craig-Lees 2010).

The present study assesses mood before and after the music video stimulus, to track changes in the viewer's emotional state consistent with similar studies (van der Weele *et al.* 2009). While the Aylesworth and Mackenzie's (1998) measure consisted of three elements (Pleasure-Arousal-Dominance), only the first two elements were selected for inclusion in the present study. As discussed in section 2.2.1.1, the dominance dimension addresses subjects' personality traits, and as such cannot be replicated across cultures (Watson and Tellegen 1985; Russell 1983). Consequently it does not feature in this study. Positive and negative induced mood music videos are utilised in this study to assess their impact on product placement recall and recognition (van der Weele *et al.*

2009). It should be borne in mind that a negative programme-induced mood prompts the eagerness to perform more thoughtful problem solving (Aylesworth and Mackenzie 1998).

The opportunity to process a placement

The scale utilised to assess whether a placement is subtle or prominent was taken from D'Astous and Chartier (2000) and measures how manifest the placement is (subtle/prominent). The scale is composed of 3 items scored on a 7-point Likert scale and includes the following items: subtle (reverse-coded), unintended (reverse-coded), and couldn't miss it. Scale values are obtained taking the mean. Finally, the scale was found to be valid and reliable (.87), above the general recommended cut-off .70.

As discussed in section 2.2.1.3, a number of measurement procedures for prominence are available (Lehu and Bressoud 2009; Brennan and Babin 2004; Law and Braun 2000; D'Astous and Chartier 2000; Avery and Ferraro 2000; Russell 1998; Gupta and Lord 1998). Some rely on qualitative coding, which means that each placement's prominence depends to a great extent on the judgement of the coder. Although this approach is acceptable, the present study seeks instead to understand how a placement is perceived in the eyes of the participants in the study. The D'Astous and Chartier's (2000) measure was considered particularly appropriate for the present study, mainly because results are participant-oriented as viewers assess directly how they themselves perceive a product placement in terms of its prominence.

The placements included in both videos were also assessed manually by two independent researchers following the work of Russell (1998) and Gupta and Lord (1998). Both agreed that, among the placed brands in the 'I Gotta Feeling' music video, four are prominent: MAC, Nokia, HP and Brian Lichtenberg. In 'The Man Who Can't Be Moved' music video, only two placements were prominent: Nixon and Marshall.

The type and amount of brand information presented

The scale utilised to assess type and amount of presented brand information is based on Puto and Wells (1984) and measures the transformational and informational content of advertisements. Puto and Wells (1984) exposed a sample of students to 13 TV advertisements that were either, transformational, informational or both elements. Subjects were exposed to the advertisements just once in a theatre setting and after each

one, were asked to answer the 23-item six-point scale. From these items, eight measured informational and fifteen measured transformational characteristics respectively.

While the Puto and Well's (1984) measure consisted of 23 items, only 4 items were selected to measure each type of content. This decision was taken in order to minimise the length of the overall questionnaire. The criteria used to make this decision relied on keeping those items with higher values in the item-to-total scale correlation. Consequently, these items are the most representative of each dimension. The items measuring information are as follows:

1) I can now accurately compare the brands portrayed in the "The Man who Can't Be Moved" video with other competing brands on matters that are important to me'
2) The "The Man who Can't Be Moved" video was very uninformative
3) "The Man who Can't Be Moved" video taught me what to look for when buying any of the brands portrayed
4) There is nothing special about the brands portrayed in the "The Man who Can't Be Moved" video

The items measuring transformation are as follows:

1) While I watched the "The Man who Can't Be Moved" music video, I thought how the brands portrayed might be useful to me
2) The brands portrayed in the "The Man who Can't Be Moved" video fit my lifestyle very well'
3) I could really relate to the "The Man who Can't Be Moved" video
4) It is hard to put into words, but the "The Man who Can't Be Moved" video leaves me with a good feeling about using the brands portrayed

Scale values are obtained within subjects by summing the items comprising each scale and dividing the sum by the number of items in each respective scale. Four scale values are assessed based on the scale's mid-point: above the mid-point an advertisement is classified as high on that dimension. Finally, the scale was found to be valid and reliable (coefficient alpha of .84) (see Table 4.9 for Scales reliability). While other scales were considered (Park *et al* 2008; Aaker and Stayman 1992; Goldberg and Gorn 1987), Puto and Wells (1984) was deemed more suitable for the present study. Other measures fail to address both constructs in a sole integrated measurement, opt for manipulation checks (Goldberg and Gorn 1987), or utilise a single item to assess whether a stimulus was considered informational or transformational by participants (Aaker and Stayman 1992).

The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium

The scale utilised to assess the perceived fit brand/music video was based on Okazaki and Yagüe (2012). The scale was adapted from Gwinner and Eaton (1999) and Speed and Thompson (2000) and was originally used to assess brand-game congruency. The scale adapted for this thesis is composed of 4-items scored on a 7-point Likert scale. Scale items are as follows: 'It makes sense to me that these brands sponsor this type of music video'; 'the sponsored brands and the music video type fit well together'; and 'the brands and the music video features have similar images'. Finally, the scale was found to be valid and reliable (coefficient alpha of .84) (see Table 4.9 for scales reliability).

Strength of the link or fit was first assessed between the brands (as a whole) and the music video, and then only for those brands that were recalled and recognised by participants. This decision was made because participants could only objectively assess the level of congruency between music video and brands, for the brands they had recognised.

4.5.1.3 Individual factors

This study investigated how individual factors affect product placement outcomes. The following section describes these factors and their corresponding measurements.

Prior familiarity with a) singer, b) song, and c) brand

The scale used to assess prior familiarity has been adapted both from Puto and Wells (1984) to evaluate prior exposure to the video and to the brands, and from Kamis and Gupta (1994) to evaluate familiarity with the band/singer. Two items were placed in the questionnaire before exposure to assess prior familiarity with the music video: 'how well do you know The Script?', and 'how well do you know the 'The Man Who Can't Be Moved' music video by the Script?' One last item was utilised to assess familiarity with each placed brand, and was placed on the one-week after exposure questionnaire to avoid priming participants. The items were scored on a 7-point Likert scale from 'I am not familiar' (1) to 'I am very familiar' (7).

After reviewing relevant studies, no reliable scale was found to measure prior familiarity with (i) singer, (ii) song and (iii) brand. In fact, studies have used a range of different single-item questions to assess previous exposure, from a simple yes/no to a more elaborate Likert scale of degrees of familiarity (Brennan and Babin 2004; Nelson 2002; DeLorme and Reid 1999; Russell 1998). For example, Bettman and Park (1980) proposed classifying users' prior familiarity with the questions: 'have you ever searched for information on this product?', 'have you ever used, or owned this product?' These were classified as low, moderate and high prior knowledge and experience, adding unnecessary complexity to the measurement of previous familiarity. Both Puto and Wells (1984) and Kamis and Gupta (1994) were considered particularly appropriate for the present study because they address the construct directly.

Judgement of placement fit

The scale utilised to measure judgement of placement fit, in terms of plot connection (low/high), was taken from Russell (2002). The scale consists of 3 items scored on a 7-point anchored Likert scale, and was administered to each recognised placed brand. 'I consider that putting (brand name) in "The Man Who Can't Be Moved video …', and participants had to evaluate whether the placement: 'was clearly presented'; 'played an important role in the story'; and 'was connected to the plot'. Finally, the scale was found to be valid and reliable (coefficient alpha of .70) (see Table 4.9 for scales reliability).

Different measurement procedures were considered (Lehu and Bressoud 2009; Cowley and Barron 2008; Gould and Gupta 2006; Nelson 2002; D'Astous and Chartier 2000; DeLorme and Reid 1999). These procedures involved researchers who had either assessed fit themselves or referred to panels of experts in the topic to judge whether placements were plot-connected or not (Lehu and Bressoud 2009; Cowley and Barron 2008; Gould and Gupta 2006; Nelson 2002; D'Astous and Chartier 2000; DeLorme and Reid 1999). For instance, Lehu and Bressoud (2009) used academic opinion to classify the nature of the placements being tested (high-low) and then asked participants which brands they recognised (unaided recall). Internal classification of placements is also done for each of the placements in the present study, but the necessity of receiving direct evaluation from viewers is crucial, since the judgement of fit construct is individual-oriented, and the nature of the study intends to homogenise the measure and assessment of the different factors. Finally, Russell's (2002) scale was considered

particularly appropriate for the present study, because it is consistent with the principle that judgement of placement fit is an individual factor and so, should be assessed directly by the viewer.

Scepticism towards advertising and attitudes towards placement in general

The scale to measure scepticism towards advertising and attitudes towards placement is based on Gupta and Gould (1997). This scale is the model of choice among product placement studies (Kim and McClung 2010; Nelson and Devanathan 2006; Nelson *et al.* 2004; Gupta *et al.* 2000). Attitudes towards placement in general were assessed by the following: 'I have no problem if music video producers receive money or other compensation from companies from placing their brands in the videos'; 'I would not watch "The Man Who Can't Be Moved" video if I knew beforehand that brands are placed prominently in the video for commercial purposes'; and 'it is unethical to influence a captive audience by using brand name products in music videos'. Scepticism towards advertising is assessed by the following items: 'while watching a TV program, I frequently flip channels to escape watching ads'; 'I hate watching ads on TV'; and 'when an ad appears on my TV, I stop looking at the screen until the program starts again'. Finally, the scales were found to be valid and reliable ((coefficient alpha of .70 and .74 respectively).

From an original scale of 30 attitude items measuring seven factors, a 20-item scale was first developed to assess viewers' attitudes towards placement in general in movies (Gupta and Gould 1997). The scale consisted of a 5-point scale anchored by strongly agree/strongly disagree. Items included measures concerning attitudes towards placement in general, perceived realism, their association with the movie star, whether they should be clearly disclosed in the credits of a movie, whether product placement should be forbidden, attitudes toward advertising in general and ethical issues related to the practice of product placement. In addition, a product placement three-point acceptability scale was utilised: acceptable, no opinion, not acceptable.

The attitude scale is composed of four factors: attitudes towards placement in general, perceived realism, restrict product placement, and attitudes toward television advertising in general. For the purposes of this study, only items relevant to attitudes towards placement in general and attitudes toward television advertising in general were

utilised. These were the three most representative items displaying higher factor loadings in the factor analysis study presented by Gupta and Gould (1997).

Involvement/connectedness

The scale to measure involvement was based on the Personal Involvement Inventory for Advertising (PIIA). The scale is composed of 6 items scored on a 7-point Likert scale. Participants were asked to indicate their degree of agreement or disagreement with six descriptive items according to their perceptions of the band, and the music video. The descriptive items were: important, relevant, and means a lot to me – for cognitive involvement; and exciting, appealing, and involving – for affective involvement.

The PIIA (Zaichkowsky 1994) was developed from the original Personal Involvement Inventory (PII) of Zaichkowsky (1985). The PIIA was crafted to capture personal rational (cognitive) and emotional (affective) relevance. Five items assessed involvement based on the cognitive aspect and five assessed involvement based on emotions. The scale reliability and validity were supported (coefficient alpha of .93). The present study kept only 6 items to avoid a lengthy questionnaire, while still maintaining the validity and reliability of the scale (see Table 4.9 for scales reliability).

Zaichkowsky (1994) was deemed appropriate for this study because it measures both cognitive and affective involvement, and because it has been accepted and utilised in advertising (Reading *et al.* 2006; Sharma 2000), interactivity (Ha and Lennon 2010; Bellman *et al.* 2009; Cauberghe 2008; Schlosser 2003) and product placement studies (Hang and Auty 2011; Nelson and Devanathan 2006; Stern and Russell 2004). Other studies focused only on assessing cognitive involvement (Matthes *et al.* 2012; Scott and Craig-Lees 2010).

The present study remains consistent with Russell *et al.* (2004), in that

> Connectedness and involvement are separate and distinct constructs that measure different aspects of a consumer's reaction towards product placement, and therefore, both deserve to be studied independently (p. 155).

The scale to measure connectedness is based on Russell *et al.* (2004). It is composed of four constructs (i) escape, (ii) modelling, (iii) fashion, and (iv) limitation, aspiration and

paraphernalia. To preserve the scale validity (coefficient alpha of .84), two questions were taken from each construct, and adapted to the study context. The items correspond to those with higher factor loadings. The items displayed all exhibit factor loadings over .6, however, in the sub constructs, Fashion (LikeHair) and Modelling (HndlReal), the higher items were discarded because the import of the questions was not considered relevant for the current research. For instance, Russell *et al*. (2004) measured the connectedness between viewers and television programmes which represents a different context than a viewer watching a music video. The items utilised in the present study are as follows:

1) Watching "The Man Who Can't Be Moved" video is an escape for me;
2) If I am in a bad mood', "The Man Who Can't Be Moved" video puts me in a better mood;
3) I like the clothes they wear on "The Man Who Can't Be Moved" video;
4) I can relate what happens in "The Man Who Can't Be Moved" video to my own life;
5) I imitate the gestures and facial expressions from the characters in "The Man Who Can't Be Moved" video;
6) I would love to meet The Script; I get ideas from "The Man Who Can't Be Moved" video about how to interact in my own life;
7) I relate what happens in "The Man Who Can't Be Moved" video to my own life;
8) I often buy clothing styles that I've seen in music videos;
9) I watch music videos related of The Script;
10) I find myself saying phrases from "The Man Who Can't Be Moved" video when I interact with other people;
11) I have belongings connected with The Script (e.g. T-shirts, cds, posters, etc.);
12) I would love to be part of "The Man Who Can't Be Moved" video.

Finally, the scale proved valid and reliable (.88).

Perceived interactivity

Perceived interactivity of the website is a relatively new measure that has been utilised by researchers allowing users assess themselves on how they perceive and/or experience a website as opposed to the manipulation checks controlled by the researcher. As discussed in section 3.2, there are two leading measurement instruments (Liu 2003; McMillan and Hwang 2002). Following this logic, the scale items utilised were selected from McMillan and Hwang (2002) and Liu (2003).

Perceived interactivity can be conceptualised as a multidimensional construct (Liu 2003; McMillan and Hwang 2002), composed of three sub-dimensions: control, time/synchronicity, and two-way communication.

For the control sub-dimension, two items were utilised from the 'Scale to Measure the Interactivity of Websites' developed by Liu (2003). The factor analysis displayed a structure comprised of three correlated yet independent dimensions. The scale had a coefficient alpha of .75 for active control. The selected items were the most representative, displaying factor loadings of .57 and .78. This scale has been utilised by Liu and Shrum (2009) and Jiang *et al* (2010).

For the second sub-dimension, time/synchronicity, two items were also selected and adapted from the same 'Scale to Measure the Interactivity of Websites' (Liu 2003), and were the most representative items displaying the highest factor loadings (.82 and .83). The scale had a coefficient alpha of .86 for synchronicity. These items directly measure the viewers' sense of synchronicity during their viewing experience. In addition, an item from the 'Measures of Perceived Interactivity' (McMillan and Hwang 2002) was included. 'Keeps my attention' combines time and control, loading .75, and is consistent with the overall meaning of the time/synchronicity sub-dimension.

For two-way communication, the third sub-dimension, two items from the 'Measures of Perceived Interactivity' (McMillan and Hwang 2002) were used. 'Enables two-way communication' corresponding to two-way communication in general, and 'enables concurrent communication' identified as an overlap between time and communication, presented the highest factor loadings (.88 and .83) (McMillan and Hwang 2002). The first item was also utilised by Cauberghe (2008), Song and Zinkhan (2008), and Sicilia *et al.* (2005).

Finally, three control questions were included. Two of these questions, corresponding to 'control of navigation' (McMillan and Hwang 2002), were incorporated to rate the ease of use of the interactive music videos. Specifically, the two most representative items which displayed higher factor loadings (.64 and .62) in the factor analysis study of McMillan and Hwang (2002) were included. The last item, 'the music video is interactive' assesses perceived interactivity in general, consistent with other interactivity studies (Cauberghe 2008; Sicilia *et al.* 2005; McMillan and Hwang 2002). The scale was found to be valid and reliable (alpha coefficient .84).

The set of questions is as follows:

1) The music video is interactive (general)

2) I felt that I had a lot of control over my viewing experience (control)
3) When I clicked on the links of The Man Who Can't Be Moved digital music video, I felt I was getting instantaneous information (time)
4) This music video enables two-way communication (two-way communication)
5) It was easy to find my way through the music video (ease of use)
6) While watching The Man Who Can't Be Moved video, I could choose freely what I wanted to see (control)
7) Getting information from The Man Who Can't Be Moved video is really fast (time)
8) The Man Who Can't Be Moved video enables concurrent communication (two-way communication)
9) This music video keeps my attention (time)

4.5.1.4 Processing depth

Implicit memory

The implicit memory test is based on Yang *et al.* (2006). In this study, subjects performed a word completion test based on the Process Dissociation Procedure [PDP) (Yoo 2008; Yang *et al.* 2006; Lee 2002; Shapiro and Krishnan 2001; Duke and Carlson 1993). Yang *et al.* (2006) used 30 brand names for fragmented word test (23 placed brands and 7 included as foils). Participants were asked to complete the words by filling in the blanks (e.g. Y_H_O for Yahoo) without making any reference to the previous exposure.

Yang et al. (2006) was considered appropriate for the present study, first because the underlying theory is accepted by academics and research on implicit memory (Yoo 2008; Yang *et al.* 2006; Lee 2002; Shapiro and Krishnan 2001; Duke and Carlson 1993), and second because it is reasonably easy to implement and participants can follow the flow of the testing. The word completion test asked participants to complete the following words, by filling in the blanks:

1) __ I __ R for Dior
2) __ __ K I A for Nokia
3) N __ X O N for Nixon
4) H & __ for H&M
5) G __ __ S S for Guess
6) A __ M A N __ for Armani
7) M __ R S __ A __ L for Marshall

8) __ E I for REI

9) __ M __ R __ C __ N __ PP __ __ E L for American Apparel

10) L __ U __ S V__ __T T __ N for Louis Vuitton

In contrast, other measures, while well-supported by literature, may cause participants simultaneously attending an implicit memory test and a recognition test to increase 'false recall'; this can perhaps work against the reliability of each test performed individually. For example, Law and Braun (2000) asked subjects to select a number of brands for a friend from a list of selected brands (placed ones and distractors). This measure was utilised in the Pilot study of the present research as portrayed in Figure 4.11 as follows:

Figure 4.11 **Example of implicit memory test**

A very good friend of yours has asked you to do some shopping on her/his behalf.

For this purpose you have as much money as you want to spend.

The following is a list of items preferred by your friend. Please check off the ones you would choose:

Brand	No	Yes	Brand	No	Yes
Nokia	☐	☐	Honda	☐	☐
* D&G	☐	☐	Cosabella	☐	☐
*Ermenegildo Zegna	☐	☐	*Swarovski	☐	☐

(*) Distractors.

Explicit memory: recall and recognition

Recall is mainly assessed by asking subjects to recall freely and write down the brands that they remember seeing in the stimulus they were exposed to (McDonnell and Drennan 2010; Parker and Dagnall 2009; Lai-man and Wai-yee 2008; Russell *et al.* 2004; Eveland and Cortese 2004; Russell 2002; Nelson 2002; Law and Braun 2000; D'Astous and Chartier 2000; Gupta and Lord 1998). The recall test is consistent with findings in the product placement literature (McDonnell and Drennan 2010; Parker and Dagnall 2009; Nelson 2002; Law and Braun 2000; D'Astous and Chartier 2000; Gupta and Lord 1998). Accordingly, recall was assessed with an open-ended question:

> Please write down the name of as many brands, products, persons and/or places that you remember seeing in 'The Man Who Can't Be Moved' video.

Twenty brands featured in the music video therefore the number of correct responses could range from zero to twenty. Answers were coded as correct (1) if written properly or even if slightly misspelled.

The recognition test consists of providing a number of brands and a number of distracters and asking subjects to recognise the brands they were exposed to in the stimulus. This measure has been used extensively (McDonnell and Drennan 2010; Parker and Dagnall 2009; Yang *et al.* 2006; Brennan and Babin 2004; Russell 2002; Nelson 2002; Shapiro and Krishnan 2001; Law and Braun 2000; D'Astous and Chartier 2000; Gupta and Lord 1998). Consistent with recognition tests utilised in the product placement literature (Brennan and Babin 2004; Shapiro *et al.* 2002; Russell 2002; Nelson 2002; Gupta and Lord 1998), the current study investigated aided recall through the question:

> Which of the following brands do you remember seeing in 'The Man Who Can't Be Moved' video? (Please mark all that apply)

Following this question, participants were provided with a list of the 20 placed brands plus 8 distractors and the option to mark whether they remembered seeing a brand (for example, yes/no).

4.6 Sampling design process

Since the overall aim is to understand the effects of interactivity in digital music videos on the cognitive outcomes, recall and recognition of product placements, users of digital music videos, existing and potential, constitute the target market.

This study employs experimental, between-groups, research design which utilises *human-computer interaction* software to assess interactive behaviour. The main requirements of the experimental research design included:

a) Exposing subjects to the digital music video being tested.
b) Subjects answering the web-based survey immediately after being exposed to the online music video.
c) Subjects performing a) and b) whilst being monitored with human computer interaction action tracker software, in a controlled-experiment environment.

d) Interval testing. Subjects returned to the computer laboratories a week-after exposure to complete a questionnaire.

Subjects were recruited among postgraduate students from Dublin City University Business School (DCUBS) in Ireland. They were recruited in one of two ways. In the first, students from postgraduate courses in DCUBS were invited to participate via their lecturers, and received credits after presenting a reflection on the experiment. Upon completion of the experiment, participants attended a workshop to inform them of the purpose of the experiment and how experiments are useful in understanding digital consumer behaviour. In the second recruitment wave, an email inviting the general student population of the DCUBS was sent asking subjects to take part in the study. A compensation of 10 euro was offered to all students who participated in the experiment.

A convenience sample was utilised in keeping with similar research on product placement, human computer interaction and interactivity (Verhellen *et al.* 2013; Park *et al.* 2008; Cauberghe and De Pelsmacker 2008; Nelson and Devanathan 2006; Sicilia *et al.* 2005). Specifically, the sample included:

i) Postgraduate students participating in a management module.
ii) Professionals participating in a part-time digital consumer behaviour module.

The use of both part-time and full time students helped to more accurately reflect the socio-economic profile of the target population.

A pilot study was undertaken and is further discussed in Section 4.7. The pilot sample was composed of 50 subjects, 37 male and 13 female postgraduate students at DCU. The pilot study only tested one music video to gather exploratory insight (see Section 4.7). The sample had a strong background in marketing and advertising. The main study was conducted similarly, and the sample was divided in four groups according to the experimental condition as shown in Table 4.6.

Sampling strategy is important given the requirements for validity, reliability and generalisability in academic research. Accordingly, the following section discusses the limitations of the chosen strategy and the supporting rationale.

Table 4.6 **Participants of present study**

		Interactive condition	Non-interactive condition	Total per stimulus
Pilot study		24	26	50
Main study	The Script	90	57	147
	Black Eyed Peas	76	57	133
	Total per condition	166	114	280

4.6.1. The target population

According to Malhotra (2009), it is necessary to be precise in terms of who is and who is not included in the sample. In order to do so, the characteristics of the elements of any sample have to be defined: the sampling unit, time frame and the extent. The elements are males and females over 18 years old, specifically, students. The sampling unit is a university, DCU. The time frame for data collection was from April 2011 (pilot study) to December 2013. The main study was run in 2013, in March and November.

The sampling frame, or target population, is 'a list or set of directions for identifying the target population' (Malhotra 1999, p. 330). There are three basic conditions which the sample satisfied:

i) Participants were online music video viewers,

ii) Participants were part of the music video target population and

iii) Participants were part of the placed brands' target market.

To explore the first condition, general statistics have been employed. For the U.S. market, comScore found that 85.9 per cent of the total Internet audience viewed online video (ComScore 2014). Google Sites led by YouTube ranked as the top online video site with 159.1 million unique viewers (Houghton 2014). Amongst YouTube channel partners, the music video site Vevo ranked number 1 in 2014 (Houghton 2014). Vevo streams music videos from Universal Music Group, Sony Music Entertainment and EMI (Vevo 2015). According to online video demographics, the heaviest consumers of digital video are 18-24 years-olds, followed by 25-34 years-olds. Both, men (50.2%) and women (49.8%) watch online videos, but men watch them more than women by a factor of 1.8 (Piech 2013).

To satisfy the second condition, consumers of digital music were mapped. Peoples (2013) noted that consumers between 25 and 34 were most likely to be digital music

buyers; consumers 35 years and over were most likely to be CD buyers; and consumers aged 18-to-24 were more likely than the 45-to-54 to buy digital music. Participant profile in the present study corresponds to the 18 to 47 age range, with an average of 24 years. This parallels the typical age profile in similar research (Hudders *et al.* 2012; Schemer *et al.* 2008) and also matches the target audience for digital music videos. The sampling frame constitutes students from DCU Business School programmes, both male and female.

The third condition consists of determining whether the subjects are part of the placed brands' target market. Music groups regularly include brands appealing to their direct target market in their music videos. For example, The Black Eyed Peas appeals to two main segments, the 18-25 and 35-54 year old age groups (E-Poll 2010). Blackberry, Apple, Levi's, and Pepsi are just some of the brands which have sought endorsement from the Black Eyed Peas for their global fan base (Jurgensen 2010). Another example includes Apple utilising the 'Hey Mamma' song by the Black Eyed Peas as part of the launch campaign of the iTunes store (Jurgensen 2010). In a word, brands look for endorsement from those music groups and singers that match their target audiences' preferences.

4.6.2 Using college student samples in social science research

There is an ongoing discussion on the representativeness of undergraduate students samples (Peterson 2001) with opinions in favour (Oakes 1972) and against (Henrich *et al* 2010). Carlson (1971) advises against the use of such samples, and sees students as having 'unfinished' personalities because they are in an early stage of adulthood. Similarly, Sears (1986, p. 515) observed in the psychology literature that students possess 'less-crystallized attitudes, less-formulated senses of self, stronger cognitive skills, stronger tendencies to comply with authority, and more unstable peer group relationships.' Ultimately, Sears (1986) acknowledged that his criticisms were somewhat inferential as they were not the result of direct comparison between students and nonstudents. Nonetheless, college students increasingly feature in social science research because of ease of access and the fact that debate over their use remains inconclusive (Peterson 2001).

A number of other studies have compared student and nonstudent samples in consumer research (e.g. Wilson and Peterson 1990; Burnett and Dunne 1986), and provide support for the use of nonstudent samples. Both relied on convenience samples.

Peterson (2001) analysed issues of the Journal of Consumer Research Studies over the last twenty years and found that the use of student samples increased from 23% in the first volume to 89% in the most recent volume (as of 2001). He observed that college student samples are slightly but consistently more homogeneous than nonstudent ones. His meta-analysis (cumulative N = 1 650,000) included meta-analysis reporting results for both student and nonstudent samples, based on at least two observations and samples. Results indicated that the use of student samples produced relatively larger effect sizes (55%) as a function of the constructs studied both directionally and in magnitude terms, as supported by 30 meta-analyses reporting effect sizes for 64 relationships (cumulative N= 1 350,000). However, results proved inconclusive (Peterson 2001), as no particular pattern to explain these results was found. No concise evidence was found against the use of student samples for the case of theory application research (Peterson 2001).

In short, the rationale for using a student sample in this thesis is threefold. First, many of the core product placement articles reviewed in Table 4.1 above use such student samples. Second, the profile of the student sample used reflects the profile of the typical online music viewer. Third, the profile of the student sample used matches those of the target market for the brands featured in both music videos. The use of student samples is also plausible given that this study is seeking theory application results (Peterson 2001; Calder *et al.* 1981). Further research should be conducted and replicated with a nonstudent sample prior generalisation to the practice domain as suggested by Peterson (2001). Based on these considerations, it can be argued that the use of a student sample for the present study is normative, defensible, and convenient.

The discussion regarding sampling, however, is not limited to the use of student and nonstudent samples. More radical views have stressed how samples have typically been biased towards 'Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies' (Henrich *et al* 2010, p. 61). The argument goes that it is not really valid to use these subjects as representative of human populations, particularly when it comes to human psychology and behaviour. After reviewing a number or studies of WEIRD

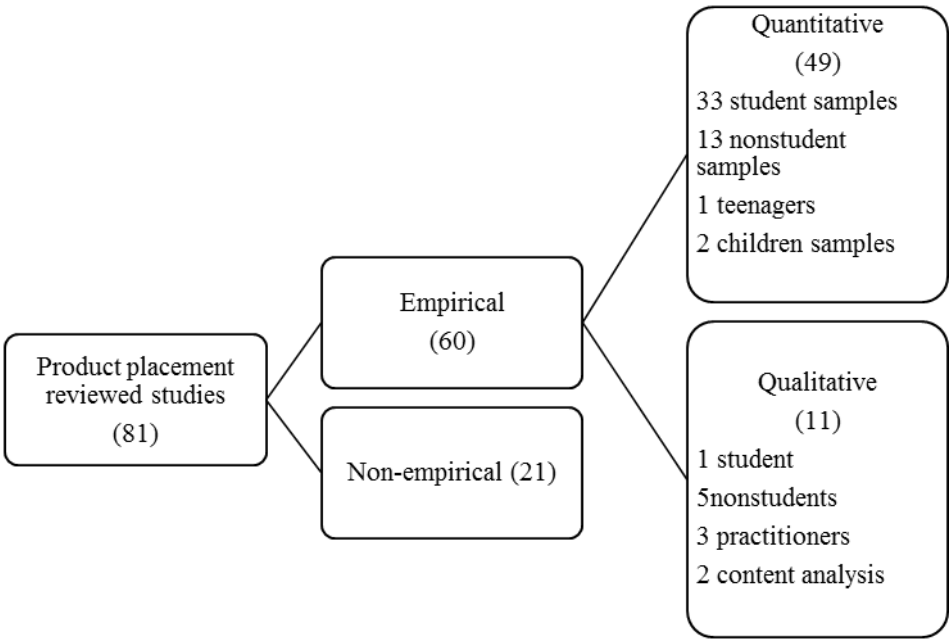
samples, Henrich *et al* (2010) concluded that subjects belonging to this category are 'the least representative populations one could find for generalizing about humans' (p. 61) .

4.6.3. Sampling and product placement research

Most studies on product placement have been conducted with the use of student samples (Dens *et al.* 2012; van Reijmersdal, *et al.* 2010; Kureshi and Sood 2010). In their content analysis of 57 studies on product placement , van Reijmersdal *et al.* (2010) found that 80 per cent of the published research (N=44) was based on student samples. Their analysis included those studies published in peer-reviewed journals from 1981 to August 2008 that utilised significance tests to analyse the relations between independent variables and audience reactions to brand placement.

van Reijmersdal *et al.*'s (2010) analysis revealed a number of interesting findings. First, experiments have been utilised mostly to investigate audience reactions to product placement in television programmes, films, digital games and music videos. Second, experiments had often relied on the use of student samples. For instance, of the 33 experiments conducted to investigate product placement, and reviewed in 2 above, 26 utilised student samples (see Figure 4.12). Similarly, in order to develop, test and validate their connectedness scale, Russell and Puto (1999) conducted experimental research on student samples. This is consistent with Calder *et al.* (1981) and Peterson's (2001) argument in favour of the use of student samples for theory development.

Figure 4.12 **Sampling and product placement research**



4.6.4. Homogeneity samples in HCI

Special emphasis has been placed on subject selection in experimental research. The units, or subjects, of the experiment have to observe the conditions of homogeneity and randomization (Lazar *et al.* 2010). Randomization consists of subjects being randomly assigned to each group condition and having the same chance of being placed in any group. Homogeneity entails filtering out any confounding factors. A confounding factors is any characteristic affecting the group conditions, such as educational and knowledge background, income, and technology experience. Therefore, the subjects should share the same general characteristics, because these characteristics can affect the experimental conditions.

The homogeneity of the sample is considered of special importance in empirical experiments in human computer interaction. Critics have noted that the chances of recruiting the exact same type of participants, i.e. sharing age, education background, computer experience, are slim. However, homogeneity should nonetheless be encouraged to ensure basic conditions for the experiment. For instance, if the group's intra characteristics differ significantly, these differences can affect the results between groups, compromising the validity of the experiment (Lazar *et al.* 2010).

In the context of this study it is worth reiterating that student samples are more homogeneous than nonstudent ones (Peterson 2001). As discussed, homogeneity is specially sought after in human-computer interaction experimental research and despite the challenge in securing homogeneity, the validity of human-computer interaction experimental research is well- established (Lazar *et al*. 2010).

4.6.5. Discussion of sampling techniques

There are two main sampling techniques: probability and non-probability (Lazar *et al.* 2010; Malhotra 2009; Coolican 2009; Saunders *et al.* 2007). Probability sampling, as its name suggests, follows a probability approach to sample selection enabling statistical conclusions and inferences about the population. It is commonly used in experimental research and survey strategies.

> With probability samples the chance, or probability, of each case being selected from the population is known and is usually equal for all cases. This means that it is possible to answer research questions and to achieve objectives that require you to estimate statistically the characteristics of the population from the sample. (Saunders et al 2007, p. 207)

In the case of non-probability samples, there is uncertainty about the probability of selecting a case; therefore, it is not possible to make statistical conclusions about the population. Nevertheless, results based on non-probability samples can be generalised, but not on statistical grounds. This method is often used for case studies (Saunders *et al.* 2007).

Non-probability sampling

Non-probability sampling requires human intervention and include quota sampling, judgement (or purposive) sampling and convenience sampling (Saunders *et al.* 2007). Taking its lead from many similar experimental studies in the product placement literature, this study utilises a non-probability convenience sample. Other types of non-probability sampling are snowballing, whereby contacts provide other respondent names, and self-selection sampling, whereby respondents 'volunteer themselves' to participate in the research. One might also add plausibility sampling – 'a sample selected because it appears plausible that the members are representative of a wider population, without any real evidence' (Talmage 1988, p. 82 cited in Saunders, Lewis, and Thornhill, 2007).

The main limitation of non-probability sampling is the lack of randomness; hence, it is not appropriate in descriptive or causal research, because inferences based on the population cannot be sustained (Malhotra 2009; Fisher 2004). However, it can be useful in exploratory research, 'where the objective is to generate ideas, gain insights, or develop hypotheses' (Malhotra, 2009, p. 377).

Non-probability sampling is often used in human/computer interaction research (Lazar *et al.* 2010). A number of techniques can be utilised however to mitigate the ensuing lack of validity. Among these techniques, Lazar *et al.* (2010) mention the necessity for demographic data to guarantee representativeness when respondents are self-selected. Another technique is oversampling, which involves recruiting and analysing bigger samples of the population of interest. Under-investigated populations that correspond to those groups where data have not yet been studied can also be used. Random sampling of usage, not users, is another technique to overcome shortcomings in non-probability sampling validity. Here for example, a website could be studied based on those subjects who actually use it; subjects who did not use the website during the research time frame would be excluded (Lazar *et al.* 2010).

In *self-selected surveys*, as used in websites, everyone is free to participate, and it is up to each participant to determine whether they want to get involved in the research or not. In this view, Lazar *et al.* point out that 'if no data exist about a certain user population or usage pattern, then a self-selected survey of users, asking about usage, might make the most sense' (2010, p.109).

4.6.6 Ethics and participant recruitment

Subjects were recruited voluntarily and directly from targeted classes through an intranet application (Loop). They were required to confirm online their attendance at the research study, and emailed afterwards with details of the place and time of meeting.

Subjects were informed of the conditions of the study beforehand and signed a Consent Form in line with regulations of the Ethics Research Committee of DCU. Subjects were told that the purpose of the study was to assess music video viewing behaviour of college students; specifically, to compare the types of feelings and thoughts that viewers generate in response to different types of music. Subjects in the interactivity condition

were informed that their 'clicking' activity during the stimulus exposure would be recorded..

The study does not involve the use of devices that may jeopardize the subjects' integrity or safety in any form. Subjects were reminded before starting the test of their right to participate or not in the study, and were given the right to withdraw from the study at any stage. Confidentiality was assured. For instance, during Stage One students were asked to write down their names. This is a mere identifier to link the data with those collected in Stage Two. Once data collection was complete, participants' names were deleted and another identifier was assigned to data. Any further information regarding the identity of the subjects was removed.

4.7 Pilot study

The experimental design was pretested in a pilot study. During the early stages of this research, interactivity was approached in a different manner. For instance, interactivity was assessed as a manipulation check (presence/absence). Although only indicative, the results of the pilot study provided significant insights into understanding interactive product placement. Recall and recognition were consistent with similar research (McDonnell and Drennan 2010; Parker and Dagnall 2009; Brennan and Babin 2004; Shapiro *et al.* 2002; Russell 2002; Nelson 2002; Law and Braun 2000; Gupta and Lord 1998).

4.7.1 Sample

The pilot sample was composed of 50 subjects (37 males and 13 females), all of them postgraduate students at DCU. The inclusion criterion was Master students from DCU, specifically those enrolled in the Next Generation Management (NGM) module. The sample age was between 21 and 34 years old.

Participants were recruited purposively. Students were invited to attend and participate in the study via an intranet invitation posted on Loop. Students expressed their intention to participate by selecting one of the time slots options available. Students received marks as part of their research methods learning after completing the test and writing a reflection on their participation.

4.7.2 Stimulus selection mechanism

The 'I Gotta Feeling' video by The Black Eyed Peas was selected primarily because of the presence of multiple product placements and because it was readily available in the platform for interactive video Clikthrough.com. It was also considered convenient because the embedded brands were directed to both target markets, males and females, and because it was a popular online video at the time, according to the Social 50 Billboard 2010 (see Figure 4.13).

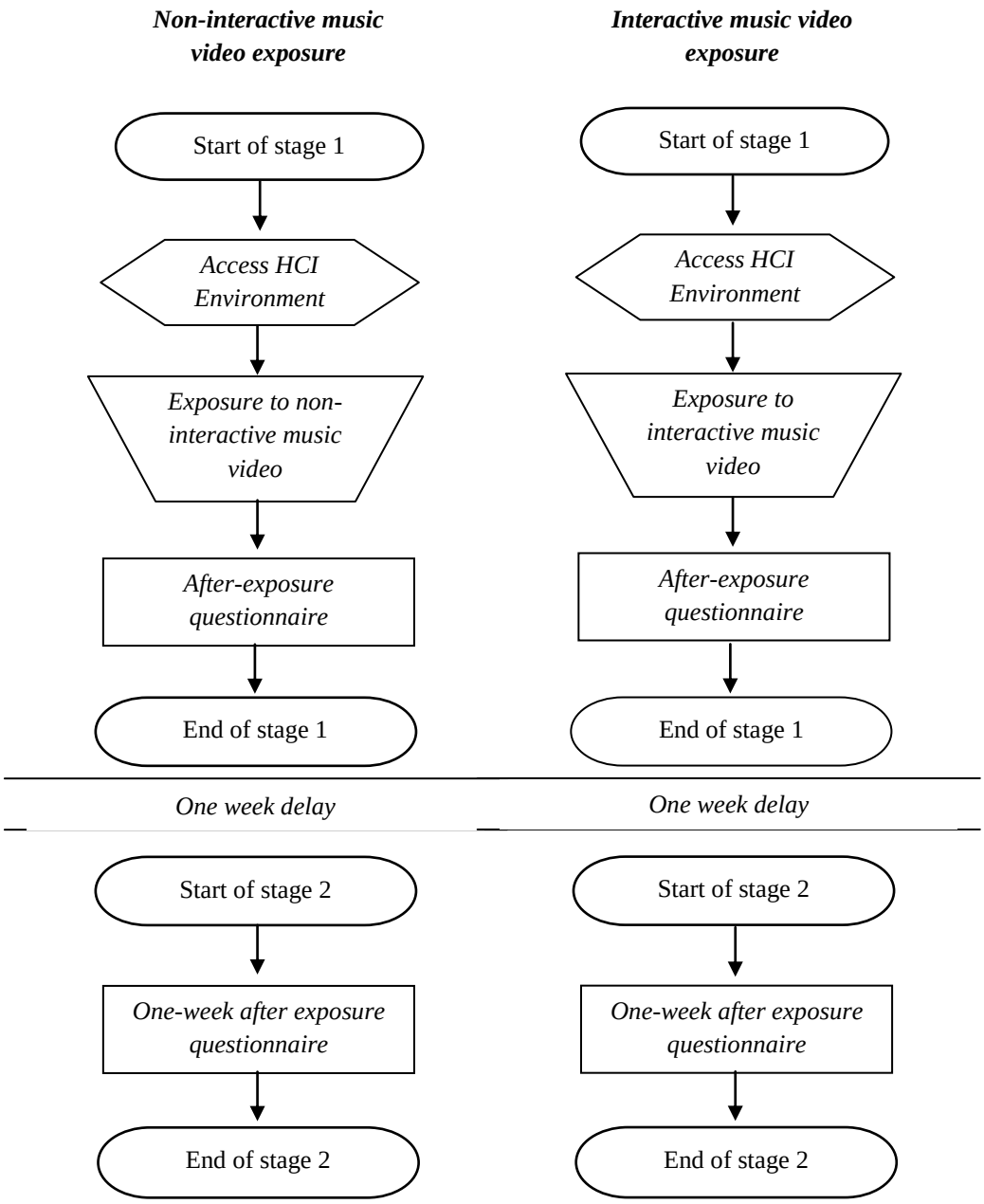
Figure 4.13 **Pilot study video selection**

'I Gotta Feeling' by The Black Eyed Peas	
Duration	4:51
Product placements	37 (14 targeting men and 23 targeting women
Brands portrayed	27
Popularity	Artist ranking number 6th on the Social 50 Billboard. December 11, 2010
Music video release date	23/06/2009
Genre	Pop hip hop

4.7.3 Experimental procedure

The study took place simultaneously in three computer rooms in DCU Business School in March 2011. Subjects were divided in two main groups according to their experimental condition (interactive, N = 24, non-interactive, N = 26). The duration of Stage 1 averaged 45 minutes with a follow up survey of 10 minutes (see Figure 4.14). During the test, minor events regarding PC system capacity and data file storage were registered and resolved by the researcher.

Figure 4.14 **Pilot study: experimental procedure**



4.7.4 Preliminary results and discussion

An SPSS file of 591 variables was compiled. Preliminary analysis was conducted to test the reliability of the 10 scales employed (coefficient alpha between .74 and .94). However, for two scales (placement modality and judgement to fit) there were very few cases to assess reliability, because these factors were only tested for those individuals who recognised the brand. Thus, the number of cases was not statistically significant. The preliminary data analysed the robustness of the hypotheses, the measurements' validity and reliability and thereby contributed to refining the measurement instrument overall.

Interactivity was operationalised as a manipulation check (presence/absence). The results of the experiment provided significant insights into interactive product placement. Recall and recognition were assessed consistent with similar research (McDonnell and Drennan 2010; Parker and Dagnall 2009; Brennan and Babin 2004; Shapiro *et al.* 2002; Russell 2002; Nelson 2002; Law and Braun 2000; Gupta and Lord 1998; Anderson 1994).

The recall test suggested that brands were more recalled in the interactive condition. For example, in the interactive condition, 54% of the sample recalled American Apparel – one of the placed brands, as opposed to only 4% in the non-interactive condition (see the complete set of brands placed in Table 4.7). To confirm that recall was not affected by previous familiarity, information regarding previous familiarity with the musical group The Black Eyed Peas, and with the 'I Gotta Feeling' music video was collected. There was no significant difference between previous familiarity with the musical group in both experimental conditions (Interactive M = 5.33, SD = 1.61; Non-interactive M =5.58, SD = 1.38, t (49) = -.590, p > .05) or the music video (Interactive M = 3.30, SD = 1.29; Non-interactive M =3.25, SD =1.15, t (49) = 134, p > .05). The recognition test showed higher recognition in the presence of interactivity. For instance, Nokia was recognised by 54% in the interactive condition and by 25% in the non-interactive one (see Table 4.8).

In the one-week after exposure questionnaire, results showed that brands were more recalled in the interactive condition. For example, Burberry subtle placement was recalled by 96 per cent a week after stimuli exposure in the interactive condition, while

only recalled by 53 per cent in the non-interactive. Marc Jacobs' subtle placement was recalled by 31 per cent in the interactive condition while it was recalled by only 14 per cent in the non-interactive condition. For the recall measurement, MAC and HP displayed slightly higher results in the non-interactive condition. In the recognition test, Nokia, HP and MAC, were also more recognised by the non-interactive sample. This finding is interesting, because Nokia, HP and MAC are the prominent placements within the video. This effect echoes Ariely's (2000) findings in the sense that interaction gives consumers control over the placements they choose to interact with, and this possibility can take their interest away from the prominent placements and motivate them to further explore the brands portrayed on screen by the singers. While participants in the non-interactive condition were exposed to four prominent placements, participants in the interactive condition were potentially exposed to 27 brands, thereby potentially fragmenting their attention.

Table 4.7 **Pilot test: placement recall results**

	After stimuli exposure			One-week after stimuli exposure		
Interactive Placement	**Interactive Condition**	**Non Interactive Condition**	**% out of total**	**Interactive Condition**	**Non Interactive Condition**	**% out of total**
Nokia	35 %	17 %	26 %	60 %	42 %	57 %
American Apparel	54 %	4 %	30 %	56 %	5 %	32 %
Steve Madden	4 %	0 %	2 %	-	-	-
HP	*31 %*	*13 %*	*22 %*	*40 %*	*50 %*	*45 %*
Nike	12 %	4 %	8 %	31 %	14 %	22 %
Marc Jacobs	-	-	-	-	-	-
Guess	4 %	0 %	2 %	8 %	10 %	9 %
Forever 21	-	-	-	4 %	5 %	4 %
Amiclubwear.com	-	-	-	-	-	-
BCBG	-	-	-	4 %	0 %	2 %
Elegant Moments	-	-	-	-	-	-
Burberry	4 %	0 %	2 %	96 %	0 %	51 %
Frederick's of Hollywood	0 %	4 %	2 %	4 %	10 %	6 %
WeSC	4 %	4 %	8 %	4 %	0 %	2 %
MAC Cosmetics	*23 %*	*21 %*	*21.6 %*	*31 %*	*43 %*	*36 %*
Minx Nails	-	-	-	-	-	-
Obey	-	-	-	-	-	-
Theory	4 %	0 %	2 %	0%	0 %	0 %

Note: These Interactive placements were recalled by brand name. Sample sizes are as follows: After stimuli exposure total sample n= 50 (Interactive n=26, Non-interactive n=24).

Table 4.8 **Pilot test: placement recognition results**

	After stimuli exposure			One-week after stimuli exposure		
Brand	**Interactive Sample**	**Non Interactive Sample**	**% out of total**	**Interactive Sample**	**Non Interactive Sample**	**% out of total**
Nokia**	54%	25%	40%	58 %	31 %	68 %
D&G*	23%	0 %	12%	15 %	14 %	15 %
American Apparel	73%	4%	39%	65 %	5 %	38 %
Steve Madden	8%	0 %	4%	0 %	0 %	0 %
HP**	42%	21%	31%	46 %	32 %	53 %
Coca Cola*	12%	0 %	6%	0 %	14 %	6 %
Nike	15%	8%	12%	50 %	19 %	38 %
Louis Vuitton*	15%	0 %	8%	8 %	14 %	11 %
Marc Jacobs	8%	0 %	4%	4 %	0 %	2 %
Guess	15%	0 %	8%	19 %	14 %	17 %
Armani*	12%	8%	10%	8 %	5 %	6 %
Frederick's of Hollywood	19%	4%	12%	8 %	5 %	6 %
BCBG	8%	0 %	4%	4 %	0 %	2 %
Burberry*	8%	8%	8%	15 %	14 %	15 %
J Brand Jeans	4%	4%	2%	0 %	0 %	0 %
Apple*	12%	8%	10%	4 %	19 %	11 %
Taboo Deltah 3008*	4%	0 %	2%	0 %	0 %	0 %
Gucci	12%	8%	10%	4 %	0 %	2 %
Samsung *	0 %	17%	8%	12 %	29 %	19 %
Chanel	8%	4%	6%	0 %	10 %	4 %
Elegant Moments	8%	0 %	4%	4 %	0 %	2 %
Forever 21	8%	4%	65	8 %	5 %	6 %
Fergie footwear*	31%	25%	28%	8 %	10 %	9 %
Urban Outfitters *	19%	0 %	10%	15 %	0 %	9 %
MAC**	38%	29%	33%	31 %	33 %	32 %
Rayban *	23%	17%	20%	15 %	24 %	21 %
Minx Nails	12%	8%	10%	15 %	0 %	9 %
Monster	4%	0 %	2%	8 %	5 %	6 %
Swarovski	12%	0 %	6%	4 %	0 %	2 %
Victoria's Secret*	35%	29%	31%	27 %	29 %	28 %
WeSC	4%	0 %	2%	4 %	0 %	2 %
H&M*	0 %	4%	2%	0 %	5 %	2 %
Blackberry*	8%	4%	6%	8 %	0 %	4 %
Pepsi*	8%	0 %	4%	0 %	5 %	2 %
Obey	0 %	0 %	0 %	0 %	0 %	0 %
Mont Blanc*	0 %	0 %	0 %	0 %	0 %	0 %
Levi's*	0 %	4%	2%	0 %	0 %	0 %
Theory	8%	0 %	4%	4 %	0 %	2 %

Note: Brands denoted by (*) correspond to distractors. Brands denoted by (**) correspond to prominent brands. Sample sizes are as follows: After stimuli exposure total sample n= 50 (Interactive n=26, Non-interactive n=24).

4.7.5 Lessons learnt from the pilot study

Following the pilot test, the experimental procedure and measurement instruments were modified to strengthen the present research. The first major change concerned operationalising interactivity. During the pilot study interactivity was an experimental condition. This means that it was addressed as a manipulation check (presence/absence). However, this decision left out further analysis on the nature of perceived interactivity by participants. Consequently, it was decided to focus on perceived interactivity (see Section 3.2).

Second, a decision was taken to include a second music video stimulus, a 'negative context-induced mood' video. Thus, two digital music videos, a 'negative context-induced mood' and a 'positive context-induced mood', were utilised consistent with Mood Theory (van der Weele *et al.* 2009; Aylesworth and Mackenzie 1998). van der Weele *et al.* (2009) studied the effects of television programme-induced mood on product placement and recommended that future research should include stimuli inducing both positive and negative moods in order to understand the true impact of placement on recall and recognition. The present thesis adopted this approach. Mood literature suggests that positive mood decreases central processing while negative mood increases it (Aylesworth and Mackenzie 1998; Goldberg and Gorn 1987; Isen 1984). Mood transference can influence attitudes (Balasubramanian et al. 2006); however, there is a lack of research to date on the effects of mood on cognitive placement outcomes (Mitchell 2014). Product placements are embedded in media, becoming an integral part of the content they convey. So it seems plausible to investigate how the mood generated by this content – positive or negative - might impact on the various outcomes of product placement namely, recall and recognition.

Mood states, upon exposure to stimuli, can be affected by the media message. It is also interesting to analyse the change of mood before and after stimulus exposure and to consider whether this affects placement recall and recognition. Similarly, it is worth investigating the impact of positive and negative media contexts on recall levels for embedded brands. For example, would these effects be the same under conditions with and without interactivity?

Third, the pilot study included the 27 brand placements for the recognition, placement modality and judgement of fit tests. This decision directly impacted the duration of the

study and was seen to cause boredom for participants. As a result, a number of brands were excluded from the main study (3). For the recognition test, and following the results of the pilot study, the less recognised brands were deleted. These brands included Obey, Hdimi Emerito and Joe Heart Collection. So, 27 brands featured in the placement modality and judgement to fit tests in the pilot study but only the 13 most recognised of these brands were retained (half of the original set) (see Figure 4.15).

Figure 4.15 **Pilot study most recognised brands**

1. Nokia*	2. Nike	3. MAC*
4. American Apparel	5. Marc Jacobs	6. Minx Nails
7. Steve Madden	8. Guess	9. Burberry
10. HP *	11. Forever 21	12. Paul Smith
13. Frederick's of Hollywood		

Prominent brands are denoted with an (*)

Fourth, the perceived fit between the brand and the music video was assessed taking into account those brands effectively recalled by respondents, and following the judgment of fit between media and embedded brand by Okazaki and Yagüe (2012). As it was important that participants could judge placement fit between music video and brands, this element was assessed only for those brands that were recalled and recognised by participants.

Fifth, since recognition increases with repetition, the order of the factors analysed was rearranged to avoid false recall. The questionnaire was administered before and one-week after exposure. For instance, immediately after stimulus exposure, subjects were asked recall questions; then some distractors were included followed by recognition questions (see Section 4.5.2). Finally, participants were given 30 seconds to navigate the interactive videos in line with similar interactivity experiments (Sicilia *et al.* 2005; Ariely 2000).

4.7.6 Establishing validity and reliability of measures

As shown in Table 4.9, the scales used here were found to be reliable. Construct reliability was assessed by computing Cronbach's alpha. The alpha values range from .70 to .93, which is above the recommended value of .70 (Kuan and Chau 2001).

Table 4.9 **Scales reliability**

Coefficient alpha			
Factor	**Original study**	**Pilot study**	**Main study**
Programme type/programme-induced mood			.88
Pleasure	.72 [4]	.88	.91
Arousal	.69 [5]	.83	.83
The opportunity to process a placement	.87 [6]	N/A	.87
The type and amount of brand information presented			.84
Informational	.73 [7]	.88	.75
Transformational	.88 [8]	.74	.76
The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium	.85	N/A	.84
Judgment of placement fit	.70	N/A	.70
Scepticism towards advertisement	.66 [9]	.82	.70
Attitude toward placements in general	.66 [10]	.89	.74
Involvement with the musical group	.91-.96 [11]	.92	.92
Involvement with the video	.91-.96 [12]	.94	.93
Connectedness	.84[13]	.89	.88
Perceived interactivity	.85	N/A	.84

Discussion and conclusion

This chapter discusses the rationale for pursuing an experimental design. First, product placement studies are mainly experimental because researchers are interested in discovering the effects of stimulus exposure on consumers. The present research follows this line of thinking. Second, studies on interactivity are typically experiment-based (see Section 3.2). As far as the researcher is aware, no human-computer remote observation recording software has been utilised in product placement studies to date.

[4] Handbook of Marketing Scales, 2011, p.310.
[5] Handbook of Marketing Scales, 2011, p.310.
[6] D'Astous and Chartier, 2000, p.35.
[7] Puto and Wells, 1984, p. 642.
[8] Puto and Wells, 1984, p.642.
[9] Gould and Gupta, 1997, p.42
[10] Gould and Gupta, 1997, p.42
[11] Zaichkowsky, 1994, p.62.
[12] Zaichkowsky, 1994, p.62.
[13] Russell, *et al.* 2004, p.152.

Different types of experimental designs were discussed. For example, the merits of between-subjects design and within-subjects design were assessed. To avoid priming participants by being exposed twice to the same digital music video (and its brands), it was decided to select a between-subjects design. The research aimed to understand whether the factors considered in the analysis of non-interactive product placement were relevant in the analysis of interactive product placement. Between-subjects design was deemed to be best suited to the research objectives of the present thesis. The between-group experimental design does have its limitations however. It measures the performance of a group of people against the performance of another group; thus, individual differences can impact the results. It also implies the use of large samples to measure the different experimental conditions (Lazar *et al.* 2010).

Another element of the experimental design discussed in this chapter was the experimental setting. A real setting was considered at some point when planning the present research. For example, a meeting-room was equipped with coaches, a flat screen, a laptop and a camera to record interactions. The possibility of having small groups watching the music videos (Brennan and Babin 2004; D'Astous and Chartier 2000) was considered but subsequently dropped because the novelty of watching (and interacting with) interactive digital music videos could have caused participants in the room to exchange views, leading to a potential bias. For example, Nelson and Devanathan (2006) exposed participants to a film in groups, and noted how participants exchanged views regarding the film during exposure. Finally, a laboratory experimental setting was used to control the settings of the test and to maximise internal validity. It is worth noting that the laboratory-based setting simulates controlled real-setting conditions. For instance, an online digital music video could be watched on a personal computer, a laptop, a tablet or a mobile, and viewing can occur as an individual activity.

Participants watched the full 5-minute musical video, in accordance with similar research (Matthes *et al.* 2012; Schemer *et al.* 2008). This is considered an advantage of the present research. Other studies on product placement have exposed participants to the stimulus for different lengths of time. For example, Nicovich (2005) exposed participants to a role-playing game during 30 minutes while Lee and Faber (2007) exposed their participants to an online game for 6 minutes. In the case of films, Gupta and Lord (1998) exposed participants to a 30 min. movie excerpt while Auty and Lewis (2004) also exposed participants to a 1 min. 50 seconds film excerpt,

and Brennan and Babin (2004) exposed participants to the full-length film. The decision to expose participants to excerpts or complete stimulus varies from one media channel to another, and this influences the experimental findings.

It is common practice in similar placement studies to use a manipulation check involving a control group. Accordingly, the experimental procedure included a control and a treatment group. The two versions of two online digital music videos were prepared using human computer interaction (HCI) recording software Morae Recorder, and each condition was allocated to a different laboratory to reduce contamination.

The measurement instrument utilised was adapted to account for consumers' perceptions of 10 factors being studied, because consumer perceptions are central to advertising research. To control for any possible inconsistency in both the measurement instrument and experimental procedure, a pilot study was conducted. This preliminary study assessed interactivity with a manipulation check (presence/absence). The adjustments made to the main questionnaire instrument following the pilot study bolstered the validity of this study significantly. Preliminary results showed that both recall and recognition of product placements are higher in the interactive condition. Finally, this chapter outlined in detail the research design for the study.

PART THREE
RESULTS, DISCUSSION AND CONCLUSION

CHAPTER FIVE
RESULTS AND ANALYSIS I

Introduction

This chapter presents the results of the empirical work undertaken. The experiment consisted of a 2 (*programme-induced mood*: positive/negative) x 2 (interactive/non-interactive) between-groups factorial design. *Programme-induced mood* was manipulated by using two music videos: a positive context-induced mood digital video, which includes Conditions One and Three, and a negative context-induced mood digital video, which includes Conditions Two and Four. Interactivity was manipulated via two experimental conditions. Conditions One and Two, the control conditions, exposed participants to a linear non-interactive digital music video. Conditions Three and Four, the interactive conditions, exposed participants to an interactive digital music video.

Data analysis was organised in five steps. Section I presents the hypothesis testing, organising the results per factor, and per experimental condition (interactive/non-interactive x positive/negative context-induced mood), and presenting a comparison between the four conditions according to the research questions. To this end, general statistics such as correlations and independent-samples t-test, and regression and moderation analysis were performed. Section II discusses the results of perceived interactivity. Sections III and IV present the conceptual models for recall and recognition of the present study. To test the model, linear regression analysis was utilised using an integrated database to explore those execution and individual factors directly affecting placement recall and recognition. A table with the descriptive statistics of all the variables of the studies is presented below (see Table 5.1).

Table 5.1 **Descriptive statistics of the variables of the research**

Variables		*M*	*SD*	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Placement recall	*r*	*1.00*	*1.42*	*1*	*.581***	*.567***	*.575***	*.232***	*.021*	*.087*	*.001*	*.205***	*.037*	*-.339***	*.042*	*.003*	*-.004*
(2) Placement recognition	*r*	*3.22*	*2.20*	.581**	1	.594**	.743**	.089	-.237**	.014	-.015	.315**	.026	-.217**	-.091	-.103	.112
(3) Placement recall one week after exposure	*r*	*2.32*	*1.30*	.567**	.594**	1	.629**	.170*	-.034	.086	.063	.227**	-.113	-.189**	.114	.031	.080
(4) Placement recognition one week after exposure	*r*	*3.39*	*2.23*	.575**	.743**	.629**	1	.171*	-.098	-.009	-.003	.243**	-.007	-.195**	-.001	-.032	.013
(5) Implicit memory	*r*	*2.76*	*1.05*	.232**	.089	.170*	.171*	1	.267**	.062	-.159*	.112	.197**	-.173**	.203**	.166**	-.163**
(6) Context-induced mood	*r*	*1.49*	*.50*	.021	-.237**	-.034	-.098	.267**	1	.154	-.300**	-.001	.102	.032	.162**	.109	.045
(7) Mood before exposure (MBE)	*r*	*27.53*	*6.85*	.087	.014	.086	-.009	.062	.154	1	.291**	-.134	-.147	-.132	.130	.031	.185
(8) Mood after exposure (MAE)	*r*	*26.40*	*8.49*	.001	-.015	.063	-.003	-.159*	-.300**	.291**	1	-.313**	-.133*	.018	-.093	-.049	.012
(9) The type and amount of brand information presented (TABIP)	*r*	*3.04*	*.96*	.205**	.315**	.227**	.243**	.112	-.001	-.134	-.313**	1	.208**	-.074	.152*	.140*	.142*
(10) The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium (SL)	*r*	*14.41*	*4.35*	.037	.026	-.113	-.007	.197**	.102	-.147	-.133*	.208**	1	-.081	.094	.083	-.300**
(11) Interactivity	*r*	*1.41*	*.49*	-.339**	-.217**	-.189**	-.195**	-.173**	.032	-.132	.018	-.074	-.081	1	.052	.065	.032
(12) Prior familiarity- singer (PFs)	*r*	*4.63*	*2.00*	.042	-.091	.114	-.001	.203**	.162**	.130	-.093	.152*	.094	.052	1	.562**	-.105
(13) Prior familiarity- video (PFv)	*r*	*3.86*	*2.30*	.003	-.103	.031	-.032	.166**	.109	.031	-.049	.140*	.083	.065	.562**	1	-.095
(14) Scepticism	*r*	*7.16*	*3.53*	-.004	.112	.080	.013	-.163**	.045	.185	.012	.142*	-.300**	.032	-.105	-.095	1
(15) Attitudes	*r*	*15.42*	*4.35*	-.033	.021	.119	.020	-.072	-.018	-.049	.069	-.170**	-.029	.030	.073	.051	-.045
(16) Involvement with the singer	*r*	*19.11*	*7.67*	.030	.026	.067	.064	.005	-.020	.068	-.309**	.322**	.040	-.044	.313**	.141*	.088
(17) Involvement with the music video	*r*	*19.33*	*7.59*	-.009	.038	.093	.072	.154*	.005	-.047	-.400**	.423**	.189**	-.020	.261**	.304**	-.011
(18) Connectedness	*r*	*37.46*	*13.93*	.084	.129*	.118	.082	.115	.040	-.238*	-.436**	.550**	.189**	.014	.257**	.218**	.012
(19) Control	*r*	*8.21*	*3.15*	.137	.218**	.110	.151	.133	-.087	-.152	-.075	.276**	.079	-.079	.041	.193*	-.111
(20) Time	*r*	*13.84*	*3.77*	.136	.192*	.003	.138	.143	-.058	-.394**	-.323**	.380**	.217**	-.079	.183*	.163*	-.083
(21) Two-way	*r*	*7.91*	*2.79*	.105	.324**	.102	.248**	.128	-.127	-.269*	-.163*	.326**	.176*	-.081	.025	.084	.004
(22) Perceived usability	*r*	*9.23*	*2.64*	.181*	.270**	.078	.202*	.212**	-.130	-.144	-.132	.319**	.154*	.051	.036	.117	-.102
Gender	*r*	*1.59*	*.49*	-.056	.005	-.022	-.060	-.032	-.132*	-.060	.050	.015	-.034	-.016	.012	.068	.001

Variables		(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
(1) Recall	*r*	*-.033*	*.030*	*-.009*	*.084*	*.137*	*.136*	*.105*	*.181**	*-.056*
(2) Recognition	*r*	.021	.026	.038	.129*	.218**	.192*	.324**	.270**	.005
(3) Recall one week after exposure	*r*	.119	.067	.093	.118	.110	.003	.102	.078	-.022
(4) Recognition one week after exposure	*r*	.020	.064	.072	.082	.151	.138	.248**	.202*	-.060
(5) Implicit memory	*r*	-.072	.005	.154*	.115	.133	.143	.128	.212**	-.032
(6) Context-induced mood	*r*	-.018	-.020	.005	.040	-.087	-.058	-.127	-.130	-.132*
(7) Mood before exposure	*r*	-.049	.068	-.047	-.238*	-.152	-.394**	-.269*	-.144	-.060
(8) Mood after exposure	*r*	.069	-.309**	-.400**	-.436**	-.075	-.323**	-.163*	-.132	.050
(9) Information	*r*	-.170**	.322**	.423**	.550**	.276**	.380**	.326**	.319**	.015
(10) Strength of the link	*r*	-.029	.040	.189**	.189**	.079	.217**	.176*	.154*	-.034
(11) Interactivity	*r*	.030	-.044	-.020	.014	-.079	-.079	-.081	.051	-.016
(12) Familiarity Singer	*r*	.073	.313**	.261**	.257**	.041	.183*	.025	.036	.012
(13) Familiarity video	*r*	.051	.141*	.304**	.218**	.193*	.163*	.084	.117	.068
(14) Scepticism	*r*	-.045	.088	-.011	.012	-.111	-.083	.004	-.102	.001
(15) Attitudes	*r*	1	-.021	-.038	-.048	-.137	-.102	.042	-.152*	-.071
(16) Involvement with the singer	*r*	-.021	1	.787**	.503**	.106	.294**	.263**	.101	-.178**
(17) Involvement with the music video	*r*	-.038	.787**	1	.608**	.243**	.445**	.397**	.289**	-.097
(18) Connectedness	*r*	-.048	.503**	.608**	1	.107	.327**	.207**	.224**	-.006
(19) Control	*r*	-.137	.106	.243**	.107	1	.504**	.503**	.578**	.124
(20) Time	*r*	-.102	.294**	.445**	.327**	.504**	1	.604**	.528**	.072
(21) Two-way	*r*	.042	.263**	.397**	.207**	.503**	.604**	1	.609**	.006
(22) Perceived usability	*r*	-.152*	.101	.289**	.224**	.578**	.528**	.609**	1	.109
(23) Gender	*r*	-.071	-.178**	-.097	-.006	.124	.072	.006	.109	1

5.1 Hypothesis testing

The following presents the results for the videos portraying i) a positive context-induced mood, 'I Gotta Feeling' by The Black Eyed Peas and ii) a negative context-induced mood, 'The Man Who Can't Be Moved' by The Script. Results are reported as follows: demographics of the study are reported first, followed by an analysis of the hypotheses, organised according to the 10 factors identified as having an impact on product placement recall and recognition.

5.1.1 Demographics

A total of 280 subjects participated in the main study. 133 subjects, out of 147 approached, completed the positive context-induced mood digital music video experiment. The distribution of the sample is balanced between females (*N* = 62, 47 per cent) and males (*N* = 71, 53.4 per cent). The average age of the participants was 24 years with a range from 19 to 44 years. The complete set of respondents holds a third level education. 42.9 per cent of the participants work part-time while 56.5 per cent did not work at all. The interactive condition was composed of 76 participants, 47.4 per cent females (*N* = 36) and 52.6 per cent males (*N* = 40) with an average age of 24 years. The non-interactive condition had a total of 57 participants, 45.6 per cent females (*N* = 26), and 54.4 per cent males (*N* = 31), with an average age of 25 years.

While a total of 155 subjects participated in the main study for the negative context-induced digital music video, only 147 respondents submitted valid responses. The sample consists of 50 males (34 per cent) and 97 females (66 per cent). The average age of the participants was 24 years with a range from 18 to 47 years. The complete set of respondents holds a third- level education. While 36.4 per cent of the participants work (8 per cent full time, 28.4 per cent part time), 62.6 per cent of the participants did not work at the time of this study. The interactive condition was comprised of 90 participants, females (*N* = 30, 33.3 per cent), and males (*N* = 60, 66.7 per cent). The non-interactive condition was composed of 57 participants, females (*N* = 20, 35.13 per cent), and males (*N* = 37, 64.9 per cent). Despite the gender differences, gender was not found to be a moderator and to have an impact on the final results.

5.1.2 Programme-induced mood

Programme-induced mood accounts for the *pleasure* and *arousal* dimensions. Both dimensions were measured before and after stimulus exposure in both experimental

conditions i.e. interactive and non-interactive. The scale is composed of eight items scored on a 1 (negative) to 7 (positive) basis (Aylesworth and Mackenzie 1998). Each factor comprises four items. In the case of the seven-point mood scale used in this research, 4 is the mid-point so anything below this point is considered as 'low' on that dimension while anything above it would be classified as 'high'.

5.1.2.1 Descriptive Statistics

In the positive context-induced mood condition, overall mood decreased after the exposure to the music video in both conditions, interactive (M_1 = 3.61, SD_1 = .83 / M_2 = 3.15, SD_2 = 1.17) and non-interactive (M_1 = 3.28, SD_1 = .83 / M_2 = 2.83, SD_2 = 1.02). A paired samples t-test was conducted in order to investigate the impact that the exposure to the music video had on *mood*, *pleasure* and *arousal*. In the interactive condition, there was a statistically significant decrease in mood scores (M_1 = 3.61, SD_1 = .83; M_2 = 3.04, SD_2 = 1.03) exposure to the music video, t (41) = 3.87, p < .01. The decrease in mood scores was .57 with a 95% confidence interval ranging from .72 to .87. There was also a statistically significant decrease in *arousal* scores (M_1=3.93, SD_1 = .98; M_2 = 3.1, SD_2 = 1) exposure to the music video, t (41) = 4.83, p > .01. The decrease in *arousal* scores was .83 with a 95% confidence interval ranging from .48 to 1.18. The *pleasure* score also decreased. However, the results did not yield a statistically significant result, t (41) =1.64, p >.05. In the non-interactive condition, the decrease in *mood* scores (M_1 = 3.28, SD_1 = .83; M_2=2.77, SD_2 = 1.26) exposure to the music video, t (15) = 1.31, p > .05 was not statistically significant.

In the negative context-induced mood condition, overall *mood* increased after exposure in both conditions, interactive (M_1 = 3.27, SD_1 = .95 / M_2 = 3.43, SD_2 = .95) and non-interactive (M_1 = 3.41, SD_1 = .86/M_2 = 3.85, SD_2 = .85). A paired samples t-test was conducted to investigate the impact of stimulus exposure on *mood*, *pleasure* and *arousal*. In the interactive condition, there was no statistically significant increase in *mood* scores (M_1 = 3.27, SD_1 = .95 / M_2 = 3.43, SD_2 = .95) exposure to the music video. In the non-interactive condition, there was also no statistically significant change in *mood* (M_1 = 3.41, SD_1 = .86 / M_2 = 3.7, SD_2 = .83) exposure to the music video.

A post-hoc test was conducted to investigate whether *interactivity* has a moderating effect in the relation *placement recall* and *mood after exposure –pleasure and arousal.* The moderation effect of *interactivity* was significant. The IV explained, after

controlling for *interactivity*, 37.4 per cent of the variance in *recall*, ΔR^2=*.02*, *F* (2, 28) = .3.44, *p*=.03. The final model was significant, *F* (5, 283) = 9.22, *p*= .00. *Pleasure (β=-.55, p = .047), arousal (β=.764, p = .006), and interactivity (β=-.99, p= .00)* were statistically significant. *Interactivity* and its moderation effects were also investigated in the relation *placement recognition* and *mood before exposure –pleasure and arousal.* The moderation effect of *interactivity* is significant. The IV explained, after controlling for *interactivity*, 35.6 per cent of the variance in *recognition*, ΔR^2=*.03*, *F* (2, 240) = 4.06, *p*= .02. The final model was significant, *F* (5, 240) = 6.97, *p*= .00. *Pleasure (β=-.83, p=.08), arousal (β=1.62, p = .00), and interactivity (β=-1.03, p = .00)* were statistically significant.

A post-hoc test was conducted to investigate whether *context-induced mood* has a moderating effect in the relation *placement recall* and *mood after exposure –pleasure and arousal.* The moderation effect of *context-induced mood* is not significant, ΔR^2=*.02*, *F* (2, 287) = 2.14, *p*= .12. The final model was not significant, *F* (5, 287) =1.14, *p*= .34. *Context-induced mood* and its moderation effects were also investigated in the relation *placement recognition* and *mood after exposure –pleasure and arousal.* The moderation effect of *context-induced mood* is significant. The IV explained, after controlling for *context-induced mood*, 33.6 per cent of the variance in *recall*, ΔR^2=*.04*, *F* (2, 244) = 4.82, *p*= .01. The final model was significant, *F* (5, 244) = 6.19, *p*= .00. However, only *pleasure (β=-1.96, p = .00)* and context-induced mood *(β=-.97, p = .00)* were statistically significant.

5.1.2.2 Hypothesis testing

H1a: Positive context-induced mood in digital music videos produces higher recall of interactive placement than positive context-induced mood in classical no-interactive product placement.

An independent-samples t-test was conducted to compare the recall scores in both experimental conditions (interactive/non-interactive). There was a significant difference on placement recall between the interactive and non-interactive conditions (*t* (112) = -34.09, *p* = .000). Therefore, H1a was supported (see Table 5.2).

H1b: Positive context-induced mood in digital music videos produces higher recognition of interactive placement than positive context-induced mood in classical non-interactive product placement.

An independent-samples t-test was conducted to compare the recognition scores in both experimental conditions (interactive/non-interactive). There was not significant difference on placement recognition between the interactive and non-interactive conditions (t (110) = -1.25, p > .05). Therefore, H1b was not supported (see Table 5.2).

Table 5.2 **Context-induced mood Independent-samples T-test**

Hypothesis	Dependent variable	Independent variable		Df	Statistical		Test outcome
		Interactive	Non interactive		t value	P	
H1a	Recall	*N*=77	*N*=57	112	4.09	.00	Significant
H1b	Recognition	*N*=72	*N*=45	110	1.25	.21	Non-significant

H1c: Arousal has a positive effect digital music videos produces higher recall of interactive placement than high arousal in classical non-interactive product placement.

An ANCOVA model was estimated to test the effects of video exposure (positive/negative) on recall. The independent variable was the video type (positive/negative), and the dependent variable consisted of the scores of recalled brands. Participants' *arousal* scores after exposure were utilised as a covariate in the analysis. After adjusting for *arousal* after exposure, there was no significant difference in recalled brand scores for participants in the positive and negative video, F (1, 140) = .02, p > .05, partial eta squared = .000. There was no significant difference either when calculating the interactive condition only, F (1, 102) = .32, p > .05. Therefore, H1c was not supported (see Table 5.3).

H1d: High arousal in digital music videos produces higher recognition of interactive placement than high arousal in classical non-interactive product placement.

An ANCOVA model was estimated to test the effects of video exposure (positive/negative) on recognition. The independent variable was the video type (positive/negative), and the dependent variable consisted of the scores for the recognised brands. Participants' *arousal* scores after exposure were utilised as a covariate in the analysis. After adjusting for *arousal* after exposure, there was no significant difference in recognised brand scores for participants in the positive and

negative video, F (1, 290) = .37, p > .05, partial eta squared = .001. There was also no significant difference when calculating the interactive condition only, F (1, 168) = .42, p > .05, partial eta squared = .002. Therefore, H1d was not supported (see Table 5.3).

Table 5.3 **Programme-induced Mood**

Hypothesis	Independent variable	Dependent variable	Covariate	F	*P*	Hypothesis test outcome
H1c	Video type	Recall	Arousal	.02	.90	Non-significant
H1d	Video type	Recognition	Arousal	.37	.54	Non-significant

H1e: Positive context-induced mood in digital music videos produces higher recall and recognition than negative context-induced mood.

An independent-samples t-test was conducted to compare the recall and recognition scores in both experimental conditions (interactive/non-interactive). There was a significant difference on placement recall between the interactive and non-interactive conditions (t (259) = 6.87, p = .00). There was also a significant difference on placement recognition between the interactive and non-interactive conditions (t (216) = 3.68, p = .00) (see Table 5.4).

Table 5.4 **The Effects of Context-induced Mood on Recall and Recognition**

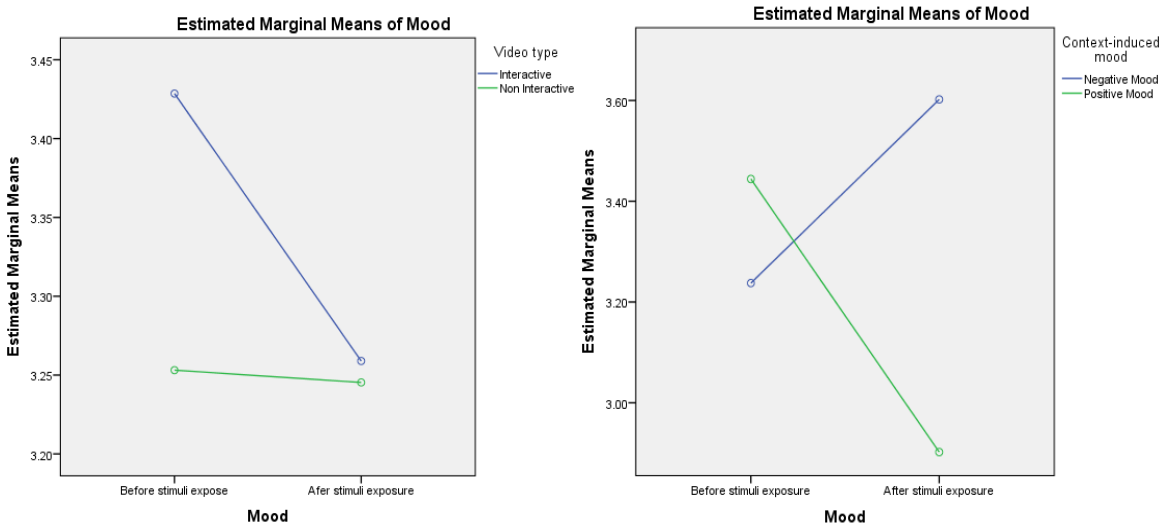
	IV	N	Mean	SD	df	T	sig
Recall	Interactive	171	1.42	1.626	259.00	6.87	.00
	Non Interactive	118	.43	.768			
Recognition	Interactive	157	3.58	2.318	216.00	3.68	.00
	Non Interactive	89	2.58	1.864			

H1f: Interactivity has a positive effect on the change of viewers' mood before and after stimulus exposure.

H1g: Context-induced mood has a positive effect on the change of viewers' mood before and after stimulus exposure.

A mixed between-within subjects' analysis of variance was performed to assess the impact of interactivity (presence/absence) and context-induced mood (positive/negative), on mood scores before and after exposure. There was a large effect between context-induced mood and mood before and after stimuli exposure, Wilks' Lambda = .87, F (1,82) = 11.89, p= .00, partial eta squared = .13. There was no significant effect between interactivity and mood before and after time, Wilks' Lambda = .99, F (1,204) = .38, p= .54, partial eta squared = .01 (see Figure 5.1). The main effect is not significant, F (1,204) = 1.27, p= .26, partial eta squared = .02.

Figure 5.1 **Mixed between-within subjects' analysis of variance for mood scores over time**



5.1.3 The opportunity to process a placement

Participants evaluated the perceived prominence of their recognised brands. Consistent with similar studies (D'Astous and Chartier 2000), perceived prominence was only evaluated for the top two recalled (subtle and prominent) placements in both videos (positive and negative context-induced mood), with a similar amount of responses in both experimental conditions. This decision was made so that both brands would present a significant number of entries to allow statistical analysis.

5.1.3.1 Hypothesis testing

H2a: Prominent interactive product placements achieve higher recall and recognition than subtle classical non-interactive product placements.

Positive context-induced mood digital music video

An independent-samples t-test was conducted to compare recall in the case of Nokia (prominent) in both conditions (interactive/non-interactive). There was no significant difference on placement recall scores between these conditions (t (123) = 1.71, $p > .05$). An independent-samples t-test was conducted to compare recognition scores in the case of Nokia (prominent) in both conditions (interactive/non-interactive). There was no significant difference on placement recognition scores (t (132) = .626, $p > .05$) (see Table 5.5).

Negative context-induced mood digital music video

An independent-samples t-test was conducted to compare recall in the case of Marshall (prominent brand) in both experimental conditions (interactive/non-interactive). There was a significant difference on placement recall between the interactive and non-interactive conditions (t (151) = -3.12, $p < .05$). An independent-samples t-test was conducted to compare recognition in the case of Marshall (prominent brand) in both experimental conditions (interactive/non-interactive). There was a significant difference on placement recognition between the interactive and non-interactive conditions (t (153) = -1.69, $p > .05$) (see Table 5.5).

H2b: Interactivity has a positive effect on recall and recognition of prominent product placements.

Positive context-induced mood digital music video

Interactivity was examined as a moderator of the relation between *prominence* and *product placement recall* and *recognition*. The moderation effect of *interactivity* is not significant. One prominent brand, which was highly recalled and recognised, was selected: Nokia. This decision was made to ensure that the brand would present a significant number of entries to allow statistical analysis (see Table 5.5).

Negative context-induced mood digital music video

Interactivity was examined as a moderator of the relation between *prominence* and *product placement recall* and *recognition*. The moderation effect of *interactivity* is not significant. One prominent brand, which was highly recalled and recognised, was selected: Marshall. This decision was made to ensure that the brand would present a significant number of entries to allow statistical analysis (see Table 5.5).

H2c: Subtle interactive product placements achieve higher recall and recognition than subtle classical non-interactive product placements.

Positive context-induced mood digital music video

An independent-samples t-test was conducted to compare recall in the case of American Apparel (subtle) in both conditions (interactive/non-interactive). There was a significant difference on recall scores between these conditions such that there was higher recall in the interactive condition (t (104) = 6.08, $p < .05$). An independent-samples t-test was conducted to compare recognition in the case of American Apparel (subtle) in both conditions (interactive/non-interactive). There was a significant difference on

recognition scores between both conditions such that higher recognition occurred in the interactive condition (t (104) = 6.08, p < .05). Therefore H2c was supported (see Table 5.5).

Negative context-induced mood digital music video

An independent-samples t-test was conducted to compare recall and recognition in the case of All Saints (subtle) in both conditions (interactive/non-interactive). There was a significant difference between the interactive and non-interactive conditions (t (142) = -3.16, p < .05). There was also a significant difference between both conditions such that higher recognition occurred in the interactive condition (t (151) = -3.14, p < .05). Therefore, H2d was supported (see Table 5.5).

H2d: Interactivity has a positive effect on recall and recognition of subtle product placements.

Positive context-induced mood digital music video

Interactivity was examined as a moderator of the relation between *subtle placements* and *recall* and *recognition*. The moderation effect of *interactivity* is not significant. One subtle brand, which was highly recalled and recognised, was selected: American Apparel. This decision was made to ensure that the brand would present a significant number of entries to allow statistical analysis (see Table 5.5).

Negative context-induced mood digital music video

Interactivity was examined as a moderator of the relation between *subtle placements* and *recall* and *recognition*. The moderation effect of *interactivity* is not significant. One subtle brand, which was highly recalled and recognised, was selected: All Saints. This decision was made to ensure that the brand would present a significant number of entries to allow statistical analysis (see Table 5.5).

Table 5.5 **The opportunity to process a placement**

Hypothesis	Dependent variable	Conditions		Statistical			Test outcome
		Interactive	Non interactive	Df	T value	P	
Positive context-induced mood digital music video							
H2a	Recall			123	1.71	.09	Non- significant
	Recognition			132	.63	.53	Non- significant
H2c	Recall			104	6.08	.00	Significant
	Recognition			132	2.04	.04	Significant
Negative context-induced mood digital music video							
H2a	Recall			151	-3.12	.00	Significant
	Recognition			153	-1.69	.09	Significant
H2c	Recall			142	-3.16	.00	Significant
	Recognition			151	-3.14	.00	Significant

		B	S.E.	Wald	df	Sig.	Exp(B)	Test outcome
Positive context-induced mood digital music video								
H2b	**Recall**							
	Prominence	.64	.92	.48	1	.49	1.89	Non-significant
	Interactivity	.03	2.29	.00	1	.99	1.03	
	Interaction term	-.12	.44	.07	1	.79	.89	
	Recognition							
	Prominence	2.05	1.36	2.29	1	.13	7.80	Non-significant
	Interactivity	5.03	3.67	1.88	1	.17	152.92	
	Interaction term	-1.04	.70	2.21	1	.14	.36	
H2d	**Recall**							
	Prominence	1.68	1.81	.86	1	.35	5.36	Non-significant
	Interactivity	1.18	3.92	.09	1	.76	3.24	
	Interaction term	-1.02	1.13	.81	1	.37	.36	
	Recognition							
	Prominence	5.37	3.70	2.10	1	.15	214.09	Non-significant
	Interactivity	11.99	8.95	1.80	1	.18	161195.26	
	Interaction term	-3.65	2.41	2.30	1	.13	.03	
Negative context-induced mood digital music video								
H2b	**Recall**							
	Prominence	-.66	1.25	.28	1	.60	.52	Non-significant
	Interactivity	-1.15	.97	1.40	1	.24	.32	
	Interaction term	.79	1.04	.57	1	.45	2.20	
	Recognition							
	Prominence	-.35	1.02	.12	1	.73	.71	Non-significant
	Interactivity	.53	.65	.65	1	.42	1.69	
	Interaction term	.17	.66	.06	1	.80	1.18	
H2d	**Recall**							
	Prominence	-.67	1.36	.24	1	.62	.51	Non-significant
	Interactivity	1.56	3.48	.20	1	.65	4.74	
	Interaction term	-1.72	3.41	.26	1	.61	.18	
	Recognition							
	Prominence	-1.27	1.07	1.41	1	.24	.28	Non-significant
	Interactivity	-.57	1.95	.09	1	.77	.57	
	Interaction term	.05	1.73	.00	1	.98	1.05	

5.1.3.2 The moderation effect of brand information

Hierarchical multiple regression was used to assess the ability of the model to predict placement recall and recognition, after controlling for the influence of perceived information. The moderation effect of information was significant for the case of recall of a prominent brand (see Table 5.6).

Positive context-induced mood

After controlling for perceived information, for the case of recall the model explained 79.1 per cent of the variance in recall, ΔR^2=.587, F (1, 62) = 97.38, p= .00. The final model is not significant, F (3, 62) = 34.59, p= .00. For the case of recognition, the model could not be computed due to perfect fit –multicollinearity.

Negative context-induced mood

After controlling for perceived information, the model explained 79.2 per cent of the variance in recall, ΔR^2=.93, F (1, 40) = 6710.5, p= .00. The final model is significant, F

(3, 49) = 2383, *p*= .00. After controlling for perceived information, the model explained 79.2 per cent of the variance in recognition, ΔR^2=.00, *F* (1, 51) = .01, *p*= .92. The final model is significant, *F* (3, 51) = .23, *p*= .87.

Table 5.6 The Opportunity to Process a Placement **and the Moderation Effects of Information**

	B	T	Sig.	Hypothesis test outcome
Prominent placement (negative context-induced mood)				
Recall				
Prominence	3.532	81.791	.000	Significant
Information	4.706	77.012	.000	
Interaction term	-6.046	-81.966	.000	
Recognition				
Prominence	-.008	-.015	.988	Non-significant
Information	-.180	-.250	.803	
Interaction term	.090	.104	.918	
Prominent placement (positive context-induced mood)				
Recall				
Prominence	2.185	10.102	.000	Significant
Information	3.352	9.521	.000	
Interaction term	-4.009	-9.868	.000	
Recognition				
Prominence	-.587	-1.773	.081	Non-significant
Information	-1.241	-2.303	.025	
Interaction term	1.232	1.982	.052	

5.1.4 The type and amount of brand information presented

The presented brand information is composed of the *informational* and *transformational* dimensions of perceived information, and was measured after stimulus exposure utilising Puto and Wells' (1984) Transformational and Informational scales. The measure comprises eight items (four items for each factor) which are scored on a 1 (negative) to 7 (positive) scale.

5.1.4.1 Descriptive statistics

The positive context-induced mood digital music video was perceived as equally *informational* in both the interactive (*M* = 2.99, *SD* = .98) and non-interactive (*M* = 3.04, *SD* = .92) conditions. The negative context-induced digital music video was perceived as more *informational* (*M* = 3.42, *SD* = 1.1), and t*ransformational* (*M* = 2.92, *SD* = 1.21) in the interactive condition. To assess whether there were any significant differences, a set of independent-samples t-tests as well as linear and logistic regression analyses were calculated and are outlined below.

5.1.4.2 Hypothesis testing

H3a: Interactive product placement is perceived as more informational than classical non-interactive product placement.

Positive context-induced mood digital music video

An independent-samples t-test was conducted to compare the *informational* scores in the interactive and non-interactive conditions. There was no significant differences in scores between the interactive (M = 3.19, SD = 1.07) and non-interactive conditions (M = 3.23, SD = 1*; t* (124) = -.2205, $p > .05$). Therefore, H3a was not supported.

Negative context-induced mood digital music video

An independent-samples t-test was conducted to compare the *informational* scores in the interactive and non-interactive conditions. There was no significant difference in scores in the interactive (M = 3.42, SD = 1.1) and non-interactive conditions (M = 3.26, SD = 1.02*; t* (151) = .903, $p > .05$). Therefore, H3a was not supported (see Table 5.7).

H3b: Interactive product placement is perceived as more transformational than classical non-interactive product placement.

Positive context-induced mood digital music video

An independent-samples t-test was conducted to compare the *transformational* scores in the interactive (M = 2.75, SD = 1.20) and non-interactive (M = 2.85, SD = 1.16) conditions. There was no significant difference in their scores (t (124) = -.456, $p > .05$). Therefore, H3b was not supported.

Negative context-induced mood digital music video

An independent-samples t-test was conducted to compare the *transformationa*l scores in the interactive (M = 2.92, SD = 1.21) and non-interactive (M = 2.42, SD = .90) conditions. There was a positive significant difference in their transformational scores (t (146) = 2.93, $p < .01$), thus H3b was supported (see Table 5.7).

Table 5.7 **Perceived Information Independent-samples T-test**

Hypothesis	Independent variable		Dependent variable		Statistical			Test outcome
			Interactive	Non interactive	Df	t value	P	
Positive context-induced mood digital music video			*(n=75)*	*(n=51)*				
H3a	Informational	M	3.19	3.23	124	-.21	.84	Non-significant
		SD	1.07	1.00				
H3b	Transformational	M	2.45	2.85	124	-.41	.65	Non-significant
		SD	1.20	1.16				
Negative context-induced mood digital music video			*(n=94)*	*(n=61)*				
H3a	Informational	M	3.42	3.26	151	.90	.37	Non-significant
		SD	1.1	1.02				
H3b	Transformational	M	2.92	2.42	146	2.93	.00	Significant
		SD	1.21	.90				

H3c: The type and amount of brand information presented has a positive effect on product placement recall and recognition in interactive digital music videos.

A linear regression analysis was performed to assess the impact of *perceived information* and *transformation* on *placement recall* in the interactive condition. The model was significant, F (2, 168) = 3.94, p= .02. However, only *transformation (β=.29, p = .02)* was statistically significant. The model was also significant for the case of *placement recognition, F* (2, 154) = 6.43, p= .002. However, only *transformation (β=.43, p = .02)* was statistically significant.

H3d: Product placement is perceived as more transformational when embedded in a positive context-induced mood media vehicle than when embedded in a negative context-induced mood media vehicle.

An independent-samples t-test was carried out to compare the transformational scores in the positive and negative context-induced mood videos. As depicted in Table 5.8, there was no significant difference in scores in the positive (M = 11.32, SD = 4.94) and negative (M = 10.90, SD = 4.48*; t* (291) = .76, p > .05) context-induced mood videos. Therefore H3d was not supported (see Table 5.8).

Table 5.8 **Transformation Independent-samples T-test**

Hypothesis	Dependent variable		Group		Statistical			Test outcome
			Negative (n=155)	Positive (n=138)	df	t value	p	
H3d	Transformation	M	10.90	11.32	291	.76	.45	Non- significant
		SD	4.48	4.94				

5.1.4.3 Post-hoc tests: the moderation effects of interactivity and context-induced mood

Interactivity

A post-hoc test was conducted to investigate whether *interactivity* has a moderating effect in the relation *placement recall* and *transformation and information.* The moderation effect of *interactivity* was not significant. The IV explained, after controlling for *interactivity*, 39.5 per cent of the variance in *recall*, ΔR^2*=.01*, *F* (2, 283) = .88, *p*= .42. The final model was significant, *F* (5, 283) = 10.47, *p*= .00. However, only *interactivity (β=-.94, p = .00) and transformation (β=.59, p = .03)* were statistically significant. *Interactivity* and its moderation effects were also investigated in the relation *placement recognition* and *transformation and information.* The moderation effect of *interactivity* was not significant. The IV explained, after controlling for *interactivity*, 38.6 per cent of the variance in *recall*, ΔR^2*=.01*, *F* (2, 240) = 1.40, *p*= .25. The final model was significant, *F* (5, 240) = 8.42, *p*= .00. However, only *interactivity (β=-.96, p = .00)* was statistically significant.

Context-induced mood

A post-hoc test was conducted to investigate whether *context-induced mood* has a moderating effect in the relation *placement recall* and *transformation and information.* The moderation effect of *context-induced mood in placement recall* was not significant. The IV explained, after controlling for *context-induced mood*, 24 per cent of the variance in *recall*, ΔR^2*=.01*, *F* (2, 287) = 1.21, *p*= .30. The final model was significant, *F* (5, 287) = 3.52, *p*= .00. However, only *transformation (β=.734, p = .02)* was statistically significant. The moderation effect of *context-induced mood in placement recognition* was not significant. The IV explained, after controlling for *context-induced mood*, 40.4 per cent of the variance in *recall*, ΔR^2*=.01*, *F* (2, 244) = 1.78, *p*= .17. The final model was significant, *F* (5, 244) = 9.49, *p*= .00. However, only *transformation (β=1.27, p = .01)* and context-induced mood *(β=-.98, p = .00)* were statistically significant.

5.1.5 The strength of the link between brand and story character/ editorial content/ vehicle/ medium

5.1.5.1 Descriptive statistics

In the *positive context-induced digital music video, perceived fit between the video and the brands* was higher in the interactive condition. An independent-samples t-test was

conducted in order to compare the *perceived fit* in the interactive and non-interactive conditions. There was no significant difference in scores in the interactive (M = 5.16, SD = 1.46) and non-interactive conditions (M = 4.77, SD = 1.29: t (132) = 1.623, p > .05). There was no significant difference in scores in the interactive (M = 4.71, SD = 1.4) and non-interactive conditions (M = 4.67, SD = 1.48: t (151) = .155, p > .05, in the *negative context-induced digital music video.*

5.1.5.2 Hypothesis testing

H4a: The perceived fit of a celebrity endorser with brands in a digital music video has a positive influence on recall.

Positive context-induced digital music video

A linear regression analysis was performed to assess the impact of the *perceived fit* of The Black Eyed Peas on recall. *Perceived fit* of the celebrity endorser with brands had no statistically significant effect on placement recall (β = -.17, p > .05) in the interactive condition. In the non-interactive condition, *perceived fit* of the celebrity endorser with brands and recall (β = -.04, p > .05) were not significantly related. Therefore, H4a was not supported (see Table 5.9).

Negative context-induced digital music video

A linear regression analysis was performed to assess the impact of the *perceived fit of the singer with the brands* on recall. In both the interactive and non-interactive conditions, *perceived fit of the singer with the brand* and recall had no statistically significant effect (β_1 = -.13, p > .05 / β_2 = -.20, p > .05). Therefore H4a was not supported (see Table 5.9).

H4b: The perceived fit of a celebrity endorser with brands in a digital music video has a positive influence on recognition.

Positive context-induced digital music video

A linear regression analysis was performed to assess the impact of the *perceived fit* of The Black Eyed Peas on recognition. *Perceived fit* of the celebrity endorser with brands had no statistically significant effect on placement recognition (β = -.12, p > .05). In the non-interactive condition, *perceived fit* of the celebrity endorser with brands and recognition (β = .20, p > .05) were not significantly related. Therefore, H4b was not supported (see Table 5.9).

Negative context-induced digital music video

A linear regression analysis was performed to assess the impact of the *perceived fit of the singer with the brands* on recognition. In both the interactive and non-interactive conditions, *perceived fit of the singer with the brand* and recognition had no statistically significant effect (β_1 = .045, p > .05 / β_2 = .24, p > .05) (see Table 5.9). Therefore H4b was not supported.

Table 5.9 **Strength of the Link**

Hypothesis	Dependent variable	Independent variable	Beta	t-value	p-value	Hypothesis test outcome
Positive context-induced mood digital music video						
H4a						
Interactive	Recall	Perceived fit	-.17	-1.17	.25	Non-significant
Non interactive	Recall	Perceived fit	-.04	-.18	.86	Non-significant
H4b						
Interactive	Recognition	Perceived fit	-.12	-1.02	.31	Non-significant
Non interactive	Recognition	Perceived fit	.20	1.26	.22	Non-significant
Negative context-induced mood digital music video						
H4a						
Interactive	Recall	Perceived fit	-.13	-.98	.33	Non-significant
Non interactive	Recall	Perceived fit	-.20	-.60	.56	Non-significant
H4b						
Interactive	Recognition	Perceived fit	.05	.41	.68	Non-significant
Non interactive	Recognition	Perceived fit	.24	1.55	.13	Non-significant

5.1.6 Prior familiarity with a) brand, b) video, and c) singer

5.1.6.1 Familiarity with the brands

5.1.6.1.1 Descriptive statistics

First, descriptive statistics were carried out in order to identify which brands were familiar and which brands were not. Familiarity was assessed by a single item scored on a Likert scale ranging from 1 (negative) to 7 (positive). Results are presented in Appendix D.

5.1.6.1.2 Hypothesis testing

H5a: Previous unfamiliarity with the brand has a positive effect on placement recall.

Positive context-induced mood digital music video

Two logistic regression analyses were carried out to investigate whether previous unfamiliarity has a positive effect on placement recall. Two unfamiliar brands, which were also recalled, were selected: Marc Jacobs and Frederick's of Hollywood. This decision was made so that both brands would present a significant number of entries to allow statistical analysis. The logistic regressions were conducted by taking the recall

binary measure for each of the brand as dependent variables with the familiarity item for each brand as an independent variable. In the interactive condition, while unfamiliarity was not a significant predictor of recall of Marc Jacobs (β = -.16, p > .05), it was a significant predictor of recall for Frederick's of Hollywood (β = .61, p < .05). Therefore, H5a was partially supported (see Table 5.10).

Negative context-induced mood digital music video

Two logistic regression analyses were carried out to investigate whether unfamiliarity with the brand has a positive influence on recall. Two unfamiliar brands, which were also recalled, were selected: Sabian and Shure (see Appendix C). In the case of the interactive condition, unfamiliarity was not a significant predictor of recall of Shure (β = -.50, p > .05), or Sabian (β = -16.81, p > .05). Therefore, H5a was not supported (see Table 5.10).

H5b: Previous familiarity with the brand has a positive effect on recognition.

Positive context-induced mood digital music video

Two logistic regression analyses were calculated to investigate whether *previous familiarity with the brand* positively influences recognition. Two familiar, highly recognised brands were selected: Nokia and Nike. The logistic regressions were conducted by taking the recognition binary measure for each brand as dependent variable with the familiarity item for each brand as an independent variable. In the interactive condition, *previous familiarity with the brand* was not a significant predictor of recognition for Nokia (β = -.082, p > .05) or Nike (β = 16.98, p > .05). Therefore, H5b was not supported (see Table 5.10).

Negative context-induced mood digital music video

Two logistic regression analyses were calculated to investigate this hypothesis. The two most familiar brands, which were also recognised, were selected: Dior and G-Star. In the interactive condition, *previous familiarity with the brand* was not a significant predictor of recognition for Dior (β = .27, p > .05), or G-Star (β = .28, p > .05). Similarly, in the non-interactive condition, *previous familiarity with the brand* was not a significant predictor of recognition for Dior (β = .66, p > .05), or G-Star (β = -.06, p > .05) (see Table 5.10). Therefore, H5b was not supported.

Table 5.10 **Prior Familiarity with the Brands**

Hypothesis	Dependent variable	Independent variable	Beta	Wald	p-value	Hypothesis test outcome
Positive context-induced mood digital music video						
H5a						
Marc Jacobs						
Interactive	Recall	Familiarity	-.16	.63	.43	Non-significant
Frederick's of Hollywood						
Interactive	Recall	Familiarity	.61	5.98	.01	Significant
H5b						
Nokia						
Interactive	Recognition	Familiarity	.08	.13	.72	Non-significant
Non interactive	Recognition	Familiarity	.07	.09	.77	Non-significant
Nike						
Interactive	Recognition	Familiarity	16.98	.00	1.00	Non-significant
Non interactive	Recognition	Familiarity	.45	2.09	.15	Non-significant
Negative context-induced mood digital music video						
H5a						
Shure						
Interactive	Recall	Familiarity	-.50	.95	.33	Non-significant
Sabian						
Interactive	Recall	Familiarity	-16.81	.00	1.00	Non-significant
H5b						
Dior						
Interactive	Recognition	Familiarity	.27	1.20	.27	Non-significant
Non interactive	Recognition	Familiarity	.66	1.15	.28	Non-significant
G-Star						
Interactive	Recognition	Familiarity	.28	3.26	.07	Non-significant
Non interactive	Recognition	Familiarity	-.06	.08	.78	Non-significant

5.1.6.2 Familiarity with the video

5.1.6.2.1 Descriptive statistics

In the positive context-induced mood digital music video, *previous familiarity with the video* was slightly higher on the interactive condition. An independent-samples t-test was conducted to compare the *previous familiarity with the video* in the interactive and non-interactive conditions. There was no significant difference in scores in the interactive (M = 4.15, SD = 2.09) and non-interactive conditions (M = 4.06, SD = 2.28: t (123) = .23, $p > .05$). In the positive context-induced mood digital music video, *previous familiarity with the video* was higher in the non-interactive condition. There was a significant difference in scores in the interactive (M = 3.98, SD = 2.19) and non-interactive conditions (M = 4.81, SD = 2.11: t (145) = -2.27, $p < .05$).

5.1.6.2.2 Hypothesis testing

H5c: Previous familiarity with the digital music video has a positive effect on placement recall.

Positive context-induced mood digital music video

A linear regression analysis was performed to assess the ability of familiarity with the video to predict recall. The recall score functioned as a dependent variable while the familiarity with the video item was treated as an independent variable. *Previous familiarity with the video* had no statistically significant effect on placement recall in the interactive condition (β = .01, p > .05). In the non- interactive condition, *previous familiarity with the video* had no statistically significant effect on recall (β = -.15, p > .05). Therefore, H5c was not supported in (see Table 5.11).

Negative context-induced mood digital music video

A linear regression analysis was carried out in order to determine whether the ability of *previous familiarity with the video* can predict recall. *Previous familiarity with the video* and recall had no statistically significant relationship in the interactive (β = .01, p > .05) or the non-interactive (β = -.35, p > .05) conditions. Therefore H5c was not supported (see Table 5.11).

H5d: Previous familiarity with the digital music video has a positive effect on placement recognition.

Positive context-induced mood digital music video

A linear regression analysis was performed to assess the ability of familiarity with the video to predict recognition. Previous familiarity with the video had no statistically significant effect on placement recognition (β = -.02, p > .05). In the non-interactive condition, previous familiarity with the video had no statistically significant effect on placement recognition (β = -.03, p > .05). Therefore, H5d was not supported.

Negative context-induced mood digital music video

A linear regression analysis was used to assess the ability of familiarity with the video to predict recognition as a score. *Previous familiarity with the video* was not a significant predictor of recognition in the interactive (β = .01, p > .05), and the non-interactive (β = -.22, p > .05) condition. Therefore H5d was not supported (see Table 5.11).

Table 5.11 **Prior Familiarity with the Video**

Hypothesis	Dependent variable	Independent variable	Beta	t-value	p-value	Hypothesis test outcome
Positive context-induced mood digital music video						
H5c						
Interactive	Recall	Familiarity	.01	.08	.93	Non-significant
Non interactive	Recall	Familiarity	-.15	-.69	.50	Non-significant
H5d						
Interactive	Recognition	Familiarity	-.02	-.16	.88	Non-significant
Non interactive	Recognition	Familiarity	-.03	-.21	.84	Non-significant
Negative context-induced mood digital music video						
H5c						
Interactive	Recall	Familiarity	.01	.05	.96	Non-significant
Non interactive	Recall	Familiarity	-.35	-1.11	.29	Non-significant
H5c						
Interactive	Recognition	Familiarity	-.01	-.08	.93	Non-significant
Non interactive	Recognition	Familiarity	-.22	-1.41	.17	Non-significant

5.1.6.3 Familiarity with the singer

5.1.6.3.1 Descriptive statistics

An independent-samples t-test was conducted to compare the p*revious familiarity with the band* in the interactive and non-interactive conditions in the positive context-induced digital music video. There was no significant difference in scores in the interactive (M = 5.22, SD = 1.58) and non-interactive conditions (M = 4.80, SD = 1.8: t (123) = 1.37, p > .05). An independent-samples t-test was conducted to compare previous opinion about the band in the interactive and non-interactive conditions. There was no significant difference in scores for interactive (M = 3.85, SD = 1.46) and non-interactive conditions (M = 3.79, SD = 1.38: t (118) = .23, p > .05) (see Appendix D).

An independent-samples t-test was conducted to compare how familiar the participants were with the band in the interactive and non-interactive conditions in the negative context-induced digital music video. There was a significant difference in scores in the interactive (M = 3.98, SD = 2.19) and non-interactive conditions (M = 4.81, SD = 2.11: t (145) = -2.27, p < .05), such that participants in the non-interactive condition were more familiar with the band. An independent-samples t-test was conducted to compare previous opinion about the singer in the interactive and non-interactive conditions. There was no significant difference in scores in the interactive (M = 4.04, SD = 1.50) and non-interactive conditions (M = 4.06, SD = 1.464: t (118) = -.07, p > .05) (see Appendix C).

5.1.6.3.2 Hypothesis testing

H5e: Previous familiarity with the singer has a positive effect on recall.

Positive context-induced mood digital music video

A linear regression analysis was performed in order to assess whether *previous familiarity with the band* predicts recall. *Previous familiarity with the singer* had no statistically significant effect on placement recall in the interactive condition, (β = .19, p > .05) and in the non-interactive condition (β = -.09, p > .05); thus H5e was not supported (see Table 5.12).

Negative context-induced mood digital music video

Linear regression analysis was used to determine whether *previous familiarity with the singer* predicts recall. *Previous familiarity with the singer* was not a significant predictor of recall in the interactive (β = .038, p > .05) or the non-interactive conditions (β = .036, p > .05). Therefore, H5d was not supported (see Table 5.12).

H5f: Previous familiarity with the singer has a positive effect on recognition.

Positive context-induced mood digital music video

A linear regression analysis was performed in order to assess whether *previous familiarity with the singer* predicts recognition. *Previous familiarity with the singer* had no statistically significant effect on placement recognition in the interactive (β = .20, p > .05) and non-interactive conditions (β = .11, p > .05); thus H5f was not supported.

Negative context-induced mood digital music video

Linear regression analysis was used to determine whether *previous familiarity with the singer* predicts recognition. *Previous familiarity with the singer* was not a significant predictor of recognition in the interactive (β = -.045, p > .05) and in the non-interactive conditions (β = -.294, p > .05). Therefore, H5e was not supported (see Table 5.12).

Table 5.12 **Prior Familiarity with the Singer**

Hypothesis	Dependent variable	Independent variable	Beta	t-value	p-value	Hypothesis test outcome
Positive context-induced mood digital music video						
H5e						
Interactive	Recall	Familiarity	.19	1.28	.21	Non-significant
Non interactive	Recall	Familiarity	-.09	.43	.67	Non-significant
H5f						
Interactive	Recognition	Familiarity	.20	1.67	.1	Non-significant
Non interactive	Recognition	Familiarity	.11	.71	.48	Non-significant
Negative context-induced mood digital music video						
H5e						
Interactive	Recall	Familiarity	.04	.288	.78	Non-significant
Non interactive	Recall	Familiarity	-.56	-2.03	.07	Non-significant
H5f						
Interactive	Recognition	Familiarity	-.05	-.40	.69	Non-significant
Non interactive	Recognition	Familiarity	-.29	-1.9	.06	Non-significant

5.1.7 Judgement of placement fit

5.1.7.1 Hypothesis testing

H6a: Congruence with the plot has a negative effect on interactive placement recall.

Positive context-induced mood digital music video

Two logistic regressions were calculated by taking the recall binary measure for each of the prominent (Nokia) and the subtle (American Apparel) brands as dependent variable with the prominence score for each brand as an independent variable. This decision was made so that both brands would present a significant number of entries to allow statistical analysis. A linear regression analysis was used to assess whether *judgement to fit* predicts recall and recognition. In the case of Nokia, *judgment to fit* was not a significant predictor of recall in the interactive condition (β = -.07, p > .05). For American Apparel, judgement to fit was not a significant predictor of recall (β = -.14, p > .05); thus H6a was not supported (see Table 5.13).

Negative context-induced mood digital music video

Two logistic regression analyses were calculated by taking the recall binary measure for Marshall, the prominent brand, and All Saints, the subtle brand, as dependent variable with the prominence score for each brand as an independent variable. In the interactive condition, *judgment of placement fit* was not a significant predictor of recall (β = -.425, p > .05) in the prominent brand, Marshall. In the case of the subtle brand, *judgement of placement fit* was not a significant predictor of recall (β = .001, p > .05). Therefore H6a was not supported (see Table 5.13).

H6b: Congruence with the plot has a negative effect on interactive placement recognition.

Positive context-induced mood digital music video

Two logistic regressions were calculated by taking the recognition binary measure for each of the prominent (Nokia) and the subtle (American Apparel) brands as dependent variable with the prominence score for each brand as an independent variable. A linear regression analysis was used to assess whether *judgement to fit* predicts recognition. In the case of Nokia, *judgment to fit* was not a significant predictor of recognition in the interactive condition (β = -.13, p > .05). For American Apparel, judgement to fit was not a significant predictor of recognition (β = -.15, p > .05), thus H6b was not supported.

Negative context-induced mood digital music video

Two logistic regression analyses were calculated by taking the recognition binary measure for Marshall, the prominent brand, and All Saints, the subtle one, as dependent variable with the prominence score for each brand as an independent variable. In the interactive condition, *judgment of placement fit* was not a significant predictor of recognition (β = .013, p > .05) in the prominent brand, Marshall. In the case of the subtle brand, *judgement of placement fit* was not a significant predictor of recognition (β = -.05, p > .05). Therefore H6b was not supported (see Table 5.13).

Table 5.13 **Judgment of Placement Fit**

Hypothesis	Dependent variable	Independent variable	Beta	t-value	p-value	Hypothesis test outcome
Positive context-induced mood digital music video						
H6a						
Nokia						
Interactive	Recall	Fit	-.07	.16	.69	Non-significant
Non interactive	Recall	Fit				Non-significant
American Apparel						
Interactive	Recall	Fit	-.14	.70	.40	Non-significant
Non interactive	Recall	Fit				Non-significant
H6b						
Nokia						
Interactive	Recognition	Fit	-.13	.22	.64	Non-significant
Non interactive	Recognition	Fit				Non-significant
American Apparel						
Interactive	Recognition	Fit	-.15	.76	.38	Non-significant
Non interactive	Recognition	Fit				Non-significant
Negative context-induced mood digital music video						
H6a						
Marshall						
Interactive	Recall	Fit	-.43	1.38	.24	Non-significant
Non interactive	Recall	Fit	2.45	1.77	.18	Non-significant
All Saints						
Interactive	Recall	Fit	.00	1.81	.18	Non-significant

Hypothesis	Dependent variable	Independent variable	Beta	t-value	p-value	Hypothesis test outcome
Non interactive	Recall	Fit	.00	2.40	.12	Non-significant
H6b						
Marshall						
Interactive	Recognition	Fit	.01	.00	.96	Non-significant
Non interactive	Recognition	Fit	-1.79	2.90	.19	Non-significant
All Saints						
Interactive	Recognition	Fit	-.05	.02	.88	Non-significant
Non interactive	Recognition	Fit	-1.56	.97	.33	Non-significant

H6c: An interactive placement in digital music videos is perceived as more incongruent than a classical non-interactive product placement.

Positive context-induced mood digital music video

An independent-samples t-test was conducted to compare *judgement of placement fit* of a prominent placement (Nokia). There was no significant differences in scores in the interactive (M = 5.41, SD = 3.83) and non-interactive conditions (M = 2.48, SD = 1.57*; t* (53) = .27, p >.05 (see Table 5.14). Therefore, H6c was not supported.

Negative context-induced mood digital music video

An independent-samples t-test was conducted to compare *judgement of placement fit* of a prominent placement (Marshall). There was no significant difference in scores in the interactive (M = 2.59, SD = 1.39) and non-interactive conditions (M = 2.58, SD = 1.57*; t* (53) = .27, p >.05 (see Table 5.22). In both conditions, Marshall was deemed as an incongruent placement. Therefore, H6b was not supported.

Table 5.14 **Judgement of Placement Fit Independent-samples T-test**

Hypothesis	Dependent variable		Conditions		Df	Statistical		Test outcome
			Interactive	Non interactive		T Value	P	
Positive context-induced mood digital music video			**(n=39)**	**(n=26)**				
H6b	Fit Nokia	M	5.41	5.23	63	.17	.87	Non-significant
		SD	3.83	4.62				
Negative context-induced mood digital music video			**(n=35)**	**(n=20)**				
H6b	Fit Marshall	M	2.59	2.48	53	.27	.79	Non-significant
		SD	1.39	1.57				

5.1.8 Scepticism towards advertising

5.1.8.1 Descriptive statistics

In the positive context-induced digital music video, *scepticism towards advertising* was very similar between conditions. An independent-samples t-test was conducted to compare *scepticism towards advertising* in the interactive and non-interactive

conditions. There was no significant difference in scores in the interactive (*M* = 2.38, *SD* = 1.07) and non-interactive conditions (*M* = 2.47, *SD* = 1.12: *t* (132) = -.46, *p* > .05) (see Appendix D). An independent-samples t-test was conducted to compare *scepticism towards advertising* in the interactive and non-interactive conditions in the negative context-induced digital music video. There was no significant difference in scores in the interactive (*M* = 3.21, *SD* = .63) and non-interactive conditions (*M* = 3.37, *SD* = .75: *t* (153) = -1.37, *p* > .05) (see Appendix C).

5.1.8.2 Hypothesis testing

H7a: Interactivity moderates the influence of scepticism towards advertising on product placement recall.

Positive context-induced mood digital music video

Interactivity was examined as a moderator of the relation between the *scepticism towards advertising* and *placement recall*. The moderation effect of *interactivity* is not significant. The IV and the moderator were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 32.4 per cent of the variance in *product placement recall*, $\Delta R^2 = .11$, *F* (1,130) = .56, *p*= .45. The final model is significant, *F* (3, 130) = 5.08, *p*= .00, but no coefficients were significant.

Negative context-induced mood digital music video

The moderation effect of *interactivity* was not significant. The IV and the moderator were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 38.3 per cent of the variance in *product placement recall*, $\Delta R^2 = .00$, *F* (1,151) = .22, *p*= .64. The final model was significant, *F* (3, 151) = 8.68, *p*= .00, but no coefficients were significant.

H7b: Interactivity moderates the influence of scepticism towards advertising on product placement recognition.

Positive context-induced mood digital music video

Interactivity was examined as a moderator of the relation between the *scepticism towards advertising* and *placement recognition*. The moderation effect of *interactivity* is not significant. The IV and the moderator were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 30.8 per cent of the variance in *product placement recognition*, $\Delta R^2 = .03$, *F* (1,113) = .95, *p*= .33. The

final model is not significant, F (3, 113) = 1.22, p= .31, but no coefficients were significant.

Negative context-induced mood digital music video

The moderation effect of *interactivity* is not significant. The IV and the moderator were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 30.8 per cent of the variance in *product placement recognition*, ΔR^2=*.105*, F (1,125) = 1.17, p= .28. The final model is significant, F (3, 125) = 4.37, p= .01, but no coefficients were significant.

H7c: Scepticism towards advertising has a negative influence on attitude towards placements in general.

Positive context-induced mood digital music video

A linear regression analysis was used to assess whether *scepticism* has an influence on attitude towards placements in general. *Scepticism* and *attitude towards the placement* were not significantly related in the interactive condition (β = .02, p > .05). In the non-interactive condition, *scepticism* was a significant predictor of *attitudes towards placement* (β = -.28, p < .05). Therefore, H7b was not supported in the interactive condition, but was supported in the non-interactive condition (see Table 5.15).

Negative context-induced mood digital music video

Scepticism was not a significant predictor for neither the interactive (β = .73, p > .05), nor the non-interactive conditions (β = -.06, p > .05). Therefore, H7c was not supported (see Table 5.15).

Table 5.15 **Scepticism towards Advertising**

Hypothesis	Dependent variable	Independent variable	Beta	t-value	p-value	Hypothesis test outcome
Positive context-induced mood digital music video						
H7c						
Interactive	Attitudes	Scepticism	.02	.19	.85	Non-significant
Non interactive	Attitudes	Scepticism	-.28	-2.02	.05	Significant
Negative context-induced mood digital music video						
H7c						
Interactive	Attitudes	Scepticism	.06	.55	.58	Non-significant
Non interactive	Attitudes	Scepticism	-.06	-.46	.65	Non-significant

5.1.8.3 Post-hoc tests: the moderation effects of interactivity and context-induced mood

H7d: Interactivity moderates the relation scepticism towards advertising and attitude towards placements in general

A post-hoc test was conducted to investigate whether *interactivity* has a moderating effect in the relation *attitude towards placements in general* and *scepticism towards advertising.* The moderation effect of *interactivity* is not significant. *Scepticism towards advertising* explained, after controlling for *interactivity*, 1.2 per cent of the variance in *attitude towards placements in general*, ΔR^2=.11, F (2, 42) = .02, p= .89. The final model was not significant, F (2, 286) = .02, p= .98.

H7e: Context-induced mood moderates the relation scepticism towards advertising and attitude towards placements in general

A post-hoc test was conducted to investigate whether *context-induced mood* has a moderating effect in the relation *attitude towards placements in general* and *scepticism towards advertising.* The moderation effect of *context-induced mood* is not significant. *Scepticism towards advertising* explained, after controlling for *context-induced mood*, 1.7 per cent of the variance in *attitude towards placements in general*, ΔR^2=.00, F(1,290) = .08, p= .78. The final model was not significant, F (2, 290) = .04, p= .96.

5.1.9 Attitudes towards placement

5.1.9.1 Hypothesis testing

H8a: Attitudes towards placement in general has a positive influence on brand recall.

Positive context-induced mood digital music video

A linear regression was used to determine whether *attitudes towards placement* have an effect on placement recall. In the interactive condition, *attitudes towards placement* had no statistically significant effect (β = -.02, p > .05). In the non- interactive condition, *attitudes towards placement* was not a significant predictor of recall either (β = .18, p > .05). Therefore, H8a was not supported (see Table 5.16).

Negative context-induced mood digital music video

Attitudes towards placement in general was not a significant predictor of recall in the interactive (β = -.012, p > .05) and in the non-interactive conditions (β = -.031, p > .05). Therefore H8a was not supported (see Table 5.16).

H8b: Attitudes towards placement in general has a positive influence on brand recognition.

Positive context-induced mood digital music video

A linear regression was used to determine whether *attitudes towards placement* have an effect on placement recognition. In the interactive condition, *attitudes towards placement* had no statistically significant effect on placement recognition (β = .14, p > .05). In the non- interactive condition, *attitudes towards placement* was not a significant predictor of recognition (β = -.05, p > .05). Therefore, H8b was not supported (see Table 5.16).

Negative context-induced mood digital music video

Attitudes towards placement in general was not a significant predictor of recognition in the interactive (β = .108, p > .05) and the non-interactive conditions (β = -.151, p > .05). Therefore H8b was not supported (see Table 5.16).

Table 5.16 **Attitudes towards Placement in General**

Hypothesis	Dependent variable	Independent variable	Beta	t-value	p-value	Hypothesis test outcome
Positive contest-induced mood digital music video						
H8a						
Interactive	Recall	Attitude	-.02	-.15	.88	Non-significant
Non interactive	Recall	Attitude	.18	.87	.39	Non-significant
H8b						
Interactive	Recognition	Attitude	.14	1.15	.25	Non-significant
Non interactive	Recognition	Attitude	-.05	-.36	.72	Non-significant
Negative contest-induced mood digital music video						
H8a						
Interactive	Recall	Attitude	-.01	-.09	.93	Non-significant
Non interactive	Recall	Attitude	-.03	-.09	.93	Non-significant
H8b						
Interactive	Recognition	Attitude	.11	.99	.33	Non-significant
Non interactive	Recognition	Attitude	-.15	-.99	.33	Non-significant

H8c: Attitudes towards placement in general in an interactive placement context are more positive than in classical non-interactive product placement.

Positive context-induced mood digital music video

An independent-samples t-test was conducted to compare the *attitudes towards placement in general* in the interactive and non-interactive conditions. There was no

significant difference in scores between the interactive (M = 5.14, SD = 1.27) and the non-interactive conditions (M = 5.06, SD = 1.51: t (153) = -.98, p > .05), thus H8c was not supported.

Negative context-induced mood digital music video

There was no significant difference in scores in the interactive (M = 5.07, SD = 1.48) and non-interactive conditions (M = 5.31, SD = 1.59: t (132) = .351, p > .05), thus H8c was not supported.

5.1.9.2 Post-hoc tests: the moderation effects of interactivity and context-induced mood

H8d: Interactivity moderates the relation between context-induced mood and attitudes towards placement in general

Interactivity was examined as a moderator of the relation between *context-induced mood* and *attitudes towards placement in general*. *Context-induced mood* explained, after controlling for *interactivity,* 6.6 per cent of the variance in *attitude towards placements in general*, ΔR^2=.00, F (1,285) = .88, p= .35. The final model was not significant, F (3, 285) = .42, p= .74. The moderation effect of *interactivity* was not significant.

H8e: Context-induced mood moderates the relation between interactivity and attitudes towards placement in general

Context-induced mood was examined as a moderator of the relation between *interactivity* and *attitudes towards placement in general*. *Interactivity* explained, after controlling for *context-induced mood,* 6.6 per cent of the variance in *attitude towards placements in general*, ΔR^2=.00, F (1,285) = .88, p= .35. The final model was not significant, F (3, 285) = .42, p= .74. The moderation effect of *context-induced mood* was not significant.

5.1.10 Involvement / connectedness

5.1.10.1 Descriptive statistics

In the positive context-induced mood digital music video, an independent-samples t-test was conducted to compare *involvement with the singer* in the interactive and non-interactive conditions. There was no significant difference in scores in the interactive

(*M* = 2.91, *SD* = 1.54) and non-interactive conditions (*M* = 2.61, *SD* = 1.51: *t* (118) = .38, *p* > .05). An independent-samples t-test was conducted to compare *involvement with the video* in the interactive and non-interactive conditions. There was no significant difference in scores in the interactive (*M* = 2.64, *SD* = 1.66) and non-interactive conditions (*M* = 2.85, *SD* = 1.80: *t* (110) = -2.30, *p* > .05). An independent-samples t-test was conducted to compare connectedness in the interactive and non-interactive conditions. There was no significant difference in scores in the interactive (*M* = 2.51, *SD* = 1.33) and non-interactive conditions (*M* = 2.51, *SD* = 1.19: *t* (132) = .01, *p* > .05).

In the negative context-induced mood digital music video, there was not a significant difference in *involvement with the singer* between the interactive (*M* = 3.22, *SD* = 1.29), and non-interactive (*M* = 3.22, *SD* = 1.34: *t* (120) = .998, *p* > .05) conditions. An independent-samples t-test was conducted to compare the mean scores of *involvement with the digital music video.* There was not a significant difference in mean scores between the interactive (*M* = 3.1, *SD* = 1.20), and non-interactive (*M* = 3, *SD* = 1.08: *t* (96) = .997, *p* > .05) conditions. Connectedness was higher in the interactive condition (see H9d).

5.1.10.2 Hypothesis testing

H9a: In an interactive product placement, higher involvement with a digital music video results in higher recall than in classical non-interactive product placement.

Positive context-induced mood digital music video

A linear regression analysis was used to assess whether *involvement with the video* influences recall. *Involvement with the video* had no statistically significant effect on placement recall in the interactive condition (β = -.16, *p* > .05). However, *involvement with the video* was a negative significant predictor of recall in the non-interactive condition (β = -.44, *p* < .05). Therefore, H9a was partially supported (see Table 5.17).

Negative context-induced mood digital music video

Involvement with the video had no statistically significant effect on recall in the interactive (β = .09, *p* > .05) and in the non- interactive conditions (β = .52, *p* > .05). Therefore, H9a was not supported (see Table 5.18).

H9b: In an interactive product placement, higher involvement with a digital music video results in higher recognition than in classical non-interactive product placement.

Positive context-induced mood digital music video

A linear regression analysis was used to assess whether *involvement with the video* influences recognition. *Involvement with the video* had no statistically significant effect on placement recognition in the interactive (β = -.05, p > .05) and in the non-interactive conditions (β = .09, p > .05). Therefore, H9b was not supported (see Table 5.17).

Negative context-induced mood digital music video

Involvement with the video had no statistically significant effect on recognition in the interactive (β = .17, p > .05) and in the non-interactive conditions (β = -.20, p > .05) (see Table 5.18). Therefore, H9b was not supported.

H9c: In an interactive product placement, involvement with a singer in a digital music video has a positive influence on recall.

Positive context-induced mood digital music video

A linear regression analysis was used to assess whether *involvement with the singer* has an effect on recall. Recall and *involvement with the singer* had no statistically significant relation (β = .00, p > .05). Therefore, H9c was not supported (see Table 5.17).

Negative context-induced mood digital music video

A linear regression analysis was used to determine whether *involvement* with The Script had an effect on recall. *Involvement with the singer* was not related to recall in the interactive (β = .14, p > .05) and non-interactive conditions (β = .30, p > .05) (see Table 5.18). Therefore, H9c was not supported.

H9d: In an interactive product placement, involvement with a singer in a digital music video has a positive influence on recognition.

Positive context-induced mood digital music video

A linear regression analysis was used to assess whether *involvement with the singer* has an effect on recognition. Recognition and *involvement with the singer* had no statistically significant relation (β = -.07, p > .05). Therefore, H9d was not supported (see Table 5.17).

Negative context-induced mood digital music video

A linear regression analysis was used to determine whether *involvement* with The Script had an effect on recognition. *Involvement with the singer* was not related to recognition in the interactive (β = .08, p > .05) and non-interactive conditions (β = -.09, p > .05) (see Table 5.18). Therefore, H9d was not supported.

H9e: In an interactive product placement, involvement with a digital music video has a positive influence on perceived information of the placement.

Positive context-induced mood digital music video

A linear regression analysis was used to determine whether *involvement with the video* has an effect on perceived information. Perceived information and *involvement with the video* had no statistically significant relation (β = .16, p > .05), thus, H9e was not supported (see Table 5.17).

Negative context-induced mood digital music video

A linear regression analysis was used to assess whether *involvement* with 'The Man Who Can't Be Moved' video by The Script has an effect on perceived information. *Involvement with the video* was a significant predictor of perceived information (β = .32, p < .05). Therefore, H9e was supported (see Table 5.18).

Table 5.17 **Involvement in a Positive Context-induced Mood Digital Music Video**

Hypothesis	Dependent variable	Independent variable	Beta	t-value	p-value	Hypothesis test outcome
H9a						
Interactive	Recall	Involvement	-.162	-1.08	.29	Non-significant
Non interactive	Recall	Involvement	-.44	-2.20	.04	Significant
H9b						
Interactive	Recognition	Involvement	-.05	-.39	.70	Non-significant
Non interactive	Recognition	Involvement	.09	.50	.62	Non-significant
H9c						
Interactive	Recall	Involvement	.00	.03	.98	Non-significant
Non interactive	Recall	Involvement	-.07	-.55	.59	Non-significant
H9d						
Interactive	Recognition	Involvement	-.30	-1.49	.15	Non-significant
Non interactive	Recognition	Involvement	.16	.99	.33	Non-significant
H9e						
Interactive	Involvement	Information	.16	.50	.62	Non-significant
Non interactive	Involvement	Information	.21	1.40	.17	Non-significant

Table 5.18 **Involvement in a Negative Context-induced Mood Digital Music Video**

Hypothesis	Independent variable	Dependent variable	Beta	t-value	p-value	Hypothesis test outcome
H9a						
Interactive	Recall	Involvement	.09	.53	.60	Non-significant
Non-interactive	Recall	Involvement	.52	1.35	.24	Non-significant
H9b						
Interactive	Recognition	Involvement	.17	1.19	.24	Non-significant
Non-interactive	Recognition	Involvement	-.20	-1.08	.29	Non-significant
H9c						
Interactive	Recall	Involvement	.14	.93	.36	Non-significant
Non- interactive	Recall	Involvement	.30	.77	.47	Non-significant
H9d						
Interactive	Recognition	Involvement	.08	.67	.51	Non-significant
Non-interactive	Recognition	Involvement	-.09	-.53	.60	Non-significant
H9e						
Interactive	Involvement	Information	.32	2.43	.02	Significant
Non interactive	Involvement	Information	-.02	-.11	.91	Non-significant

H9f: Interactivity moderates the influence of connectedness on product placement recall.

Positive context-induced mood digital music video

Interactivity was examined as a moderator of the relation between *connectedness* and *placement recall*. The moderation effect of interactivity is not significant. The IV and the moderator were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 33.8 per cent of the variance in *product placement recall*, ΔR^2=.11, F (1, 73) = 1.25, p= .27. The final model is significant, F (3, 73) = 3.14, p= .03; however, the interaction between connectedness and interactivity was not significant.

Negative context-induced mood digital music video

Interactivity was examined as a moderator of the relation between *connectedness* and *placement recall*. The moderation effect of interactivity is not significant. The IV and the moderator were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 16.5 per cent of the variance in *product placement recall*, ΔR^2=.02, F (1, 90) = 1.67, p= .20. The final model is not significant, F (2, 90) = 1.27, p= .29.

H9g: Interactivity moderates the influence of connectedness on product placement recognition.

Positive context-induced mood digital music video

Interactivity was examined as a moderator of the relation between *connectedness* and *placement recognition*. The moderation effect of interactivity is significant, ΔR^2=.06, F

(1, 70) = 1.62, p= 4.50. The final model is not significant, F (3, 70) = 1.98, p= .13; however, *connectedness (β=1.21, p = .03)*, and the interaction between connectedness and interactivity *(β=-.25, p = .04)*, were significant.

Negative context-induced mood digital music video

Interactivity was examined as a moderator of the relation between *connectedness* and *placement recognition*. The moderation effect of interactivity is not significant, ΔR^2=.01, F (1, 81) = .63, p= .43. The final model is not significant, F (2, 81) = 1.73, p= .18.

5.1.11 Implicit memory

5.1.11.1 Descriptive statistics

Positive context-induced mood digital music video

Consistent with previous studies (Duke and Carlson 1993; Shapiro and Krishnan 2001; Lee 2002; Yang *et al.* 2006; Yoo 2008), descriptive statistics in the form of percentages for positive performance on the implicit memory test were calculated for each brand and condition. As depicted in Table 5.19, participants in the interactive condition reported higher implicit memory recognition than the non-interactive group. Based on the results of the pilot test, only five brand names were used in the word-fragment test, consistent with Yang *et al.* (2006).

Table 5.19 **Implicit Memory Descriptive Statistics**

Brand		Condition		Total
		Interactive	Non-interactive	
Positive context-induced mood digital music video				
Guess	N	64	41	105
	%	85.3%	32.5%	83.3%
Burberry	N	55	31	86
	%	73.3%	60.8%	68.3%
***Nokia**	N	46	24	70
	%	61.3%	47.1%	55.6%
American Apparel	N	46	20	66
	%	61.3%	39.2%	52.4%
***Mac**	N	10	4	14
	%	13.3%	7.8%	11.1%
Negative context-induced mood digital music video				
***Nixon**	N	81	50	131
	%	86.2%	82%	84.5%
***Marshall**	N	68	40	108
	%	72.3%	65.6%	69.7%
American Apparel	N	47	24	71
	%	50%	39.3%	45.8%
Dior	N	17	4	21
	%	18.1%	6.6%	13.5%
REI	N	6	4	10
	%	6.4%	6.6%	6.5%

Note: Prominent brands are denoted with an (*)

Negative context-induced mood digital music video

Similarly to the positive context-induced mood digital music video, participants in the interactive condition showed higher mean scores than in the non-interactive condition (see Table 5.19).

Hypothesis testing

H10a: Implicit memory is higher for interactive product placement than for classical non-interactive product placement.

Positive context-induced mood digital music video

An independent-samples t-test was conducted to compare the implicit memory result for each of the five brands in the interactive and non-interactive conditions. The sample means are shown in Table 5.20. There was a significant difference between both conditions such that higher implicit memory occurred in the interactive condition. Furthermore, an independent-samples t-test was conducted to compare the overall implicit memory score in the interactive and non-interactive conditions. There was no significant difference in the number of brands identified (t (126) = 1.66, p > .05). Therefore, H10a was not supported.

Table 5.20 **Positive Context-induced Mood Digital Music Video: Implicit Memory Independent-samples T-test**

Brand	Condition		Statistical			Result
	Interactive (n=75)	Non interactive (n=51)	Df	t-value	P	
Guess			98.82	-.71	.48	Non-significant
Burberry			124	-1.00	.32	Non-Significant
***Nokia**			105.51	-1.58	.12	Non-significant
American Apparel			107.11	-2.48	.02	Significant
***Mac**			120.98	-1.00	.32	Non-significant

Note: Prominent brands are denoted with an (*)

Negative context-induced mood digital music video

An independent-samples t-test was conducted to compare the implicit memory scores in the interactive and non-interactive conditions. First, the variance for each of the five individual brands was calculated. The sample means are displayed in Table 5.21, which show that there was no significant difference between conditions in the cases of the prominent brands, Nixon and Marshall, and for American Apparel and REI. However, there was a positive significant difference in the case of Dior. Additionally, an

independent-samples t-test was conducted to compare the overall implicit memory score in the interactive and non-interactive conditions. Overall, there was no significant difference in the number of brands identified (t (115) = 1.47, p > .05), thus H10a was not supported.

Table 5.21 **Negative Context-induced Mood Digital Music Video: Implicit Memory Independent-samples T-test**

Brand	Condition		Statistical			Result
	Interactive (n=94)	Non interactive (n=61)	Df	t-value	P	
***Nixon**			118.05	-.69	.49	Non-significant
***Marshall**			122.42	-.88	.38	Non-significant
American Apparel			153	-1.30	.20	Non-significant
Dior			153	-2.06	.04	Significant
REI			126.86	.04	1.00	Non-significant

Note: Prominent brands are denoted with an (*)

H10b: Involvement with the interactive digital music video has a positive influence on implicit memory.

Positive context-induced mood digital music video

A linear regression analysis was performed to assess the impact of the participant's *involvement with the video* on implicit memory. *Involvement with the video* had a significant influence on the overall implicit memory score (β = .26, p < .05). Therefore, H10b was supported (see Table 5.22).

Negative context-induced mood digital music video

A linear regression was performed to assess the impact of the participant's *involvement with the video* on implicit memory. As a result, *involvement with the video* was not a significant predictor of the overall implicit memory score (β = .05, p > .05), thus H10b was not supported (see Table 5.22).

H10d: Attitude towards product placement in an interactive digital music video has a positive influence on implicit memory.

Positive context-induced mood digital music video

A linear regression analysis was carried out in order to assess the impact of attitude towards product placement on implicit memory. Attitudes towards placement in general was not a significant predictor of the overall implicit memory score (β = .05, p > .05). Therefore, H10c was not supported (see Table 5.22).

Negative context-induced mood digital music video

A linear regression was performed to assess the impact of *attitudes towards placement* on implicit memory. Results showed that *attitudes towards placement* was not a significant predictor of implicit memory (β = -.14, p > .05). Therefore, H10d was not supported (see Table 5.22).

Table 5.22 **Implicit Memory Testing**

Hypothesis	Dependent variable	Independent variable	Beta	t-value	p-value	Hypothesis test outcome
Positive context-induced mood digital music video						
H10b						
Interactive	Implicit	Involvement	.26	2.08	.04	Significant
H10d						
Interactive	Implicit	Attitudes	.05	.43	.67	Non-significant
Negative context-induced mood digital music video						
H10b						
Interactive	Implicit	Involvement	.05	.33	.75	Non-significant
H10d						
Interactive	Implicit	Attitudes	-.14	-1.28	-.21	Non-significant

Positive context-induced mood digital music video

To test H10b, H10c, H10d and H10e a logistic regression was performed. This model was evaluated on each of the five brands to ascertain the effects of attitude toward the placement, prominence, and *involvement with the video* on the likelihood that participants have positive implicit memory (see Table 5.23). The logistic regression model was not statistically significant for brand 1 (Nokia), p > .05; for brand 2 (MAC), p > .05, for brand 3 (Guess), p > .05; and for brand 4 (Burberry), p > .05.

Table 5.23 **Positive Context-induced Mood Digital Music Video: Logistic regression predicting likelihood of reporting positive implicit memory in individual brands**

Hypothesis	Independent variable	Dependent variable	Brand 1	Brand 2	Brand 3	Brand 4	Brand 5
H10b							
Interactive	Implicit	Involvement	Not-supported	Not-supported	Not-supported	Not-supported	Supported
Hypothesis	**Independent variable**	**Dependent variable**	**Brand 1**	**Brand 2**	**Brand 3**	**Brand 4**	**Brand 5**
H10c							
Interactive	Implicit	Familiarity	Not-supported	Not-supported	Not-supported	Not-supported	No-Supported
H10d							
Interactive	Implicit	Attitudes	Not-supported	Not-supported	Not-supported	Not-supported	Supported
H10e							
Interactive	Implicit	Opportunity to process a placement	Not-supported	Not-supported	Not-supported	Not-supported	Not-supported

The model was statistically significant for brand 5 (American Apparel), $p < .05$, indicating that the model was able to distinguish between respondents who scored positive on the implicit memory test and those who did not. The model as a whole explained between 34 per cent (Cox and Snell R squared) and 53.30 per cent (Nagelkerke R squared) of the variance in the implicit test, and correctly classified 88.20 per cent of cases. As depicted in Table 5.24, only one independent variable made a unique statistically significant contribution to the model (*involvement with the video*). The strongest predictor was *attitudes towards placement in general*, recording an odds ratio of 1.30. This indicated that respondents who had a positive *attitude towards placement in general* were 1.35 times more likely to score correctly on the implicit test memory than those who did not, controlling for all other factors in the model. *Involvement with the video* showed an odds ratio of 1.27, indicating that participants with a positive implicit memory were 1.27 more likely to report positive results if they reported a high *involvement with the video*. Therefore, H10b and H10d were supported in the case of brand 5. Contrary to what was expected, prominence and *previous familiarity with the brand* had a negative effect on implicit memory, refuting H10c and H10e.

Table 5.24 **Logistic regression predicting the likelihood of reporting positive implicit memory in American Apparel**

	B	S.E.	Wald	Df	Sig.	Odds Ratio	95% C.I.for Odds Ratio	
							Lower	Upper
Involvement with the video	.24	.12	4.14	1	.04	1.27	1.01	1.59
Prominence	-.33	.27	1.52	1	.22	.72	.42	1.22
Attitudes towards placement in general	.30	.20	2.33	1	.13	1.35	.92	1.99
Familiarity with the brand	-.11	.44	.06	1	.81	.90	.38	2.11

Negative context-induced mood digital music video

To test H10b, H10c, H10d and H10e a logistic regression was performed. Similar to Study One, logistic regression was performed to assess the impact of attitude toward the placement, prominence, and *involvement with the video* on the likelihood that participants have positive implicit memory for each of the five brands presented in the test. The logistic regression model was not statistically significant either for brand 1 (Dior), $p > .05$; brand 2 (American Apparel), $p > .05$; brand 3 (Nixon), $p > .05$; brand 4 (REI), $p > .05$; and brand 5 (Marshall), $p > .05$. Therefore, H10b, H10c, H10d and H10e were not supported (see Table 5.25).

Table 5.25 **Negative Context-induced Mood Digital Music Video: Logistic Regression Predicting the Likelihood of Reporting Positive Implicit Memory in Individual Brands**

Hypothesis	Independent variable	Dependent variable	Brand 1	Brand 2	Brand 3	Brand 4	Brand 5
H10b							
Interactive	Implicit	Involvement	Not-supported	Not-supported	Not-supported	Not-supported	Not-supported
H10c							
Interactive	Implicit	Familiarity	Not-supported	Not-supported	Not-supported	Not-supported	Not-supported
H10d							
Interactive	Implicit	Attitudes	Not-supported	Not-supported	Not-supported	Not-supported	Not-supported
H10e							
Interactive	Implicit	Opportunity to process a placement	Not-supported	Not-supported	Not-supported	Not-supported	Not-supported

5.1.11.2 Model testing

A series of regression analyses with implicit memory as the dependent variable were conducted. The first regression analysis included all observations from the combined dataset, following the conceptual model of the present study outlined in Figure 3.1 (N = 183). Only *video context-induced mood* (positive/negative) had a significant effect (p < .05), thus H10b and H10f were supported. The coefficients were positive. Results showed that watching a positive-*induced mood* music video increased *implicit memory* .55 times (see Table 5.26).

Implicit 1= ∫ (Programme-induced mood after exposure, the strength of the link between brand and singer, scepticism, attitudes, information, transformation, involvement with the singer previous to exposure, connectedness, prior familiarity with the singer, prior familiarity with the video, involvement with the singer, involvement with the video, perceived interactivity, video context-induced mood (+/-), video type (interactive/ non-interactive)).

Table 5.26 **Implicit Memory Model Testing: Combined Dataset**

Source	SS	Df	MS	Number of obs = 183
Model	39.1525565	15	2.61017044	F(15, 167) = 2.82
Residual	154.661651	167	.926117671	Prob > F = .0006
Total	193.814208	182	1.06491323	R-squared = .2020
				Adj R-squared = .1303
				Root MSE = .96235

Implicit memory	**Coef.**	**Std. Err.**	**T**	**P>|t|**	**[95% Conf. Interval]**	
Programme-induced mood after exposure	-.00	.01	-.32	.75	-.02	.02
The strength of the link between brand and singer	.01	.02	.56	.58	-.03	.05
Scepticism	-.04	.02	-1.49	.15	-.09	.01
Attitudes	-.02	.02	-1.14	.26	-.05	.01
Information	.01	.02	.43	.67	-.03	.05
Transformation	-.01	.02	-.34	.74	-.05	.04
Involvement with the singer previous to exposure	-.17	.11	-1.54	.13	-.40	.05

Implicit memory	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
Connectedness	-.01	.01	-.87	.39	-.02	.01
Prior familiarity with the singer	.07	.06	1.12	.27	-.05	.18
Prior familiarity with the video	.03	.04	.60	.55	-.06	.11
Involvement with the singer after exposure	.00	.02	.08	.94	-.03	.04
Involvement with the video	.04	.02	1.92	.06	-.00	.09
Perceived interactivity	.01	.01	1.10	.27	-.01	.03
Video context-induced mood (+/-)	.55	.16	3.41	.00	.23	.88
Video type (interactive/ non-interactive)	.06	.42	.14	.89	-.77	.89

The second regression analysis was performed in the interactive condition model, including observations from both video type (positive/negative video-induced mood) (*N* = 108). The regression analysis was performed following the conceptual model of the present study outlined in Figure 3.1. Only *perceived usability* and the video *context-induced mood* (positive/negative) had a significant positive effect ($p < .05$). The video type had the strongest impact i.e. watching a positive music video increased implicit memory by .84 (see Table 5.28). Therefore, H10f was supported. In addition *perceived usability* was found to have a positive significant effect on implicit memory, which implies that navigating the interactive digital music video with ease increased implicit memory by .11 (see Table 5.27).

Implicit1= ∫ (Programme-induced mood after exposure, the strength of the link between brand and singer, scepticism, attitudes, information, transformation, involvement with the singer previous to exposure, connectedness, prior familiarity with the singer, prior familiarity with the video, involvement with the singer, involvement with the video, control, time, two-way, perceived usability, video context-induced mood (+/-), video type (interactive/ non-interactive))

Table 5.27 **Implicit Memory Model Testing: Interactive Dataset**

Source	SS	Df	MS	Number of obs = 108
Model	28.5874637	18	1.58819243	F(18, 89) = 1.75
Residual	80.8199438	89	.908089256	Prob > F = .0451
Total	109.407407	107	1.02249913	R-squared = .2613
				Adj R-squared = .1119
				Root MSE = .95294

Implicit memory	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
Programme-induced mood after exposure	-.02	.01	-1.23	.22	-.04	.01
The strength of the link between brand and singer	-.02	.03	-.52	.60	-.07	.04
Scepticism	-.05	.04	-1.36	.18	-.13	.02
Attitudes	-.02	.03	-.59	.56	-.07	.04
Information	.01	.03	.42	.67	-.04	.06
Transformation	.03	.03	.95	.34	-.03	.09
Involvement with the singer previous to exposure	.05	.16	.32	.75	-.26	.36
Connectedness	-.01	.01	-1.43	.16	-.03	.01

Implicit memory	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
Prior familiarity with the singer	.05	.08	.68	.50	-.10	.21
Prior familiarity with the video	-.01	.06	-.18	.86	-.12	.10
Involvement with the singer after exposure	.00	.02	.06	.95	-.04	.05
Involvement with the video after exposure	.01	.03	.38	.70	-.05	.08
Perceived interactivity:						
Control	-.04	.04	-.86	.39	-.11	.05
Time	-.02	.04	-.62	.54	-.09	.05
Two-way	-.00	.05	-.07	.95	-.10	.09
Perceived usability	.11	.05	2.05	.04	.00	.21
Video context-induced mood (+/-)	.84	.21	3.92	.00	.41	1.26
Video type (interactive/ non-interactive)	-2.00	1.15	-1.73	.09	-4.29	.295

Finally, the same set of regression analyses was calculated with *gender* as a moderator. *Gender* was not a significant moderator on the relationship between the independent variables of the study and *implicit memory*. The complete set of results is displayed in Appendix D.

5.1.12 Recall

Consistent with similar studies (Nelson 2002; Gupta and Lord 1998), descriptive statistics for recalled brands were calculated for each brand and condition. Participants in the interactive condition showed higher recall and recognition compared to the non-interactive condition, in both Study One and Study Two (see Appendix D).

5.1.12.1 Hypothesis testing

H11a: Interactive placement increases brand recall more so than classical non-interactive product placement.

Positive context-induced mood digital music video

An independent-samples t-test was conducted to compare recall scores in the interactive and non-interactive conditions. This approach is similar to other studies investigating this issue (Gupta and Lord 1998). Three out of a total of 19 recalled brands, reported a significant difference between the interactive and non-interactive conditions (see Table 5.28). These brands were American Apparel and Nike, subtle and prominent respectively. An independent-samples t-test was also calculated to compare the scores for the total number of brands recognised in both conditions. There was a significant difference between the interactive (M = 2.30, SD = 1.50) and the non-interactive

conditions (M = 1.46, SD = .70; t (123) = 4.5, p < .05). Higher recall was achieved in the interactive condition compared to the non-interactive, thus supporting H11a (see Table 5.28).

Table 5.28 **Positive Context-induced Mood Digital Music Video: Recall Independent-samples T-test**

Brand		Condition			Statistical		Result
		Interactive (n=75)	Non interactive (n=51)	Df	t-value	P	
American Apparel				103.61	-6.1	.00	Significant
Nokia *				122.92	-1.71	.09	Non-significant
HP *				125	-.63	.53	Non-significant
Guess				123.37	-1.01	.30	Non-significant
MAC *				120.8	-1.39	.17	Non-significant
Steve Madden				125	-.83	.41	Non-significant
Theory				125	-.83	.41	Non-significant
Obey				125	-.83	.41	Non-significant
Forever 21				125	-.83	.41	Non-significant
Nike				76.58	1.20	.05	Significant
Marc Jacobs				74	-2.04	.05	Significant
Paul Smith				125	-.83	.41	Non-significant
BCG				125	-.83	.41	Non-significant
Burberry				74	-1.42	.16	Non-significant
Fredericks of Hollywood				74	-1.76	.08	Non-significant
WeSC				125	-.83	.41	Non-significant
Recall (score)	M	2.30	1.46	123	4.5	.00	Significant
	SD	1.50	.70				
Recall 1 week after (*N* = 64, 40)	M	2.41	2.05	100	1.70	.09	Non- significant
	SD	1.26	.88				

Note: Prominent brands are denoted with an (*)

Negative context-induced mood digital music video

There was a significant difference in 11 of a total of 18 recalled brands when comparing the interactive and non-interactive conditions. As depicted in Table 5.29, there was no significant differences in the recall score in the interactive (M = 2.30, SD = 1.45) and non-interactive conditions (M = 1.73, SD = .91*;* t (66) = 1.25, p = .21). Therefore, H11a was partially supported.

Table 5.29 **Negative Context-induced Mood Digital Music Video: Recall Independent-samples T-test**

Brand		Condition		Statistical			Result
		Interactive (n=94)	Non interactive (n=59)	Df	t-value	P	
Marshall *				149.86	-3.51	.00	Significant
Nixon *				140.81	-3.34	.00	Significant
All Saints				142	-3.16	.00	Significant
Gibson				148.46	-2.23	.03	Significant
Firetrap				151	-.48	.63	Non-significant
Famous Stars				93	-3.14	.00	Significant
Shure				93	-2.74	.01	Significant
American Apparel				147.48	-1.54	.13	Non-significant
DW				93	-2.52	.01	Significant
G-Star				93	.2.52	.01	Significant
Sabian				151	-.81	.42	Non-significant
Ticketmaster				46	-2.6	.01	Significant
Ask the missus				93	-2.29	.03	Significant
Unconditional				93	-2.03	.05	Significant
Concrete				151	-.79	.43	Non-significant
Dior				93	-1.42	.16	Non-significant
REI				51	-.09	.93	Non-significant
Epiphone				151	-.79	.43	Non-significant
Recall score (*N* = 57, 11)	M	2.30	1.73	66	1.25	.21	Non-significant
	SD	1.45	.91				
Recall 1 week after (*N* = 59, 23)	M	2.58	1.83				
	SD	1.60	1.03	62	2.51	.02	Significant

Note: Prominent brands are denoted with an (*)

5.1.13 Recognition

5.1.13.1 Hypothesis testing

H11b: Interactive placement increases brand recognition more so than classical non-interactive product placement.

In the positive context-induced mood digital music video, although brands were more likely to be recalled in the interactive condition than in the non-interactive condition, only three brands reported a significant difference when comparing the brand-per-brand recognition for both interactive and non-interactive conditions (see Table 5.30). An independent-samples t-test was also calculated to compare the scores for the total number of brands recognised in both conditions, interactive (M = 3.58, SD = 2.32) and non-interactive (M = 2.58, SD = 1.86; t (216) = 3.68, $p < .05$). There was a statistically significant difference between both conditions, so that higher recognition was achieved in the interactive condition compared to the non-interactive one. Therefore, H11b was supported (see Table 5.30).

Table 5.30 **Positive Context-induced Mood Digital Music Video: Recognition Independent-samples T-test**

Brand		Condition		Statistical			Result
		Interactive (n=77)	Non interactive (n=57)	df	t-value	P	
Nokia*				132	-.63	.53	Non-significant
American Apparel				132	-2.05	.04	Significant
Steve Madden				132	-.32	.75	Non-significant
HP *				132	-.64	.53	Non-significant
Nike				95	2.54	.01	Significant
Brian Lichtenberg*				132	-.86	.39	Non-significant
Marc Jacobs				117	-1.71	.09	Non-significant
Guess				132	-.82	.42	Non-significant
Andreani Gioielle				56	1.00	.32	Non-significant
Frederick's of Hollywood				132	-.76	.45	Non-significant
BCBG				132	.30	.76	Non-significant
Burberry				132	.24	.81	Non-significant
Cosabella				56	1.00	.32	Non-significant
Elegant Moments				56	1.00	.32	Non-significant
Forever 21				132	.12	.91	Non-significant
Hot Topic				56	1.43	.16	Non-significant
MAC*				127	-2.72	.01	Significant
Minx Nails				132	.21	.83	Non-significant
Monster				132	.21	.83	Non-significant
Paul Smith				132	-.72	.48	Non-significant
WeSC				56	1.00	.32	Non-significant
Avalon				56	1.43	.16	Non-significant
Amiclubwear				56	1.43	.16	Non-significant
Theory				127	-1.11	.27	Non-significant
Recognition (score)	M SD	3.58 2.32	2.58 1.86	216	3.68	.00	Significant
Recognition (score) 1week after (*N* = 68, 49)	M SD	3.35 2.1	2.94 1.83	115	1.14	.26	Non-significant

Negative context-induced mood digital music video

Although brands were more recalled in the interactive condition, only 8 brands out of 21 had a significant statistical difference when comparing the brand-per-brand recognised in both interactive and non-interactive conditions (see Table 5.31). An independent-samples t-test was also calculated to compare the scores for the total number of brands recognised in both conditions, interactive (M = 4.25, SD = 2.56) and non-interactive (M = 2.73, SD = 2.32; t (127) = 3.30, $p < .05$). There was a significant difference, as brand recognition was higher in the interactive condition than in the non-interactive one. Therefore, H14b was supported (see Table 5.31).

Table 5.31 **Negative context-induced mood digital music video: recognition independent-samples T-test**

Brand		Condition		Statistical			Result
		Interactive (n=94)	Non interactive (n=59)	Df	t-value	p	
Marshall				134	-1.71	.09	Non-significant
Nixon				137	-1.41	.16	Non-significant
All Saints				151	-3.14	.00	Significant
Firetrap				144	-2.86	.01	Significant
Shure				147	-4.85	.00	Significant
American Apparel				153	-.78	.44	Non-significant
DW				150	-5.07	.00	Significant
G-Star				141	-1.05	.30	Non-significant
Sabian				153	.71	.48	Non-significant
Ticketmaster				150	-1.13	.26	Non-significant
Ask the missus				153	-.38	.71	Non-significant
Unconditional				140	-2.07	.04	Significant
Nice				152	-1.65	.10	Non-significant
Galliano				149	-4.22	.00	Significant
Concrete				93	-2.94	.00	Significant
Dior				153	-1.77	.08	Non-significant
REI				153	-.65	.53	Non-significant
Epiphone				153	.26	.80	Non-significant
Jaxon				153	.33	.02	Significant
Les Paul				153	-.37	.71	Non-significant
Phonogenic				153	.04	1.00	Non-significant
Recognition (score) (*N* = 85,44)	M	4.25	2.73	127	3.30	.00	Significant
	SD	2.56	2.32				
Recognition 1 week after (*N* = 77, 38)	M	4.06	2.68	104	3.35	.00	Significant
	SD	2.65	1.73				

5.1.13.2 The moderation effects of interactivity and context-induced mood

H11c: Interactivity has a positive effect not only on short-term but also on long-term memory (e.g. recall and recognition).

H11d: Context-induced mood has a positive effect not only on short-term but also on long-term memory (e.g. recall and recognition).

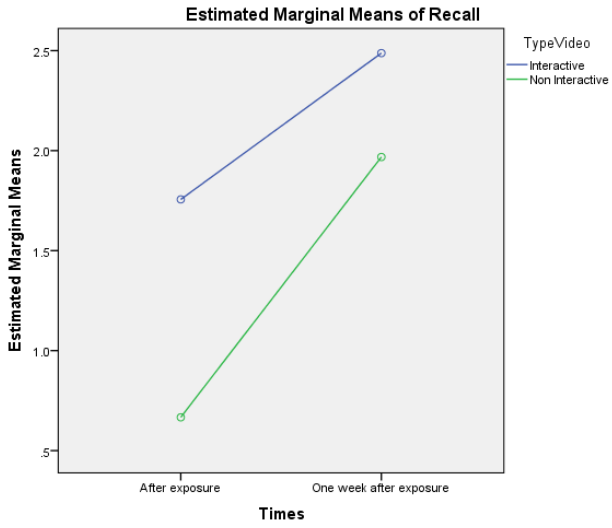
A mixed between-within subjects' analysis of variance was performed to assess the impact of interactivity (presence/absence) and context-induced mood (positive/negative) on recall scores after exposure and one week after exposure. There was a significant interaction between video type and time of exposure, Wilks' Lambda = .96, F (1,182) = 7.07, p= .01, partial eta squared = .04. For instance, more participants recalled brands in the interactive (N = 123) than in the non-interactive condition (N = 63). There was a statistically significant effect for time, Wilks' Lambda = .67, F (1,182) = 89, p= .00, partial eta squared = .33. The main effect is not significant, F (1,182) = 1.24, p= .27, partial eta squared = .01. The effect of context-induced mood was not significant either, F (1,182) = .00, p= .96, partial eta squared = .00. Finally, the impact of interactivity

(presence/absence) on recall scores was significant, F (1,182) = 18.77, p= .00, partial eta squared = .09, suggesting a moderate effect size, (see Table 5.32 and Figure 5.2).

Table 5.32 **Recall scores for the interactive and non-interactive conditions over time**

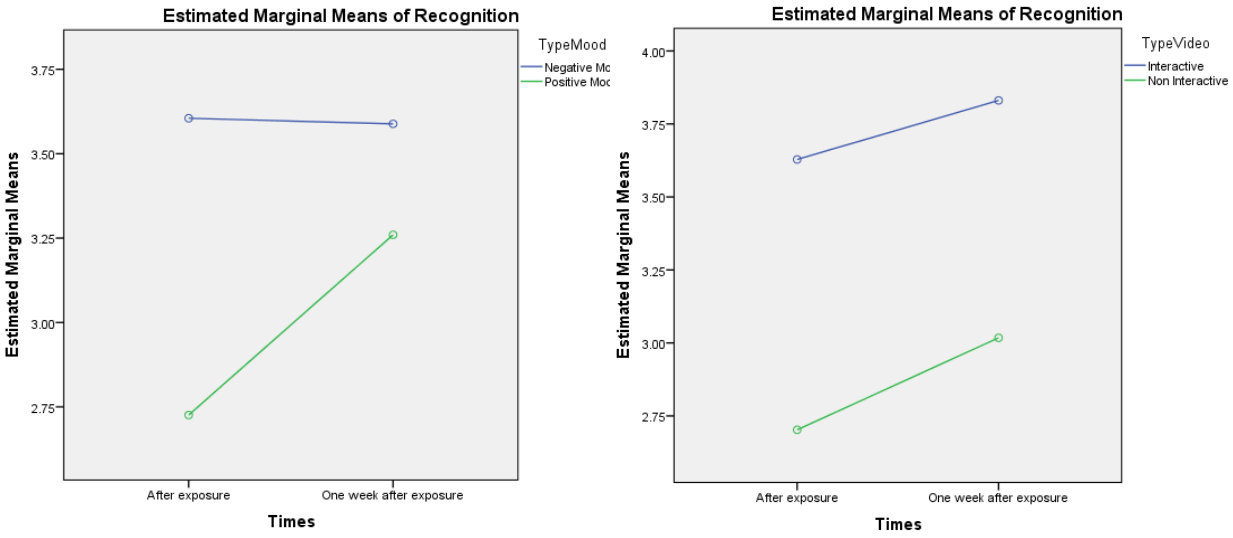
	Interactive			Non-interactive		
Time period	**N**	**M**	**SD**	**N**	**M**	**SD**
After exposure	123	1.76	1.72	63	.67	.90
One week after exposure	123	2.49	1.43	63	1.97	.93

Figure 5.2 **Mixed between-within subjects' analysis of variance for recall scores over time**



A mixed between-within subjects' analysis of variance was performed to assess the impact of interactivity (presence/absence) and context-induced mood (positive/negative) on recognition scores after exposure and one week after exposure. There was a small effect between context-induced mood and time of exposure, Wilks' Lambda = .97, F (1,204) = 5.5, p= .02, partial eta squared = .03. There was a small statistically significant effect for time, Wilks' Lambda = .98, F (1,204) = 4.86, p= .03, partial eta squared = .02. The main effect is not significant, F (1,204) = 3.37, p= .068, partial eta squared = .02. Context-induced mood had a significant effect on recognition over time, F (1,204) = 4.17, p= .04, partial eta squared = .02. Finally, the impact of interactivity (presence/absence) on recognition scores was significant too, F (1,204) = 8.65, p= .00, partial eta squared = .04, suggesting a small effect size (see Figure 5.3).

Figure 5.3 **Mixed between-within subjects' analysis of variance for recognition scores over time**



5.2 Perceived interactivity

Perceived interactivity measures control, time, and two-way communication. A measure of *perceived usability* was also included (see Section 4.5.1.3). *Perceived interactivity* was measured after exposure to an interactive music video, only in the interactive condition. The measure is comprised of nine items scored on a 7-point Likert scale.

5.2.1 Descriptive statistics

While *perceived interactivity* was higher in the negative context-induced mood digital music video (M= 40.32, SD= 10.47), there was no statistically significant difference compared to the positive context-induced mood one (M = 38.03, SD = 9.5; t (169) = 1.49, $p > .05$). An independent-samples t-test was utilised to investigate the differences in the correspondent sub-factors of *perceived interactivity*. There was no significant difference in the scores of perceived control between the negative (M= 8.46, SD= 3.13) and the positive context-induced videos (M = 7.91, SD = 3.16; t (171) = 1.14, $p > .05$). There was no significant difference in the scores of perceived time synchronicity between the negative (M= 14.04, SD= 3.70) and the positive context-induced mood digital music videos (M = 13.61, SD = 3.86; t (171) = .76, $p > .05$). However, there was a significant difference in *perceived usability*. The negative context-induced video (M= 9.55, SD= 2.59) was reported to be easier to navigate compared to the positive context-induced interactive digital music video (M = 8.86, SD = 2.67; t (170) = 1.71, $p < .05$).

The negative context-induced video (*M*= 8.23, *SD*= 2.74) was also perceived as enabling two-way communication compared to the positive context-induced interactive digital music video (*M* = 7.53, *SD* = 2.82; *t* (170) = 1.67, $p < .05$).

5.2.2 Hypothesis testing

H12a: Perceived interactivity in an interactive product placement has a positive effect on product placement recall.

Positive context-induced mood digital music video

A linear regression analysis was used to determine whether *perceived interactivity* had statistically significant and positive effect on recall. Results show that *perceived interactivity* was not a significant predictor of recall ($\beta = .18$, $p > .05$).

Negative context-induced mood digital music video

A linear regression analysis was used to determine whether *perceived interactivity* had a significant effect on recall. There was no statistically significant relationship between *perceived interactivity* and recall ($\beta = .17$, $p > .05$).Therefore, H12a was not supported (see Table 5.33).

H12b: Perceived interactivity in an interactive product placement has a positive effect on product placement recognition.

A linear regression analysis was carried out to assess whether *perceived interactivity* had an effect on placement recognition. In the positive context-induced mood digital music video, *perceived interactivity* had a positive significant influence on recognition ($\beta = .27$, $p < .05$). In the negative context-induced mood digital music video, *perceived interactivity* had a positive significant influence on recognition ($\beta = .27$, $p < .05$). Therefore, H12b was supported (see Table 5.33).

H12c: Perceived interactivity in an interactive product placement has a positive effect on attitude towards the placement.

A linear regression analysis was used to determine whether *perceived interactivity* positively influences attitude towards the placement. P*erceived interactivity* was not a significant predictor of attitude towards the placement ($\beta = .04$, $p > .05$) in the positive context-induced mood digital music video. Therefore H12c was not supported. In the negative context-induced mood digital music video, *perceived interactivity* was a

negative significant predictor of *attitudes towards placement* (β = -.21, p < .05). Therefore, H12c was supported (see Table 5.33).

Table 5.33 **Perceived Interactivity**

Hypothesis	Independent variable	Dependent variable	Beta	t-value	p-value	Hypothesis test outcome
H12a	Perceived interactivity	Recall – S1	.18	1.25	.22	Non-significant
	Perceived interactivity	Recall –S2	-.00	-.01	1.00	Non-significant
H12b	Perceived interactivity	Recognition S1	.27	2.31	.02	Significant
	Perceived interactivity	Recognition S2	.27	2.56	.01	Significant
H12c	Perceived interactivity	Attitudes S1	.04	.32	.75	Non-significant
	Perceived interactivity	Attitudes S2	-.21	-2.05	.04	Significant

Note. S1 results correspond to the positive context-induced mood digital music video. S2 correspond to the negative context-induced mood one.

5.3 Recall model testing

To test the conceptual model of the present study outlined in Figure 3.1, a series of regression analyses with recall as the dependent variable (DV) were conducted. The first regression model included all observations from the combined dataset (N = 207), including both video types (positive/negative mood) and conditions (interactive/non-interactive). Only *transformational, perceived interactivity* and *video context-induced mood* (positive/negative) had a significant effect (p < .05). In each case, the coefficient was positive (see Table 5.34). In the case of *video context-induced mood* (positive/negative mood), watching the positive context-induced video increased recall by .47.

Recall= ∫ (Programme-induced mood after exposure, the strength of the link between brand and singer, scepticism, attitudes, information, transformation, involvement with the singer previous to exposure, connectedness, prior familiarity with the singer, prior familiarity with the video, involvement with the singer, involvement with the video, perceived interactivity, video context-induced mood (+/-), video type (interactive/ non-interactive)).

Table 5.34 **Recall Model Testing: Combined Dataset**

Source	SS	Df	MS	Number of obs = 207
Model	97.2255533	15	6.48170355	F(15, 191) = 4.20
Residual	294.600534	191	1.54241117	Prob > F = .00
Total	391.826087	206	1.90206838	R-squared = .25
				Adj R-squared = .19
				Root MSE = 1.24

Recall	Coef.	Std. Err.	T	P>|t|	95% Conf.	Interval
Programme related factors						
Programme-induced mood after exposure	.02	.01	1.64	.10	-.00	.05
The strength of the link between brand and singer	-.04	.02	-1.56	.12	-.09	.01
Scepticism	-.02	.03	-.53	.60	-.08	.04
Attitudes	.00	.02	.09	.93	-.04	.04
Information	.03	.02	1.15	.25	-.02	.08
Transformation	.06	.03	2.15	.03	.01	.12
Involvement with the singer previous to exposure	.03	.13	.25	.81	-.23	.29
Connectedness	-.00	.01	-.37	.71	-.02	.02
Prior familiarity with the singer	.09	.07	1.36	.18	-.04	.23
Prior familiarity with the video	.04	.05	.79	.43	-.06	.14
Involvement with the singer after exposure	.02	.02	.80	.43	-.02	.06
Involvement with the video	-.04	.03	-1.55	.12	-.10	.01
Perceived interactivity	.03	.01	2.41	.02	.00	.05
Video context-induced mood (+/-)	.47	.20	2.38	.02	.08	.86
Video type (interactive/ non-interactive)	.07	.46	0.15	.88	-.84	.98

The second regression analysis included only observations from the interactive condition (positive and negative context-induced mood) (N=119) and tested H11e. The three components of *perceived interactivity* (control, time, two-way communication) and *perceived usability* were investigated individually. Only *involvement with the video*, video condition (interactive/non-interactive), video context-induced mood (positive/negative), *perceived usability*, and *transformation* had a significant effect on placement recall (p < .05). *Context-induced mood* had the strongest impact on placement recall. This suggests that watching a positive *context-induced video* increased recall by .59. *Perceived usability* had also a significant effect on placement recall. Navigating the interactive music video with ease increased recall by .30. The *transformational* effect of the interactive digital music video increased recall by .12 (see Table 5.35).

Recall1= ∫ (Programme-induced mood after exposure, the strength of the link between brand and singer, scepticism, attitudes, information, transformation, involvement with the singer previous to exposure, connectedness, prior familiarity with the singer, prior familiarity with the video, involvement with the singer, involvement with the video, control, time, two-way, perceived usability, video context-induced mood (+/-))

Table 5.35 **Recall Model Testing: Interactive Dataset**

Source	SS	Df	MS	Number of obs = 119
Model	80.3417292	18	4.4634294	F(18, 100) = 2.09
Residual	213.30533	100	2.1330533	Prob > F = .0112
Total	293.647059	118	2.4885344	R-squared = .2736
				Adj R-squared = .1428
				Root MSE = 1.4605

Recall	**Coef.**	**Std. Err.**	**T**	**P>|t|**	**95% Conf. Interval**	
Programme-induced mood after exposure	.02	.02	1.11	.27	-.02	.06
The strength of the link between brand and singer	-.07	.04	-1.82	.07	-.15	.01
Scepticism	.01	.06	.16	.87	-.10	.12
Attitudes	.01	.04	.28	.78	-.07	.09
Information	.02	.04	.48	.64	-.06	.10
Transformation	.12	.05	2.47	.02	.02	.21
Involvement with the singer previous to exposure	.35	.23	1.51	.14	-.11	.80
Connectedness	-.02	.01	-1.04	.30	-.04	.01
Prior familiarity with the singer	.15	.11	1.37	.17	-.07	.37
Prior familiarity with the video	.10	.08	1.23	.22	-.06	.26
Involvement with the singer	.04	.03	1.08	.28	-.03	.10
Involvement with the video	-.11	.05	-2.38	.02	-.21	-.02
Perceived interactivity:						
Control	-.05	.06	-.85	.40	-.16	.07
Time	-.04	.05	-.83	.41	-.15	.06
Two-way	-.07	.07	-1.03	.30	-.22	.07
Perceived usability	.30	.08	3.84	.00	.15	.46
Video context-induced mood (+/-)	.59	.31	1.92	.06	-.02	1.20

Recall one week after exposure

A series of regression analyses with recall one week after exposure as the dependent variable were conducted on the different predictor variables. The first regression analysis had recall one week after exposure as a dependent variable, and was calculated for the combined dataset (N = 137). Only *the strength of the link between the video and the brands* had a significant effect on recall. The coefficient was negative (-.08), and the effect's magnitude was very small (see Table 5.36).

Recall2=∫ (Programme-induced mood after exposure, the strength of the link between brand and singer, scepticism, attitudes, information, transformation, involvement with the singer previous to exposure, connectedness, prior familiarity with the singer, prior familiarity with the video, involvement with the singer, involvement with the video, perceived interactivity, video context-induced mood (+/-), video type (interactive/ non-interactive)).

Table 5.36 **Recall One Week After Exposure: Combined Dataset**

Source	SS	Df	MS	Number of obs = 137
Model	41.8126448	15	2.78750965	F(15, 121) = 1.71
Residual	197.369837	121	1.63115568	Prob > F = .0576
Total	239.182482	136	1.75869472	R-squared = .1748
				Adj R-squared = .0725
				Root MSE = 1.2772

Recall	**Coef.**	**Std. Err.**	**T**	**P>|t|**	**95% Conf. Interval**	
Programme-induced mood after exposure	.01	.02	.33	.74	-.03	.04
The strength of the link between brand and singer	-.08	.03	-2.29	.02	-.15	-.01
Scepticism	-.03	.04	-.73	.46	-.11	.05
Attitudes	.02	.03	.66	.51	-.04	.07
Information	.02	.03	.59	.56	-.04	.08
Transformation	.06	.04	1.57	.12	-.02	.14
Involvement with the singer previous to exposure	.12	.17	.69	.49	-.22	.46
Connectedness	.01	.01	.84	.40	-.01	.03
Prior familiarity with the singer	.15	.09	1.64	.10	-.03	.34
Prior familiarity with the video	-.00	.07	-.03	.98	-.13	.13
Involvement with the singer	-.00	.03	-.10	.92	-.06	.05
Involvement with the video	-.04	.04	-1.14	.25	-.11	.03
Perceived interactivity	.01	.02	.79	.43	-.02	.05
Video context-induced mood (+/-)	.36	.27	1.32	.19	-.18	.90
Video type (interactive/ non-interactive)	-.10	.76	-.13	.90	-1.61	1.41

The second regression analysis included only observations of recalled brands in the interactive condition (positive and negative context-induced mood) (*N*=89) and tested H11f. This regression also investigated whether *perceived interactivity* and its factors contributed to predict recall. Only *strength of the link between the brands and the video* had a negative significant effect. Perceiving the music video as a good fit with the embedded brands decreased recall by .10 (see Table 5.37).

Recall2=∫ (Programme-induced mood after exposure, the strength of the link between brand and singer, scepticism, attitudes, information, transformation, involvement with the singer previous to exposure, connectedness, prior familiarity with the singer, prior familiarity with the video, involvement with the singer, involvement with the video, control, time, two-way, perceived usability, video context-induced mood (+/-))

Table 5.37 **Recall One Week After Exposure: Interactive Dataset**

Source	SS	Df	MS	Number of obs = 89
Model	36.4297063	17	2.1429239	F(17, 71) = 1.03
Residual	147.480406	71	2.07718882	Prob > F = .4366
Total	183.910112	88	2.08988764	R-squared = .1981
				Adj R-squared = .0061
				Root MSE = 1.4412

Recall	**Coef.**	**Std. Err.**	**T**	**P>|t|**	**[95% Conf. Interval]**	
Programme-induced mood after exposure	-.00	.02	-.10	.92	-.05	.04
The strength of the link between brand and singer	-.10	.05	-2.12	.04	-.19	-.01

Recall	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
Scepticism	.00	.07	.07	.95	-.13	.14
Attitudes	.03	.05	.73	.47	-.06	.12
Information	.00	.04	.00	1.00	-.08	.09
Transformation	.07	.05	1.34	.18	-.03	.18
Involvement with the singer previous to exposure	.44	.27	1.64	.11	-.10	.98
Connectedness	.01	.02	.87	.39	-.02	.05
Prior familiarity with the singer	.25	.14	1.81	.08	-.03	.53
Prior familiarity with the video	.01	.10	.09	.93	-.18	.20
Involvement with the singer	-.03	.04	-.79	.43	-.10	.05
Involvement with the video	-.09	.05	-1.65	.10	-.19	.02
Perceived interactivity:						
Control	.04	.07	.64	.52	-.10	.19
Time	-.07	.06	-1.10	.28	-.19	.06
Two-way	.05	.08	.63	.53	-.11	.21
Perceived usability	.03	.09	.28	.78	-.16	.21
Video context-induced mood (+/-)	.22	.39	.58	.57	-.55	1.00

5.4 Recognition model testing

A series of regression analyses with recognition as the DV were conducted. The first regression model included all observations from the combined dataset (N = 207) including both video types i.e. positive and negative mood, and both conditions i.e. interactive and non-interactive. Only *information*, *transformational*, *perceived interactivity* and condition (interactive/non-interactive) had a positive significant effect ($p < .05$). *Perceived information* increased recognition by .09 while *transformation* had a stronger effect increasing recognition by .14. Overall, watching an interactive video increased recall by 1.57 (see Table 5.38).

Recognition1= ∫ (Programme-induced mood after exposure, the strength of the link between brand and singer, scepticism, attitudes, information, transformation, involvement with the singer previous to exposure, connectedness, prior familiarity with the singer, prior familiarity with the video, involvement with the singer, involvement with the video, video context-induced mood (+/-), video type (interactive/ non-interactive)).

Table 5.38 **Recognition Model Testing: Combined Dataset**

Source	SS	Df	MS		
Model	317.070752	15	21.1380501	Number of obs =	207
Residual	696.243258	191	3.64525266	F(15, 191) =	5.80
Total	1013.31401	206	4.91900005	Prob > F =	.0000
				R-squared =	.3129
				Adj R-squared =	.2589
				Root MSE =	1.9093

Recognition	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
Programme-induced mood after exposure	.01	.02	0.58	.56	-.03	.05
The strength of the link between brand and singer	-.02	.04	-.61	.54	-.10	.05

Recognition	Coef.	Std. Err.	T	P>|t|	[95% Conf.	Interval]
Scepticism	.02	.05	.52	.61	-.07	.12
Attitudes	.05	.03	1.41	.16	-.02	.11
Information	.09	.04	2.41	.02	.02	.16
Transformation	.14	.05	3.14	.00	.05	.24
Involvement with the singer previous to exposure	-.01	.20	-.04	.97	-.41	.40
Connectedness	-.01	.02	-.98	.33	-.04	.02
Prior familiarity with the singer	.05	.11	.51	.61	-.16	.26
Prior familiarity with the video	-.03	.08	-.32	.75	-.18	.13
Involvement with the singer	-.02	.03	-.64	.53	-.08	.04
Involvement with the video	-.01	.04	-.22	.83	-.10	.08
Video context-induced mood (+/-)	-.44	.30	-1.44	.15	-1.03	.16
Video type (interactive/ non-interactive)	1.57	.71	2.20	.03	.17	2.98

The second regression analysis included only observations of recognised brands in the interactive condition including both context-induced mood videos i.e. positive and negative (N=119) and tested H11i. The three components of *perceived interactivity* (control, time, and two way communication) and *perceived usability* were investigated individually. Only *transformation* was found to have a significant effect on recognition ($p < .05$), which implies that perceiving a digital video as transformational increased placement recognition by .19. For *perceived interactivity*, only *perceived usability* was found to have a positive significant effect on placement recognition. This suggests that perceiving a digital interactive music video as easy to navigate increased recognition by .35 (see Table 5.39).

Recognition1= ∫ (Programme-induced mood after exposure, the strength of the link between brand and singer, scepticism, attitudes, information, transformation, involvement with the singer previous to exposure, connectedness, prior familiarity with the singer, prior familiarity with the video, involvement with the singer, involvement with the video, perceived interactivity (control, time, two-way communication), perceived usability. video context-induced mood (+/-), video type (interactive/ non-interactive))

Table 5.39 **Recognition Model Testing: Interactive Dataset**

Source	SS	Df	MS	Number of obs = 119
Model	257.4897	17	14.3049834	F(18, 100) = 3.47
Residual	412.443073	100	4.12443073	Prob > F = .0000
Total	669.932773	118	5.67739638	R-squared = .3844
				Adj R-squared = .2735
				Root MSE = 2.0309

Recognition	Coef.	Std. Err.	T	P>|t|	[95% Conf.	Interval]
Programme-induced mood after exposure	.02	.03	.88	.38	-.03	.08
The strength of the link between brand and singer	-.06	.06	-1.12	.27	-.17	.05
Scepticism	.02	.08	.31	.75	-.13	.18
Attitudes	.09	.05	1.62	.11	-.02	.20
Information	.04	.05	.71	.48	-.07	.15
Transformation	.19	.07	2.95	.00	.06	.32

Recognition	Coef.	Std. Err.	T	P>|t|	[95% Conf.	Interval]
Involvement with the singer previous to exposure	.39	.32	1.24	.22	-.24	1.03
Connectedness	-.03	.02	-1.35	.18	-.07	.01
Prior familiarity with the singer	.14	.15	.95	.35	-.16	.45
Prior familiarity with the video	.01	.11	.06	.95	-.22	.23
Involvement with the singer	-.00	.05	-.04	.96	-.09	.09
Involvement with the video	-.11	.07	-1.64	.11	-.24	.02
Perceived interactivity:						
Control	-.05	.08	-.64	.52	-.21	.11
Time	-.04	.07	-.50	.62	-.18	.11
Two-way communication	.13	.10	1.24	.22	-.07	.33
Perceived usability	.35	.11	3.15	.00	.13	.56
Video context-induced mood (+/-)	-.60	.43	-1.39	.17	-1.44	.25

Recognition one week after exposure

A series of regression analyses with recognition one week after exposure as the dependent variable were conducted on the different predictor variables. The first regression analysis had recognition one week after exposure as a dependent variable, and was calculated for the combined dataset (N = 167). Only *information* and video condition (interactive/non-interactive) ($p < .05$) had a significant effect on placement recognition one week after exposure. Perceiving a digital music video as *informational* increased recognition by .10, and watching an interactive video increased recognition by 1.76 (see Table 5.40).

Recognition2= ∫ (Programme-induced mood after exposure, the strength of the link between brand and singer, scepticism, attitudes, information, transformation, involvement with the singer previous to exposure, connectedness, prior familiarity with the singer, prior familiarity with the video, involvement with the singer, involvement with the video, perceived interactivity, video context-induced mood (+/-), video type (interactive/ non-interactive)).

Table 5.40 **Recognition One Week After Exposure**

Source	SS	Df	MS	Number of obs = 167
Model	149.973089	14	9.99820591	F(15, 151) = 2.29
Residual	659.452061	151	4.36723219	Prob > F = 0.0060
Total	809.42515	166	4.87605512	R-squared = 0.1853
				Adj R-squared = 0.1044
				Root MSE = 2.0898

Recognition	Coef.	Std. Err.	T	P>|t|	[95% Conf.	Interval]
Programme-induced mood after exposure	.0210414	.0233013	0.90	0.368	-.0249972	.06708
The strength of the link between brand and singer	-.05	.05	-1.10	0.27	-.15	.04
Scepticism	-.04	.06	-0.76	0.45	-.16	.07
Attitudes	.03	.04	0.75	0.45	-.05	.11
Information	.10	.05	2.18	0.03	.01	.19
Transformation	.08	.06	1.38	0.17	-.03	.19
Involvement with the singer previous to exposure	.14	.26	0.54	0.59	-.37	.64

Recognition	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
Connectedness	-.01	.02	-0.33	0.74	-.04	.03
Prior familiarity with the singer	.07	.13	0.55	0.58	-.19	.34
Prior familiarity with the video	-.07	.10	-0.72	0.47	-.26	.12
Involvement with the singer	.01	.04	0.19	0.85	-.07	.08
Involvement with the video	-.04	.06	-0.81	0.42	-.15	.06
Video context-induced mood (+/-)	.08	.38	0.20	0.84	-.67	.82
Video type (interactive/ non-interactive)	1.76	.92	1.92	0.06	-.05	3.58

The second regression included only observations of recognised brands in the interactive condition including both context-induced mood videos i.e. positive and negative video-induced mood (*N* = 100) and tested H11j. The three components of *perceived interactivity* (control, time, and two way communication), and *perceived usability* were investigated individually. *Transformation, involvement with singer prior to exposure, familiarity with the band, perceived usability*, and *involvement with the video* had a significant impact on recognition one week after exposure. *Transformation* increased recognition by .13. *Involvement with the singer* previous to exposure increased recognition .80 times, while *involvement with the digital music video* decreased recognition by .18. *Prior familiarity with the singer* increased recognition by .37. Finally, *perceived usability* increased recognition by .22 (see Table 5.41).

Recognition2= ∫ (Programme-induced mood after exposure, the strength of the link between brand and singer, scepticism, attitudes, information, transformation, involvement with the singer previous to exposure, connectedness, prior familiarity with the singer, prior familiarity with the video, involvement with the singer, involvement with the video, perceived interactivity (control, time, two-way communication) , perceived usability, video context-induced mood (+/-), video type (interactive/ non-interactive))

Table 5.41 **Recognition One Week After Exposure: Interactive Dataset**

Source	SS	Df	MS	Number of obs = 100
Model	171.889391	17	10.1111406	F(17, 82) = 2.10
Residual	395.110609	82	4.81842206	Prob > F = 0.0142
Total	567	99	5.72727273	R-squared = 0.3032
				Adj R-squared = 0.1587
				Root MSE = 2.1951

Recognition	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
Programme-induced mood after exposure	.02	.03	0.66	0.51	-.040	.08
The strength of the link between brand and singer	-.06	.07	-0.82	0.41	-.19	.08
Scepticism	.07	.10	0.67	0.50	-.13	.26
Attitudes	.02	.07	0.23	0.82	-.12	.15
Information	.08	.06	1.36	0.18	-.04	.21
Transformation	.14	.08	1.78	0.08	-.02	.29

Recognition	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
Involvement with the singer previous to exposure	.80	.38	2.09	0.04	.04	1.57
Connectedness	-.02	.02	-0.80	0.43	-.07	.03
Prior familiarity with the singer	.37	.19	1.97	0.05	-.00	.74
Prior familiarity with the video	.03	.14	0.25	0.81	-.24	.30
Involvement with the singer	.01	.05	0.15	0.88	-.10	.12
Involvement with the video	-.18	.08	-2.33	0.02	-.34	-.03
Perceived interactivity						
Control	-.06	.10	-0.54	0.59	-.26	.15
Time	-.09	.09	-1.07	0.29	-.27	.08
Two-way communication	.17	.12	1.42	0.16	-.07	.40
Perceived usability	.22	.13	1.68	0.10	-.04	.49
Video context-induced mood (+/-)	-.04	.50	-0.09	0.93	-1.04	.95

Discussion and conclusion

This chapter presents the quantitative results which constitute the basis of the present research. A series of statistical analyses were performed to investigate the twelve hypotheses of the present thesis, these analyses were guided by three specific research objectives:

i) To empirically test the key factors which influence recall and recognition of a classical non-interactive product placement in digital music videos and the moderating effects of positive/negative context-induced mood.
ii) To analyse how the factors of the theoretical framework for classical non-interactive product placement apply in the case of interactive product placement and the moderating effects of positive/negative context-induced mood.
iii) To test whether recall and recognition levels for product placement in an interactive online medium are greater than those for product placement with the moderating effects of interactivity and positive/negative context-induced mood.

The following chapter goes a step forward in the analysis towards a new model to assess product placement effectiveness in interactive digital music videos.

CHAPTER SIX
RESULTS AND ANALYSIS II

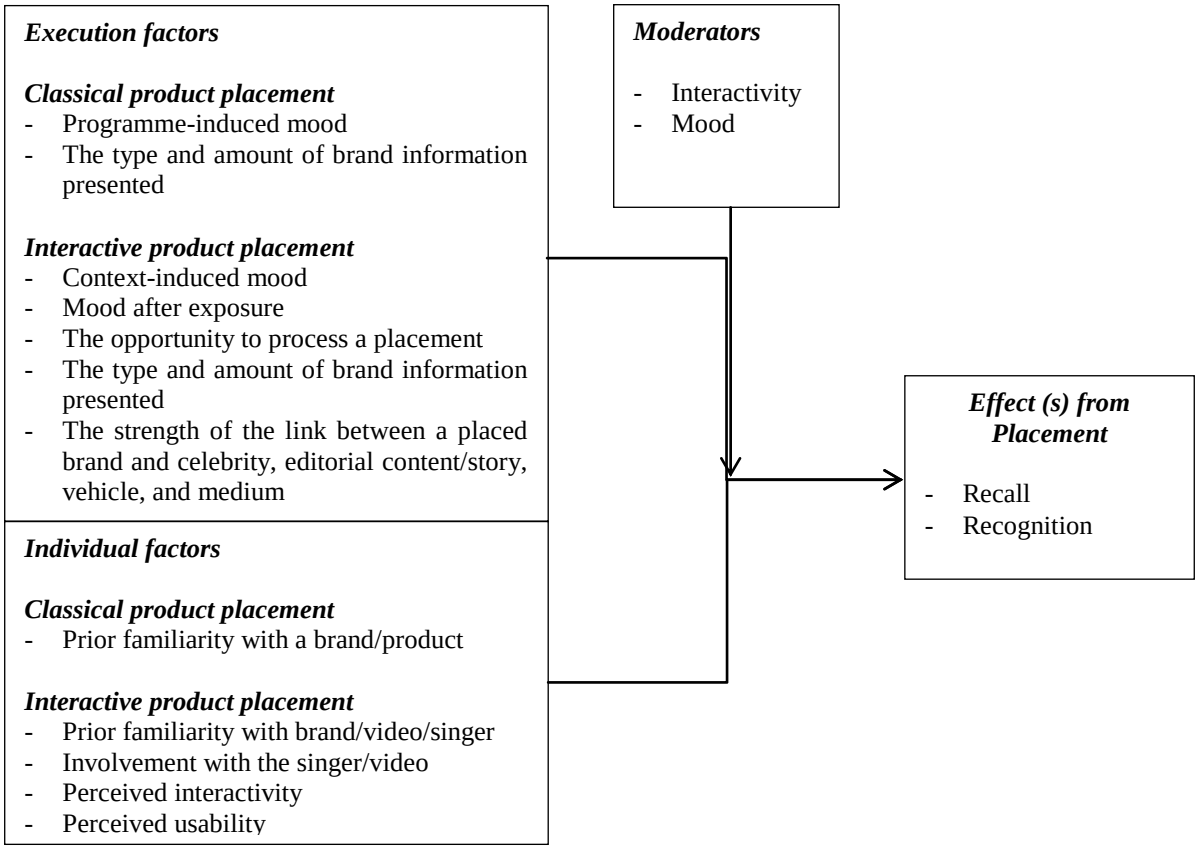
Introduction

The chapter is organised into three sections, following the rationale utilised for data analysis. Section I presents higher level analysis. Factor analysis was conducted to explore the possible factor reduction in both execution and individual factors. Section II presents moderation analysis, exploring the moderation effects of context-induced mood and interactivity on execution and individual factors respectively. Section III presents a summary of the hypothesis testing. The chapter concludes with a summary of the results.

6.1 Factor analysis

The model to be tested is shown in Figure 6.1 below. The measurement model was evaluated for reliability, and validity. Construct reliability was assessed by computing Cronbach's alpha. The alpha values range from .70 to .93 (see Section 4.7.6.). Validity was assessed by performing a factor analysis (Kuan and Chau 2001).

Figure 6.1 **Research Framework for the Study of Non-interactive and Interactive Product Placement in Digital Music Videos**



6.1.1 Exploratory factor analysis: execution factors

The four scales, and their twenty-one items, loaded on to four factors with factor loadings of .55 or above. The factors explained 67.73 per cent of the variance. All items loaded strongly in their associated factors, demonstrating convergent and discriminant validity (see Table 6.1) (Kuan and Chau 2001).

Table 6.1 Exploratory Factor Analysis Results for Execution Factors

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.85
Bartlett's Test of Sphericity	Approx. Chi-Square	13266.07
	Df	210
	Sig.	.00

Rotated Factor Loadings (Pattern Matrix)[a]

Scale items \ *Factors*	*1*	*2*	*3*	*4*
Context-induced mood (i)				
Right now I feel:				
Happy/unhappy	**-.78**			
Pleased/annoyed	**-.71**			
Satisfied/unsatisfied	**-.71**			
Contented/down	**-.70**			
Stimulated/relaxed	**-.69**			
Excited/calm	**-.77**			
Jittery/dull	**-.73**			
Wide Awake/sleepy	**-.70**			
The opportunity to process a placement (ii)				
The placement was				
… subtle		**.99**		
… unintended		**.99**		
… couldn't miss it		**.99**		
… clearly presented		**.99**		
The type and amount of brand information presented (iii)				
I could really relate to the digital music video			**.55**	
While I watched the digital music video, I thought how the brands portrayed might be useful to me			**.84**	
The digital music video taught me what to look for when buying any of the brands portrayed			**.84**	
I can now accurately compare the brands portrayed in the digital music video with other competing brands on matters that are important to me			**.80**	
The brands portrayed in the digital music video fit my lifestyle very well			**.69**	
It is hard to put into words, but the digital music video leaves me with a good feeling about using the brands portrayed			**.68**	
The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium (iv)				
It makes sense to me that these brands sponsor this type of music video				**.86**
The sponsored brands and the music video type fit well together				**.90**
The brands and the music video features have similar images				**.82**
Eigenvalues	5.73	3.76	2.72	2.01
% of variance	27.28	17.92	12.93	9.59

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
Rotation converged in 6 iterations.

6.1.2 Exploratory factor analysis: individual factors

The seven scales loaded on to seven factors with factor loadings of .53 or above. The scales explained 65.18 per cent of the variance (see Table 6.2).

Table 6.2 Exploratory Factor Analysis Results for Individual Factors

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.83
Bartlett's Test of Sphericity	Approx. Chi-Square	4293.10
	Df	741
	Sig.	.00

Rotated Factor Loadings (Pattern Matrix)[a]
Structure Matrix

Scale items \ Factors	1	2	3	4	5	6	7
Involvement (i)							
with the singer:							
Important	**.76**						
Relevant	**.82**						
Means a lot to me	**.81**						
Exciting	**.84**						
Appealing	**.87**						
Involving	**.91**						
with the video:							
Important	**.74**						
Relevant	**.76**						
Means a lot to me	**.60**						
Exciting	**.73**						
Appealing	**.73**						
Involving	**.69**						
Perceived interactivity (ii)							
The music video is interactive		**.57**					
I felt that I had a lot of control over my viewing experience of this music video		**.69**					
When I clicked on the links of the music video, I felt I was getting instantaneous information		**.73**					
This music video enables two-way communication		**.65**					
It was easy to find my way through the music video		**.59**					
While watching the music video, I could choose freely what I wanted to see		**.71**					
Getting information from the music video was really fast		**.69**					
This music video enables concurrent communication		**.79**					
Connectedness (iii)							
I can relate what happens in the music video to my own life			**.66**				
I imitate the gestures and facial expressions from the characters in the music video			**.78**				
I get ideas from the music video about how to interact in my own life			**.79**				
I relate what happens in the music video to my own life			**.84**				
I often buy clothing styles that I've seen in music videos			**.53**				
I watch music videos related to the band			**.54**				
I find myself saying phrases from the music video when I interact with other people			**.63**				
I would love to be part of the music video			**.57**				
Scepticism towards advertising (iv)							
While watching a TV program, I frequently flip channels to escape watching ads				**-.78**			
I hate watching ads on TV				**.73**			
When an ad appears on my TV, I stop looking at the screen until the program starts again				**.72**			

Scale items \ Factors	1	2	3	4	5	6	7
Attitudes towards placement in general (v)							
I have no problem if music video producers receive money or other compensation from companies from placing their brands in the videos					**.79**		
I will not watch the music video if I knew beforehand that brands are placed prominently in the video for commercial purposes					**.89**		
It is unethical to influence the captive audience by using brand name products in music videos					**.75**		
Judgement of placement fit (vi)							
Connected to the plot						**-.97**	
Played an important role in the story						**-.97**	
Prior familiarity							
with the singer							***.85***
with the video							**.78**
Eigenvalue	10.44	3.73	2.76	2.38	2.13	1.87	1.40
% of variance	26.77	9.56	7.07	6.11	5.46	4.78	3.58

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
Rotation converged in 8 iterations.

6.2 Moderation analysis

The moderation effects between the IV and the DV of the model were explored. The existence of a moderating effect implies that the relationship between two variables, IV and DV (e.g. X and Y) varies as a function of the value of a third variable, moderator (e.g. Z) (Zedeck 1971 in Aguinis 1995). A moderator is a qualitative (e.g. gender) or quantitative (e.g. mood) variable that affects the direction and/or strength of the relation between IV and DV. To test H13 and H14, which addressed the moderation effects of interactivity and context induced mood on the execution and individual factors on product placement recall and recognition, the present study performed moderation analysis following a four-step method proposed by Aguinis (1995) and Allen (2012). The method is outlined below:

i) Moderated Multiple Regression (MMR) should be performed first without the moderator. The relationship between IV and DV is not necessary to be significant as the moderator is meant to influence such relationship.

ii) The IV and moderator (Mo) should be centred or standardised to avoid multicollinearity (e.g. IV*z value).

iii) Interaction terms must be created by multiplying the standardised IV and standardised Mo (zIV x zMo).

iv) Moderated Multiple Regression (MMR) should be performed including the interaction term (DV, IV, zIV x zMo). The impact of the interaction term on DV should be significant.

6.2.1 Moderation effects for product placement recall

6.2.1.1 Context-induced mood

To test the moderation effects *context-induced mood,* a series of regression analyses with recall as the DV were conducted. The first regression model included all observations from the combined dataset (*N* = 302), containing both video types (positive/negative mood) and conditions (interactive/non-interactive). The model was not significant ($p > .05$). The second regression model included only the execution and individual factors which were previously found to have an effect on *placement recall*. The model was significant, F (6, 116) = 2.17, $p<.05$, b= 1.00 (see Table 6.3, Model 2). The third regression model investigated the moderation effects of c*ontext-induced mood* (HI1g). The moderation effect of *context-induced mood* was significant in the relation between IV and *recall.* The IV were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 21.3 per cent of the variance in *product placement recall*, $\Delta R^2=.12$, F (6, 110) = 2.49, $p<.05$ (see Table 6.3, Model 3).

Recall one week after exposure

A linear regression analysis was performed to assess the impact of *execution and individual factors* on *placement recall one week after exposure*. The model was significant, F (6, 116) = 2.32, $p<.05$, $b=2.32$ (see Table 6.3, Model 4). *Context-induced mood* was examined as a moderator of the relation between the execution factors and *recall one week after exposure* (HI1g). The moderation effect of *context-induced mood* was not significant in the relation between IV and *recall one week after exposure*. The IV were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 16.1 per cent of the variance in *product placement recall one week after exposure*, $\Delta R^2=.07$, F (6, 110) = 1.76, $p > .05$, $b= 2.33$ (see Table 6.3, Model 5).

Table 6.3 Moderated Multiple Regression: Recall and context-induced mood

Independent variables	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Constant	1.00	1.00	.98	2.32	2.32
	(5.33)***	(8.00)***	(7.44)***	(20.40)***	(18.74)***
Main effects					
Execution factors					
Mood before exposure (MBE)	.23				
	(1.04)				
Mood after exposure (MAE)	-.01	.06	-.07	.19	.14
	(.97)	(.40)	(-.51)	(1.53)	(1.07)
The type and amount of brand information presented (TABIP)	.32	.38	.44	.36	.39
	(.23)	(2.52)*	(3.01)*	(2.62)*	(2.81)
The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium (SL)	.30			-.22	-.19
	(.88)			(-1.87)†	(-1.59)
Individual factors					
Prior familiarity- singer (PFs)	-.01	.04	.45	.13	.19
	(-.04)	(.30)	(1.12)	(1.07)	(1.55)
Prior familiarity- video (PFv)	-.00				
	(-.01)				
Scepticism towards advertising (SA)	-.03				
	(-.16)				
Attitudes towards placement in general (APG)	.03				
	(.17)				
Involvement -singer (Is)	.19	.22	.30		
	(.55)	(1.04)	(1.39)		
Involvement - video (Iv)	-.49	-.46	--.61	.01	-.04
	(-1.26)	(-1.99)**	(-2.43)**	(.05)	(-.26)
Connectedness (C)	.10				
	(.34)				
Perceived interactivity (PI)	.34	.27	.33	.07	.10
	(1.46)	(1.90)†	(2.32)**	(.51)	(.74)
Interaction effects					
MAE * Mood			-.02		.06
			(-.16)		(.47)
TABIP * Mood			.07		-.05
			(.47)		(-.37)
SL *Mood					.08
					(67)
PFs*Mood			.33		.20
			(2.48)**		(1.61)
Is*Mood			.34		
			(1.59)		
Iv*Mood			-.68		-.18
			(-2.77)*		(-1.16)
C*Mood					
PI*Mood			.28		.23
			(1.96)**		(1.74)
R^2	.12	.10**	.21	.11**	.16
Adjusted R^2	-.09	.05	.13	.06	.07
ΔR^2			.12**		.05
F	.56	2.17**	2.49	2.32**	1.76
Δ F			2.62*		1.78†

1. Unstandarised coefficients are reported
2. T-values are in parentheses
3. Standarised variables used to minimise the effect of multicollinearity
4. *p<0.01, **p<0.05, ***p<0.001, †p<0.10

6.2.1.2 Interactivity as a moderator

A series of regression analyses with recall as the DV were conducted to test the moderation effects of *interactivity*. The first regression model included all observations from the combined dataset (N = 302), including both video types (positive/negative mood) and conditions (interactive/non-interactive). The model was not significant ($p >$ .10). The second regression model included only the execution and individual factors which were previously found to have an effect on *placement recall*. The model was significant, F (6, 115) = 2.15, $p<.05$ (see Table 6.4, Model 2). The third regression model investigated the moderation effects of *interactivity* (HI1h). The moderation effect of *interactivity* was not significant in the relation between IV and *recall*, $\Delta R^2=.12$, F (6, 109) = 1.27, $p>.05$ (see Table 6.4, Model 3).

Recall one week after exposure

A linear regression analysis was performed to assess the impact of *execution and individual factors* on *placement recall one week after exposure*. The model was significant, F (8, 115) = 2.19, $p>.05$ (see Table 6.4, Model 4). *Interactivity* was examined as a moderator of the relation between the execution factors and *recall one week after exposure* (HI1g). The moderation effect of *interactivity* was not significant in the relation between IV and *recall one week after exposure*. The IV were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 17.2 per cent of the variance in *product placement recall one week after exposure*, $\Delta R^2=.04$, F (8, 106) = 1.34, $p > .05$ (see Table 6.4, Model 5).

Table 6.4 Moderated Multiple Regression: Recall and interactivity

Independent Variables	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Constant	1.00	.83	.93	2.32	2.33
	(5.33)***	(1.84)**	(7.87)**	(20.40)***	(19.81)***
Main effects					
Execution factors					
Mood before exposure (MBE)	.23	.05			
	(1.04)	(.40)			
Mood after exposure (MAE)	-.01	.06	.03	.19	.17
	(.97)	(.40)	(.18)	(1.53)	(.13)
The type and amount of brand information presented (TABIP)	.32	.38	.35	.36	.36
	(.23)	(2.51)**	(2.30)**	(2.62)*	(.27)**
The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium (SL)	.30			-.22	-.24
	(.88)			(-1.87)†	(-.18)†
Individual factors					
Prior familiarity- singer (PFs)	-.01	.04	.03	.13	.14
	(-.04)	(.30)	(.25)	(1.07)	(.11)
Prior familiarity- video (PFv)	-.00				
	(-.01)				
Judgement of placement fit (JF)	-.03				
	(-.16)				
Scepticism towards advertising (SA)	.03				
	(.17)				
Attitudes towards placement in general (APG)	.19				
	(.55)				
Involvement -singer (Is)	-.49	.22	.21		
	(-1.26)	(1.04)	(.95)		
Involvement - video (Iv)	.10	-.46	-.50	.01	-.03
	(.34)	(-1.98)**	(-2.00)**	(.05)	(-.02)
Connectedness (C)	.34				
	(1.46)				
Perceived interactivity (PI)	1.00	.27	1.94	.07	.44
	(5.33)***	(1.90)†	(1.39)	(.51)	(.38)
Interaction effects					
MAE * Mood			-.09		-.02
			(-.62)		(-.02)
TABIP * Mood			-.02		-.10
			(-.15)		(-.08)
SL *Mood					.16
					(.12)
PFs*Mood			-.07		-.07
			(-.53)		(-.06)
Is*Mood			-.05		
			(-.23)		
Iv*Mood			.15		.05
			(.59)		(.04)
PI*Mood			1.05		.43
			(1.01)		(.28)
R^2	.12	.10**	.12	.11**	.13
Adjusted R^2	-.09	.05	.03	.06	.03
ΔR^2			.02		.02
F		2.15**	1.27	2.32**	1.35
Δ F	.56		.45	.11**	.47

1. Unstandarised coefficients are reported
2. T-values are in parentheses
3. Standarised variables used to minimise the effect of multicollinearity
4. *p<0.01, **p<0.05, ***p<0.001, †p<0.10

6.2.2 Moderation effects for product placement recognition

6.2.2.1 Context-induced mood

A series of regression analyses with recognition as the DV were conducted to test the moderation effects *context-induced mood*. The first regression model included all observations from the combined dataset (*N* = 251), including both video types (positive/negative mood) and conditions (interactive/non-interactive). The model was not significant ($p > .05$). The second regression model included only the execution and individual factors which were previously found to have an effect on placement recognition. The model was significant, F (9, 113) = 3.47, $p<.005$, $b= 3.22$ (see Table 6.5, Model 2). The third regression model investigated the moderation effects of c*ontext-induced mood* (H11k). The moderation effect of *context-induced mood* was not significant in the relation between IV and *recognition.* The IV were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 16.8 per cent of the variance in *product placement recognition*, $\Delta R^2=.26$, F (9, 113) = 2.07, $p>.05$ (see Table 6.5, Model 3).

Recognition one week after exposure

Linear regression analysis was performed to assess the impact of *execution and individual factors* on *placement recognition*. The model was significant, F (6, 116) = 2.27, $p<.05$, $b=3.39$ (see Table 6.5, Model 4). *Context-induced mood* was examined as a moderator of the relation between the execution factors and *recognition* (H11k). The moderation effect of *context-induced mood* was not significant in the relation between IV and *recognition.* The IV were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 25 per cent of the variance in *product placement recognition one week after exposure*, $\Delta R^2=.04$, F (6, 110) = 3.06, $p>.10$, b=3.18 (see Table 6.5, Model 5).

Table 6.5 Moderated Multiple Regression: Recognition and context-induced mood

Independent Variables	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Constant	3.22	3.22	3.19	3.39	3.40
	(11.89)***	(17.82)***	(16.71)***	(17.37)***	(16.76)***
Main effects					
Execution factors					
Mood before exposure (MBE)	.36				
	(1.10)				
Mood after exposure (MAE)	.05				
	(.15)				
The type and amount of brand information presented (TABIP)	.64	.72	.77	.59	.65
	(1.66)	(2.87)*	(2.97)**	(2.56)**	(2.71)*
The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium (SL)	-.05	-.09	-.02	-.16	-.11
	(-.17)	(-.44)***	(-.11)	(-.79)	(-.53)
Individual factors					
Prior familiarity- singer (PFs)	-.17	-.16	-.05	-.06	-.00
	(-.46)	(-.66)	(-.20)	(-.28)	(-.00)
Prior familiarity- video (PFv)	-.27	-.23	-.21		
	(-.74)	(-.96)	(-.82)		
Scepticism towards advertising (SA)	.16				
	(.55)				
Attitudes towards placement in general (APG)	.25	.22	.16	.15	.10
	(.88)	(1.16)	(.83)	(.77)	(.46)
Involvement -singer (Is)	.12	.16	.18		
	(.24)	(.50)	(.48)		
Involvement - video (Iv)	-.59	-.56	-.65	-.25	-.24
	(-1.05)	(1.15)	(-1.51)**	(-1.05)	(-.91)
Connectedness (C)	.19	.03	.10		
	(.47)	(.12)	(.37)		
Perceived interactivity (PI)	.86	.72	.77	.43	.45
	(2.57)	(3.41)***	(3.47)***	(1.98)**	(1.96)**
Interaction effects					
TABIP * Mood			.06		-.29
			(.25)		(-1.20)
SL * Mood			-.04		.07
			(-.17)		(.34)
Fs * Mood			.31		.16
			(1.25)		(.53)
Fv * Mood			-.16		
			(-.86)		
APG * Mood			-.17		-.10
			(-.84)		(-.47)
Is * Mood			.22		
			(.60)		
Iv * Mood			-.41		-.29
			(-.97)		(-1.14)
C * Mood			-.25		
			(-.96)		
PI * Mood			.12		.29
			(.55)	.	(1.28)
R^2	.24	.22***	.26	.15**	.15
Adjusted R^2	.06	.15	.14	.05	.05
ΔR^2			.05***		.04
F	1.3	3.47***	2.07	2.37**	1.57
Δ F			.74		.78

1. Unstandarised coefficients are reported
2. T-values are in parentheses
3. Mean-centred variables used to minimise the effect of multicollinearity
4. *p<0.01, **p<0.05, ***p<0.001, †p<0.10

6.2.1.2 Interactivity as a moderator

A series of regression analyses with recall as the DV were conducted to test the moderation effects *interactivity*. The first regression model included all observations from the combined dataset (N = 251), including both video types (positive/negative mood) and conditions (interactive/non-interactive). The model was not significant ($p >$ .05). The second regression model included only the execution and individual factors which were previously found to have an effect on placement recognition. The model was significant, F (9, 113) = 1.3, $p<.005$, $b= 3.22$ (see Table 6.6, Model 2). The third regression model investigated the moderation effects of *interactivity* (H11k). The moderation effect of *interactivity was* significant in the relation between IV and *recognition.* The IV were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 30.3 per cent of the variance in *product placement recognition*, $\Delta R^2=.09$, F (7, 107) = 3.08, $p<.05$, $b=3.32$ (see Table 6.6, Model 3).

Recognition one week after exposure

A linear regression analysis was performed to assess the impact of *execution and individual factors* on *placement recognition*. The model was significant, F (6, 115) = 3.39, $p<.05$, $b=3.39$ (see Table 6.6, Model 4). *Interactivity* was examined as a moderator of the relation between the execution factors and *recognition* (H11k). The moderation effect of *interactivity* is not significant in the relation between IV and *recognition.* The IV were entered in the first step. In the second step of the analysis, the interaction terms were entered, and they explained 14.7 per cent of the variance in *product placement recognition one week after exposure*, $\Delta R^2=.15$, F (5, 110) = 1.57, $p>.05$, $b=3.40$ (see Table 6.6, Model 5).

6.3 Summary of hypothesis testing

Overall, a total of 12 hypotheses were investigated (see Table 6.6). Some noteworthy highlights include

Table 6.6 Moderated Multiple Regression: Recognition and interactivity

Independent Variables	*Model 1*	*Model 2*	*Model 3*	*Model 4*	Model 5
Constant	3.22	3.22	3.32	3.39	3.40
	(11.89)***	(17.82)***	(18.29***	(17.33)***	(16.98)***
Main effects					
Execution factors					
Mood before exposure (MBE)	.36				
	(1.10)				
Mood after exposure (MAE)	.05				
	(.15)				
The type and amount of brand information presented (TABIP)	.64	.72	.84	.60	.64
	(1.66)	(2.87)	(3.90)***	(2.56)**	(2.70)*
The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium (SL)	-.05	-.09	-.07	-.16	-.19
	(-.17)	(-.44)***	(-.36)	(-.79)	(-.90)
Individual factors					
Prior familiarity- singer (PFs)	-.17	-.16	-.28	-.16	-.14
	(-.46)	(-.66)	(-1.18)	(-.79)	(-.63)
Prior familiarity- video (PFv)	-.27	-.23	-.03		
	(-.74)	(-.96)	(-.11)		
Scepticism towards advertising (SA)	.16				
	(.55)				
Attitudes towards placement in general (APG)	.25	.22	.29	.16	.24
	(.88)	(1.16)	(1.53)	(.80)	(1.17)
Involvement -singer (Is)	.12	.16	.43		
	(.24)	(.50)	(1.26)		
Involvement - video (Iv)	-.59	-.56	-1.03	-.22	-.36
	(-1.05)	(1.15)	(-2.71)**	(-.91)	(-1.39)
Connectedness (C)	.19	.03			
	(.47)	(.12)			
Perceived interactivity (PI)	.86	.72	2.77	.45	.99
	(2.57)	(3.41)**	(2.29)**	(2.03)**	(.75)
Interaction effects					
TABIP * Mood			.04		1.13
			(.17)		(-.56)
SL * Mood			.40		.10
			(2.02)**		(.49)
Fs * Mood			-.05		
			(-.28)		
APG * Mood			-.41		-.23
			(-2.24)**		(-1.16)
Is * Mood			.53		
			(1.61)		
Iv * Mood			-.37		-.22
			(-1.06)		(1.08)
PI * Mood			2.32		.48
			(1.60)		(.30)
R^2	.24	.22***	.30	.11**	.14
Adjusted R^2	.06	.15	.21	.06	.05
ΔR^2			..09***		.03**
F	1.3	3.47***	3.08	2.37**	1.57
Δ F			1.89***		.66

1. Unstandarised coefficients are reported
2. T-values are in parentheses
3. Standarised variables used to minimise the effect of multicollinearity
4. *p<0.01, **p<0.05, ***p<0.001, †p<0.10

Table 6.7 **Summary of hypothesis and results**

Hypotheses		Results		
		Study 1	**Study 2**	**Model testing**
Execution factors				
Programme-induced mood				
H1a	Positive context-induced mood in digital music videos produces higher recall of interactive placement than positive context-induced mood in classical non-interactive product placement.	*N/A*	*N/A*	*Supported*
H1b	Positive context-induced mood in digital music videos produces higher recognition of interactive placement than positive context-induced mood in classical non-interactive product placement.	*N/A*	*N/A*	*Not supported*
H1c	High arousal in digital music videos produces higher recall of interactive placement than high arousal in classical non-interactive product placement.	*N/A*	*N/A*	*Not supported*
H1d	High arousal in digital music videos produces higher recognition of interactive placement than high arousal in classical non-interactive product placement.	*N/A*	*N/A*	*Not supported*
H1e	Positive context-induced mood in digital music videos produces higher recall and recognition than negative context-induced mood.			*Supported*
H1f	Interactivity has a positive effect on the change of viewers' mood before and after stimulus exposure.			*Not supported*
H1g	Context-induced mood has a positive effect on the change of viewers' mood before and after stimulus exposure.			*Supported*
The opportunity to process a placement				
H2a	Prominent interactive product placements achieve higher recall and recognition than prominent classical non-interactive product placements.	*Not supported*	*Supported*	*N/A*
H2b	Interactivity has a positive effect on recall and recognition of prominent product placements.	*Not supported*	*Not supported*	*N/A*
H2c	Subtle interactive product placements achieve higher recall and recognition than subtle classical non-interactive product placements.	*Supported*	*Supported*	*N/A*
H2d	Interactivity has a positive effect on recall and recognition of subtle product placements.	*Not supported*	*Not supported*	*N/A*
The type and amount of brand information presented				
H3a	Interactive product placement is perceived as more informational than classical non-interactive product placement.	*Not supported*	*Not supported*	*N/A*
H3b	Interactive product placement is perceived as more transformational than classical non-interactive product placement.	*Not supported*	*Supported*	*N/A*
H3c	The type and amount of brand information presented has a positive effect on product placement recall and recognition in interactive digital music videos.	*N/A*	*N/A*	*Supported*

Hypotheses		Results		
		Study 1	**Study 2**	**Model testing**
H3d	Product placement is perceived as more transformational when embedded in a positive context-induced mood media vehicle than when embedded in a negative context-induced mood media vehicle.	*N/A*	*N/A*	*Not supported*
The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium				
H4a	The perceived fit of a celebrity endorser with brands in a digital music video has a positive influence on recall.	*Not supported*	*Not supported*	*Supported*
H4b	The perceived fit of a celebrity endorser with brands in a digital music video has a positive influence on recognition.	*Not supported*	*Not supported*	*Not supported*
Individual factors				
Prior familiarity with a) brand, b) video, and c) singer				
H5a	Previous unfamiliarity with the brand has a positive effect on placement recall.	*Partially supported*	*Not supported*	*Not supported*
H5b	Previous familiarity with the brand has a positive effect on recognition.	*Not supported*	*Not supported*	*Not supported*
H5c	Previous familiarity with the digital music video has a positive effect on placement recall.	*Not supported*	*Not supported*	*Not supported*
H5d	Previous familiarity with the digital music video has a positive effect on placement recognition.	*Not supported*	*Not supported*	*Not supported*
H5e	Previous familiarity with the singer has a positive effect on recall.	*Not supported*	*Not supported*	
H5f	Previous familiarity with the singer has a positive effect on recognition.	*Not supported*	*Not supported*	*Not supported*
Judgement of placement fit				
H6a	Congruence with the plot has a negative effect on interactive placement recall.	*Not supported*	*Not supported*	*N/A*
H6b	Congruence with the plot has a negative effect on interactive placement recognition.	*Not supported*	*Not supported*	
H6c	An interactive placement in digital music videos is perceived as more incongruent than a classical non-interactive product placement.	*Not supported*	*Not supported*	*N/A*
Scepticism towards advertising				
H7a	Interactivity moderates the influence of scepticism towards advertising on product placement recall.	*Not supported*	*Not supported*	*N/A*
H7b	Interactivity moderates the influence of scepticism towards advertising on product placement recognition.	*Not supported*	*Not supported*	*N/A*
H7c	Scepticism towards advertising has a negative influence on attitude towards placements in general.	*Partially supported*	*Not supported*	*N/A*
Attitudes towards placement in general				
H8a	Attitudes towards placement in general have a positive influence on brand recall.	*Not supported*	*Not supported*	*Not supported*
H8b	Attitudes towards placement in general have a positive influence on brand recognition.	*Not supported*	*Not supported*	*Not supported*
H8c	Attitudes towards placement in general in an interactive placement context are more positive than in classical non-interactive product placement.	*Not supported*	*Not supported*	*N/A*

Hypotheses		Results		
		Study 1	**Study 2**	**Model testing**
Involvement/ Connectedness				
H9a	In interactive product placement, higher involvement with a digital music video results in higher recall than in classical non-interactive product placement.	*Partially supported*	*Not supported*	*N/A*
H9b	In interactive product placement, higher involvement with a digital music video results in higher recognition than in classical non-interactive product placement.	*Not supported*	*Not supported*	*N/A*
H9c	In interactive product placement, involvement with a singer in a digital music video has a positive influence on recall.	*Not supported*	*Not supported*	*Not supported*
H9d	In interactive product placement, involvement with a singer in a digital music video has a positive influence on recognition.	*Not supported*	*Not supported*	*Not supported*
H9e	In interactive product placement, involvement with a digital music video has a positive influence on perceived information of the placement.	*Not supported*	*Supported*	*N/A*
H9f	Interactivity moderates the influence of connectedness on product placement recall.	*Not supported*	*Not supported*	*N/A*
H9g	Interactivity moderates the influence of connectedness on product placement recognition.	*Supported*	*Not supported*	*Not supported*
Processing Depth				
Implicit				
H10a	Implicit memory is higher for interactive product placement than for classical non-interactive product placement.	*Not supported*	*Not supported*	*Not supported*
H10b	Involvement with the interactive digital music video has a positive influence on implicit memory.	*Supported*	*Not supported*	*Supported*
H10c	Previous familiarity with the brand in an interactive digital music video has a positive influence on implicit memory.	*Not supported*	*Not supported*	*Not supported*
H10d	Attitudes towards placement in general in an interactive digital music video have a positive influence on implicit memory.	*Not supported*	*Not supported*	*Not supported*
H10e	Prominence in an interactive product placement has a positive influence on implicit memory.	*Not supported*	*Not supported*	*Not supported*
H10f	Positive context-induced mood in interactive digital music videos has a positive effect in implicit memory.	*N/A*		*Supported*
Recall and Recognition				
H11a	Interactive placement increases brand recall more so than classical non-interactive product placement.	*Supported*	*Partially supported*	*N/A*
H11b	Interactive placement increases brand recognition more so than classical non-interactive product placement.	*Supported*	*Supported*	*N/A*
H11c	Interactivity has a positive effect not only on short-term but also on long-term memory (e.g. recall and recognition).			*Supported for placement recall*
H11d	Context-induced mood has a positive effect not only on short-term but also on long-term memory (e.g. recall and recognition).			*Supported for placement recognition*

Hypotheses		Results		
		Study 1	**Study 2**	**Model testing**
H11e	The set of executional and individual factors have a positive effect on recall of interactive placement.	*Involvement with the video, interactivity, context-induced mood, perceived usability, transformation, and strength of the link between brand and singer.*		
H11f	The set of executional and individual factors have a positive effect on recall of interactive placement one week after exposure.	*Strength of the link between brand and singer, prior familiarity with the singer*		
H11g	Context-induced mood moderates the influence of the executional and individual factors on product placement recall.			*Not supported*
H11h	Interactivity moderates the influence of the executional and individual factors on product placement recall.			*Supported*
H11i	The set of executional and individual factors have a positive effect on recall of interactive placement.	*Transformation, perceived usability*		
H11j	The set of executional and individual factors have a positive effect on recognition of interactive placement one week after exposure.	*Transformation, involvement with singer prior to exposure, prior familiarity with the singer, perceived usability, and involvement with the video*		
H11k	Context-induced mood moderates the influence of the executional and individual factors on product placement recognition.			*Not supported*
H11l	Interactivity moderates the influence of the executional and individual factors on product placement recognition.			*Supported*
Perceived interactivity				
H12a	Perceived interactivity in an interactive product placement has a positive effect on product placement recall.	*Not supported*	*Not supported*	*Ease of navigation*
H12b	Perceived interactivity in an interactive product placement has a positive effect on product placement recognition.	*Supported*	*Supported*	*Ease of navigation*
H12c	Perceived interactivity in an interactive product placement has a positive effect on attitude towards the placement.	*Not supported*	*Supported*	*N/A*

Discussion and conclusion

In Chapter Five, a series of statistical analyses were performed to understand the data and its implications in the relationship between each of the ten factors analysed and product placement recall and recognition in digital music videos (interactive and non-interactive). These analyses provided a good insight, and served to confirm or reject the hypothesis presented in Table 6.6. Post-hoc test were also performed and led the researcher to investigate the moderation effects of interactivity and context-induced mood. This chapter presents higher level analysis of the models to assess product placement recall and recognition effectiveness. In doing so, the models explored the moderation effects of context-induced mood and interactivity. A series of Moderated Multiple Regressions were performed. The moderation effect of context-induced mood was significant in the relation between recall and the independent variables of the model. The moderation effect of interactivity was significant in the relation between product placement recognition and the independent variables of the model.

Context-induced mood moderated the relationship between *the type and amount of brand information presented, prior familiarity with the video, involvement with the video* and *perceived interactivity* and placement recall after stimuli exposure. *Interactivity* moderated the relationship between the *type and amount of brand information presented, involvement with the video, and perceived interactivity* and *placement recognition* after stimuli exposure.

A discussion of how these findings contribute to the body of knowledge is presented in detail in Chapter Seven.

CHAPTER SEVEN
DISCUSSION

Introduction

The aim of this study was to discuss whether interactive product placement in digital music videos enhances cognitive effects, specifically, recall and recognition. Furthermore, this research examined whether the factors affecting recall and recognition on classical non-interactive product placement remain the same with the presence of interactivity.

The chapter is organised as follows. Section I presents the synthesis of findings related to the execution factors affecting the outcomes of product placement. Section II outlines the findings addressing the individual factors. Section III discusses the findings regarding how implicit and explicit processing depth affect the outcomes of product placement. Section IV compares the execution and individual factors which have an effect on classical non-interactive product placement and the factors affecting interactive product placement. The chapter concludes with a summary of the key findings.

This research builds on Balasubramanian *et al.* (2006) integrative conceptual model, which identifies how audiences respond to product placement after identifying three main components: execution factors, individual factors, and processing depth. The conceptual framework of the present research (see Figure 7.1) shows the specific factors measured. Table 7.2 compares how the influence of the main factors differs between interactive and non-interactive videos and shows the moderation effects explored. This table helps to understand fully the findings related to the research objectives.

Figure 7.1 **Conceptual framework of the present study**

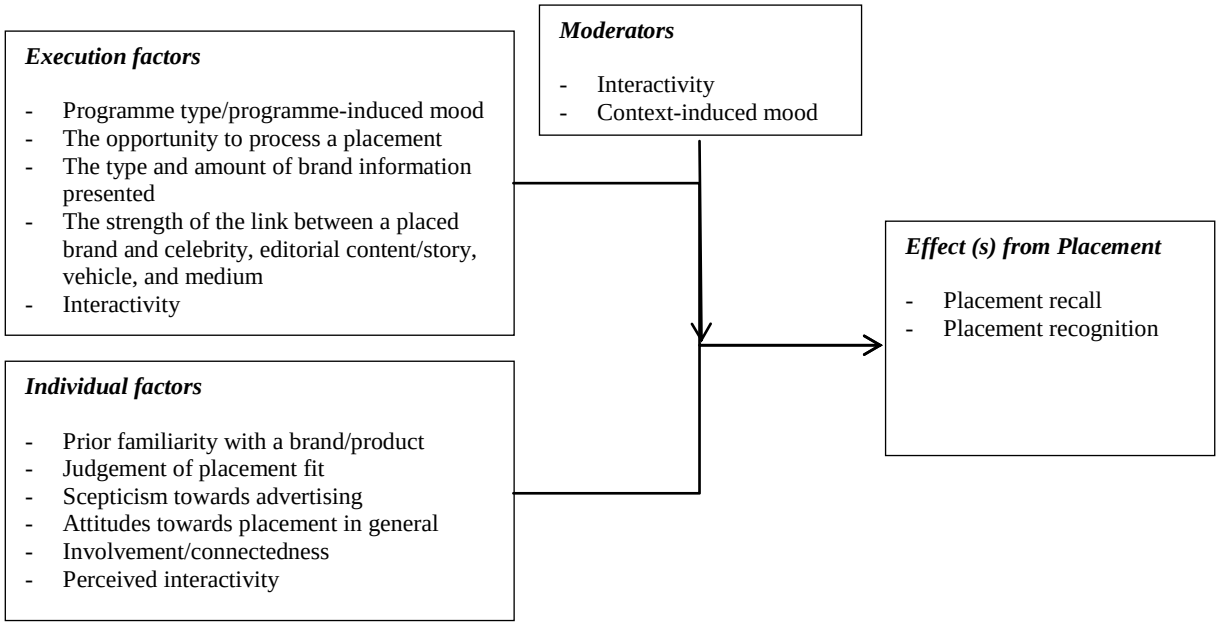


Table 7.1 **Summary of findings as per research objective**

	Research objective one		**Research objective two**		**Research objective three**	
	Non-interactive		**Interactive**		**Combined dataset**	
	Recall	***Recognition***	***Recall***	***Recognition***	***Recall***	***Recognition***
Conditions						
Video type					(+) **	(+) * One week after exposure (+) **
Context-induced mood.	+		(+) ** One week after exposure (-) **	One week after exposure (-) **	(+) **	
Factors						
Mood after exposure			(-) **		(-) **	
The type and amount of brand information presented	+	+	(+) * Transformation One week after exposure (+) *** Transformation	(+) * Transformation One week after exposure (+) ** Transformation	(+) * Transformation	(+) ** Information (+) * Transformation One week after exposure (+) ** Information
Prior familiarity with a brand	+					
Prior familiarity with the video				(+) ***		
Prior familiarity with the singer			(+) *** One week after exposure (+) **	(+) **		
The strength of the link between brand and singer			(-) *** One week after exposure (-) **		(-) ** One week after exposure (-) **	
Involvement with the singer			One week after exposure (+) ***	(+) **		
Involvement with the video			(-) **			

	Research objective one		Research objective two		Research objective three	
	Non-interactive		Interactive		Combined dataset	
	Recall	*Recognition*	*Recall*	*Recognition*	*Recall*	*Recognition*
			One week after exposure (-) ***	One week after exposure (-) **		
Perceived interactivity				(+) **	(+) **	(+) *
Perceived usability			(+) *	(+) *		
Moderators						
Context-induced mood			One week after exposure (-) *	One week after exposure (-) **	Mood after exposure (β=-.07)** Information (β=-. 3.01)* Involvement with the video (β=-.61)** Perceived interactivity (β=.33)**	
Interactivity						Information (β=.84)*** Involvement with the video (β=-.1.03)* familiarity with the video (β=-.45)*
Information					The opportunity to process a placement	(+) * Mood after exposure (β=3.07, p = .029)
Perceived usability						
Genre						

*: Significant at .01 level **: Significant at .05 level ***: Significant at .1 level

7.1 Execution factors

The following section discusses the findings related to the execution factors affecting the outcomes of product placement. The existence of execution and individual factors affecting product placement has been documented extensively, with studies usually investigating these factors individually, or in different combinations (van Reijmersdal *et al.* 2010; Bressoud *et al.* 2010; Homer 2009; Balasubramanian *et al*. 2006; Russell 2002, 1998).

As previously discussed, product placement literature has a fragmented understanding of each of these execution and individual factors. It is fragmented because factors (either individually addressed or combined) have been investigated across a range of different studies. In addition, there is a limited understanding of the effects of interactive media on product placement (Grigorovici and Constantin 2010; McDonnell and Drennan 2010; Cauberghe and Pelsmacker 2006), as the current literature does not acknowledge the different types of immersion/media.

In order to address this gap in the product placement research, the present study investigated how the different execution and individual factors influence recall and recognition of interactive and non-interactive digital music videos, and accounted for the moderating effects of interactivity and context-induced mood. Results are discussed below in the light of previous studies.

7.1.1 Programme type/programme-induced mood

Mood can be transferred from the media context to the embedded brands, affecting the way in which a stimulus is processed (Balasubramanian *et al*. 2006; Aylesworth and Mackenzie 1998; Russell 1998; Goldberg and Gorn 1987; Gardner 1985). In this context, the social psychological and consumer behaviour literatures support the impact of mood on brand recall (Gardner 1985). For instance, the Elaboration Likelihood Model (ELM) (Petty and Cacioppo 1986; Cacioppo and Petty 1984) suggests that a positive mood can decrease central processing while negative mood increases it (Aylesworth and Mackenzie 1998).

In the case of digital music videos, watching the positive context-induced video

increased recall by 46.8 per cent. This effect was stronger in interactive digital music videos, where watching a positive context-induced video increased recall by 59 per cent (see Section 5.1.2). This finding supports the Mood Congruency Theory (Goldberg and Gorn 1987) which states that a positive *programme-induced mood* facilitates and promotes processing depth (Goldberg and Gorn 1987; Isen 1984). Following Mood Congruency Theory in the product placement literature, van der Weele *et al.* (2009), in the context of television programmes, found that recall was higher in a positive *programme-induced mood*. However, their study had two main limitations. It relied on a relatively small sample (*N*=43), and utilised written scripts instead of extracts from the television programme, thus reinforcing central processing. The present study addresses these limitations by utilising bigger samples (positive *context-induced mood N*=147/ negative *context-induced mood* (*N*=155), and by exposing participants to actual stimuli instead of written extracts from a simulated stimulus.

In line with Mood Congruency Theory, this study suggests that while the *context-induced mood* in digital music videos has a positive effect on product placement recall (H1a), it has no effect on product placement recognition (H1b). While the positive *context-induced mood* increases product placement recall in digital music videos (H1e), both interactive and non-interactive, the effect is stronger in the interactive condition. Exploring these results further, two regression analysis models show that *context-induced mood* has a positive effect on the implicit memory test, in both interactive and non-interactive conditions. Again, the effect is stronger in the interactive condition.

Mood was also measured before and after exposure. In the positive *context-induced mood* condition, mood decreased after exposure in both interactive and non-interactive music videos. The decrement was significant in the interactive condition, specifically in *arousal* scores. In the negative *context-induced* condition, mood increased after exposure; however, the increment was not significant. Mood scores before and after stimuli exposure and the moderating effects of *interactivity* (presence/absence) and *context-induced mood* (positive/negative) were assessed. *Context-induced mood* had a large moderation effect (H1g). *Interactivity* was not a moderator (H1f). A post-hoc test was also conducted to assess the effects of the variables correlated with mood before and after stimuli exposure. The analyses suggested that while *interactivity* (presence/absence) has no influence on the change on *mood before and after stimulus*

exposure, *context-induced mood* (positive/negative) has a strong effect. *Previous familiarity with the singer* and the *video, attitude, scepticism, involvement with the singer, involvement with the music video,* and *perceived interactivity, perceived control* and their effects on *mood after exposure* were found to predict *mood after exposure.* However, and after controlling for *context-induced mood (positive/negative),* only *involvement with the singer and the video* predicted mood after exposure. The direction was positive. Further research to explore the effects of *context-induced mood* on *mood before* and *after stimulus exposure* should be conducted.

In the positive *context-induced* video there was a significant decrement in *arousal* scores before and after exposure to the music video, but the non-interactive product placement produced no change in *arousal*. There was no significant change in *arousal* before and after exposure in the negative *context-induced* music video. A post-hoc test was conducted and found that *interactivity* has a moderating effect in the relation *placement recall* and *recognition* and *mood after exposure –pleasure and arousal. Pleasure and arousal* explained, after controlling for *interactivity*, 37.4 per cent of the variance in *recall,* and 35.6 per cent of the variance in *recognition.* A post-hoc test was conducted and found that *context-induced mood* has a moderating effect in the relation *placement recognition* and *mood after exposure –pleasure and arousal.* After controlling for *context-induced mood,* the effects of arousal on placement recognition were not significant. Results partially support the Excitation Transfer Theory (Zillmann 1971), and suggest that arousal had an effect on placement recall (H1c) but not on recognition (H1d). This finding partially supports Goldberg and Gorn's (1987) claim that mood intensity, or individual's arousal, has a positive effect on cognitive processing (e.g. recall and recognition).

Interactivity affects memory, and context-induced mood affects recall and provoked a mood-shift. A post-hoc test was conducted which led to further insight (see Section 5.1 .2). A mixed between-within subjects' analysis of variance was performed to assess the impact of interactivity and context-induced mood on mood scores before and after exposure. The results indicated a substantial effect on context-induced mood, and not interactivity, on mood before and after stimuli exposure.

7.1.2 The opportunity to process the placement

Placements vary in intensity according to their connection to plots (Russell 1998) and visual product placements can be subtle or prominent (Gupta and Lord 1998; Russell 1998). While studies have focused on the different attributes that affect a placement's level of prominence (Brennan and Babin 2004; Avery and Ferraro 2000; D'Astous and Chartier 2000), they have typically done so using the qualitative judgement of researchers where placements are classified according to the coder's subjective perception.

Prominence has been identified as an important factor which contributes to the increase in placement effectiveness (Gupta and Lord 1998; Russell 1998). Classical non-interactive product placement literature showed that that prominent placements yield superior recall and recognition in films (Gupta and Lord 1998), and television programmes (Law and Braun 2000). The current study suggests that prominent interactive product placement achieves higher recall and recognition (H2a) than prominent non-interactive product placements in digital music videos. Thus prominence acts in a different manner in interactive product placement (Lynn *et al.* 2014). First, even when a user simply rolls the cursor over the placement, he or she can see the brand name, which implies that subtle placements can become prominent and noticeable. Second, every interactive placement is by itself prominent once the user decides to click on it. Accordingly, subtle interactive placements achieve higher recall and recognition (H2c) than subtle classical non-interactive product placement. As discussed in Section 2.2.1.3, every interactive placement can intensify its prominence because viewers can choose to click on a given hyperlink which expands the information about the placement. By clicking, individuals interact with the video content. As such it could be argued that in the case of interactive product placement in digital music videos, it is not about prominence, but about the individual's willingness to click on a given item. Once subjects decide to interact with a given placement, they activate their central processing. This, in turn, increases subjects' cognitive processing, such as recall and recognition. It is worth noting; however, that interactivity was not a moderator between prominence and brand recall and recognition (H2b, H2d). This finding implies that the presence of interactivity or added information does not impact placement recognition, most likely because viewers can notice prominent placements regardless. In the positive context-

induced mood digital music video, Nokia was prominent enough in the scene to be easily recognised in both interactive and non-interactive conditions.

7.1.3 The type and amount of brand information presented

The *type and amount of brand information presented* relates to the informational and transformational advertising classification (Puto and Wells 1984; Wells 1980). Under the assumption that every advertisement contains brand information, which in turn develops cognitive awareness, informational advertising activates cognitive memory (Cutler *et al.* 2000; Gardner 1994). Informational advertisements increase recall more than transformational advertisements (Park *et al.* 2008; Puto and Wells 1984; Berger 1962). Despite its importance, the effects of *type and amount of brand information presented* on product placement recall and recognition have been studied only theoretically in the placement literature (Balasubramanian *et al,* 2006; Russell 1998; Nebenzahl and Secunda 1993).

According to Puto and Wells (1984), an advertisement is informational only if the consumer perceives it as informational. The present study investigated whether interactive product placement was perceived as more informational than classical non-interactive product placement. Interactive digital music videos were expected to be perceived as more informational than classic non-interactive product placement because participants had the opportunity to display additional information about any hyperlinked element on screen. However, the findings did not support this claim (H3a). In order to understand why interactive product placement was not perceived as more informational than classical non-interactive product placement, it is necessary to understand that, in an interactive product placement, interactivity (and the resulting displayed information) is elective. Additional information about a specific brand is only available to those viewers who actively 'click' on a given product. In such a case, all the placements will be perceived in a similar fashion in both interactive and non-interactive cases, unless of course an individual decides to interact with a specific placement.

The *transformational effect* of an advertisement is influenced by the *context-induced mood* (Goldberg and Gorn 1987). For example, in a positive *context-induced mood,*

advertisements were perceived as having a higher *transformational effect* on viewers (Goldberg and Gorn 1987). However, in a positive *context-induced mood* music video, interactive product placement was not perceived as more transformational than non-interactive product placement (H3b). Interactive product placement was only perceived as more transformational than non-interactive product placement in a negative *context-induced mood* music video.

Perceived information has shown a positive influence on product placement recall (Park *et al.* 2008). The present research provides support for this in that perceived information had a positive effect on both recall (H3c) and recognition (H3d) of interactive product placement embedded in a positive context-induced video. However, perceived information had no effect on placement recognition in a negative context-induced music video.

Product placement is deemed to produce a transformational experience because it shows brands 'in use' within the relevant media channels (Balasubramanian *et al.* 2006; Russell 1998; Nebenzahl and Secunda 1993). The question remains, however, as to how this perceived *transformational effect* influences product placement recall and recognition. While transformational advertising focuses on affective rather than cognitive processing (Puto and Wells 1984), the present study shows how transformational advertising also affects cognitive processing. Results suggest that *perceived transformation* has a positive effect on product placement recall (interactive and non-interactive/ positive and negative context-induced digital music videos) (H3c). This effect was higher for interactive placement. As viewers perceived product placement (interactive and non-interactive) as transformational, this perception positively affects placement recognition.

Finally, as discussed above, interactive product placement was expected to be perceived as more transformational when embedded in a positive *context-induced mood* media vehicle than in a negative *context-induced mood* media vehicle (H3c). However, this claim was not supported. *Perceived transformation* was higher in a negative context-induced music video. A transformational advertisement evokes emotions in viewers (Puto and Wells 1984). Results suggest that emotions are more intense in negative *context-induced mood* music videos than in positive *context-induced mood* music

videos. Goldberg and Gorn (1987) found that subjects exposed to emotional advertisements felt happier than those who viewed informational advertisements. In other words, positive mood-induced advertisements produce a higher transformational evaluation because viewers feel more positive after exposure and translate these feelings towards the featured brands.

7.1.4 The strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium

Product placement recall and recognition are strengthened by the association between a placed brand and the main actors in a film or programme storyline (Russell 2002; D'Astous and Chartier 2000; DeLorme and Reid 1999). More recently, Verhellen *et al.* (2013) and Wiles and Danielova (2009) found that celebrity endorsement had no significant impact on the recognition of a prominent placement, and that the endorsement of an established recurrent screen character was enough. In digital music videos, the singer is the central character with whom viewers may connect (Karrh 1998; Hudders *et al.* 2012).

In the current study, the level of *perceived fit between the brand and the singer* did not impact placement recall (H4a) and recognition (H4b). This finding is consistent with current product placement theory (Russell 2002; D'Astous and Chartier 2000; DeLorme and Reid 1999). In the overall model tested in the interactive condition (negative and positive context-induced), the *strength of the link between the brand, story character (artist) and medium* (digital music video) had a negative effect on product placement recall one week after exposure. This finding can be explained following Hudders *et al.* (2012) in that individuals focus their attention on the artist, thus paying less attention to any placed brand.

7.2 Individual factors

7.2.1 Prior familiarity with a brand/product

Consistent with Nelson (2002), and in line with the von Restorff effect, the present study suggests that unfamiliarity with the brand has a positive effect on recall of interactive product placement (H5a) only in the case of a positive *context-induced mood* digital music video. However, *prior familiarity with the brand* had no impact on

placement recognition (H5b) in either a positive or a negative *context-induced mood* digital music video.

Although product placement research suggests that familiar brands are more recognised than unfamiliar ones in films (Scott and Craig-Lees 2010; Brennan and Babin 2004; DeLorme and Reid 1999) and video games (Nelson *et al.* 2006; Nelson 2002), little empirical research has examined how *prior familiarity* impacts product placement recall and recognition in digital music videos. The present study suggests that prior familiarity with the video (H5c and H5d), and the singer (H5e and H5f) has no effect on product placement recall and recognition in digital music videos, with and without interactivity. However, it is worth noting that *prior familiarity with the singer* has a positive and significant effect on interactive product placement recall and recognition one week after exposure. Results could mean that participants reflected on the experiment individually, attempting to remember which brands were related to the featured artists.

7.2.2 Judgement of placement fit

Unlike previous studies examining *judgement of placement fit* (Lehu and Bressoud (2009; D'Astous and Chartier 2000; DeLorme and Reid 1999; Karrh 1998), participants in this study self-assessed their perception on whether brands were congruent or incongruent. So, participants evaluated whether they considered that a placed brand was clearly presented or played an important role in the story and whether it was connected to the plot.

Empirical research on *judgement of placement fit* and its effects on product placement recall and recognition provided mixed results. For example, Russell's (2002) earlier findings suggested that incongruous placements are remembered to a greater extent, even more if they are visual rather than auditory, yet Lehu and Bressoud (2009) found that prominent placements achieve higher recall when congruous and connected to a plot. These differences can be related to the qualitative nature of the assessment and depends on the judgement of the researchers (DeLorme and Reid 1999; D'Astous and Chartier 2000; Nelson 2002; Gould and Gupta 2006; Cowley and Barron 2008; Lehu and Bressoud 2009). For example, Russell (2002) concluded that an incongruent placement does not contribute to the story line or build the persona of a character; Lehu

and Bressoud (2009) recurred to other academics' opinion to classify the brands placed. The congruency/incongruency literature suggests that incongruency leads to higher recall (Lee and Mason 1999; Mandler 1981). However, the present study provides evidence that incongruence with the plot, does not affect interactive placement recall or recognition (H6a and H6b) in digital music videos. A subtle and a prominent brand were compared in both positive and negative context-induced digital music videos. Being a prominent or a subtle brand had no effect on placement recall and recognition. This finding was somehow expected because in an interactive digital music video, all placements are prominent once a viewer decides to interact with them.

As discussed above, interactive placement provides additional information only if a viewer decides to engage with the content and to click on it. Hence, the added information of an interactive placement could increase the likelihood of a placement being perceived as incongruent. After testing this hypothesis, results showed that interactive placements in digital music videos were not perceived as more incongruent than classical non-interactive product placements (H6c). In the positive context-induced mood digital music video, the prominent brand was not perceived as incongruent in both interactive and non-interactive conditions. In the negative context-induced digital music video, the prominent brand was perceived as incongruent in both interactive and non-interactive conditions. This finding suggests that the presence of interactivity has no effect on how placements are perceived.

7.2.3 Scepticism towards advertising

Are contemporary consumers more sophisticated in their acceptance of marketing stimuli? The present study shows an unsophisticated contemporary consumer by showing that the sample holds low *scepticism towards advertising*. This finding reflects that audiences are acceptant of the persuasive intent of placements (Nelson 2002; DeLorme and Reid 1999). In the context of an interactive placement, the added information displayed could inhibit persuasion if the purpose of the placement was perceived as deceiving and purely commercial (Cowley and Barron 2008). This would affect placement recall and recognition. *Interactivity* was examined as a moderator of the relation between the *scepticism towards advertising* and *placement recall* (H7a) and recognition (H7b) in digital music videos. The moderation effect was not significant. Gender was not found to be a moderator for this relationship. This finding contributes to

literature on product placement and scepticism (Hudson *et al.* 2008; Nelson *et al.* 2004; Gould *et al.* 2000; DeLorme and Reid 1999; Gupta and Gould 1997) by providing evidence which suggests that *scepticism towards advertising* does not influence product placement recall and recognition in digital music videos.

Previous research has focused on how *scepticism towards advertising* affects attitudes towards placement in general, rather than how it influences placement recall and recognition. The present research supports the claim that scepticism has a negative influence on *attitude towards placements in general* (H7c) only in the case of positive *context-induced mood* non-interactive music video. This finding is consistent with previous product placement research (Balasubramanian *et al.* 2006; Gould *et al.* 2000; DeLorme and Reid 1999).

7.2.4 Attitudes towards placement in general

Positive a*ttitudes towards placement in general* contributes to seamless stimulus processing transferring the positive effects from medium to brand (Gould *et al.* 2000; DeLorme and Reid 1999; Gupta and Gould 1997). For instance, Gould *et al.* (2000) found that participants with positive *attitudes towards placement in general* were more likely to hold positive attitudes towards the specific brands and products placed. The present study suggests that while *attitudes towards placement in general* were positive, they have no influence on brand recall (H8a) and recognition (H8b) in both interactive and non-interactive digital music videos, with both positive and negative *context-induced mood* contexts. It is worth noting that films offer a different level of immersion and interaction to digital music videos. The media-type effect discussed in Section 3.3 seems relevant to understanding how different degrees of interactivity influence the way a product placement is perceived, for example whether the brand is placed in a computer game or a digital music video. It could be argued that the presence of interactivity and the option of interacting with a product placement may influence how it is perceived. Media type effect and interactivity will be discussed later in Section 6.4.

The findings suggest that the presence of interactivity with the music video has no influence on a*ttitudes towards placement in general* which was positive across all conditions (H8c). This finding supports the view that contemporary consumers are well-

accustomed to commercial marketing and advertising overtures and register positive attitudes towards placements (Gupta and Gould 1997; Nebenzahl and Secunda 1993).

A post-hoc test was conducted to assess the effects of the variables correlated with a*ttitudes towards placement in general* and the moderation effects of interactivity (see Table 5.1). The model predicted 51.41 per cent of the variance in a*ttitudes towards placement in general,* and interactivity was a moderator of this relation. The *strength of the link (β=-.03), familiarity with the singer (β=.06), and the digital music video (β=.08), scepticism (β=-.03), involvement with the singer (β=.04), involvement with the video (β=.09), perceived interactivity (β=-.18)* were statistically significant. This finding suggests that a*ttitudes towards placement in general* are positively influenced by *involvement and previous familiarity with the singer and the digital music video.* However, *strength of the link, scepticism,* and *perceived interactivity* have a negative effect on a*ttitudes towards placement in general,* which may imply that while consumers did not react against the presence of interactivity, those already sceptical of the use of advertising translated their negative attitudes to the embedded brands.

7.2.5 Involvement/connectedness

In accordance with previous studies examining Programme Involvement Theory, the results suggest that *involvement with the digital music video* does affect product placement recall immediately after stimulus exposure as well as placement recall and recognition one week after exposure. This effect was negative and only applied to the interactive condition including both positive and negative *context-induced mood-* and a non-interactive positive induced-mood music video. While *involvement with the digital music video* was low overall (H9a and H9b), in both interactive and the non-interactive conditions, participants who were involved with the video chose not to engage in further interaction with the placed brands and focused their attention on the music video. This can be explained in line with Programme Involvement Theory (Moorman *et al.* 2007; Levy and Nebenzahl 2006; Barry 1987; Kennedy 1971) where involvement with a digital music video leads a participant to focus his or her cognitive attention more on the digital music video than on the products placed in it. Nicovich (2005) also noted that involvement and presence of placements have a strong relationship. Involvement with the music video could imply that subjects focusing on the main stimulus, and dismissing

further interaction with the embedded brands. The present study provides evidence to support this view.

In line with Levy and Nebenzahl (2008), results also showed *that involvement with an interactive music video,* in the negative induced-mood condition, had a positive effect on perceived information (H9e). This finding suggest that interactive product placement sets an optimum scenario to provide further information regarding any placed brand, and this information is available to users via elective interactivity where users choose to interact with and expand the information of a given item. Because the viewer has the opportunity, motivation, and ability to process the information, he or she will opt to interact with the placements (Lynn *et al.* 2014). Finally, *involvement with the singer* was low overall, and had no influence on product placement recall (H9c) and recognition in interactive digital music videos (H9d).

Connectedness is the interpersonal link developed between viewers and a television programme and its characters (Russell and Puto 1999). Being connected with a television programme means generating feelings towards it (Stern and Russell 2004; Russell 1998; Fournier 1998). This scale assesses the level of identification of a viewer with a television programme, and how this identification contributes to developing a viewer's self and social identity (Russell *et al.* 2004). While *connectedness* was coined in the context of television programmes, which implies high periodicity, it resulted relevant to observe its applicability in the context of digital music videos.

Connectedness was very low in both interactive and non-interactive conditions, in both digital music videos, and in both positive and negative *context-induced moods*. Interactivity was not a moderator in the relationship between connectedness and recall and recognition (H9f, H9g). The findings suggest that viewers do not develop a relationship with digital music videos, as is the case for television programmes (Stern and Russell 2004), a finding that can be explained by the fact that music videos do not provide the same periodicity and level of exposure as television programmes. For example, viewers connected with a television programme would tend to imitate behaviours observed on their favourite actors. But what if participants selected the video? In the present study participants were assigned to the digital music video aleatory. It can be argued that in a typical setting, viewers would be exposed to those

videos of their choice. Fans can connect with actors and try to imitate them. Examples of a different type of *connectedness* with artists can be found with pop-culture singers such as Justin Bieber, and bands such as One Direction.

7.3 Processing depth

7.3.1 Implicit memory

Interactivity provides viewers with more opportunities for memory processing. For example, when a user rolls the cursor over an interactive object, a persistent visual label of the object is displayed. In addition, a user can click on the object and a panel containing additional information is presented. However, the present research suggests that interactivity does not increase implicit memory. There was no significant difference between implicit memory test scores in the interactive and non-interactive conditions (H10a).

The hypotheses were also evaluated on each of the five evaluated brands per study (positive/negate-context induced music video) to ascertain the effects of attitude toward the placement, prominence, and *involvement with the video* on the likelihood that participants have positive implicit memory. There was one brand in each context-induced music video (positive and negative), which displayed a significant higher implicit memory in interactive product placement compared to non-interactive placement. For example, in the positive *context-induced mood* interactive digital music video, participants were exposed several times to the brand American Apparel, reinforcing the opportunities for memory processing. American Apparel was not a prominent placement, and participants could only notice the brand's presence by clicking on the hyperlinked area. Similarly, in the negative *context-induced mood* interactive digital music video, the brand Dior was not a prominent placement, but was reinforced through interacting with the interactive placements. While these results were only found for one brand per study, and cannot be generalised, they suggest that the mere exposure effect increases implicit memory in subtle interactive product placement and suggest an opportunity for future research.

Perceived usability had a positive significant effect on implicit memory as navigating the interactive music video with ease increased implicit memory. This implies that the interface design is critical in how consumers process information online.
Consistent with product placement studies in implicit memory (Law and Braun 2000), results showed that overall, *involvement with the video* exerted a positive influence on implicit memory in digital music videos. This influence was higher in positive *context-induced mood* digital music videos (H10b).

The present study also suggests that *prior familiarity with the brand* has no influence on implicit memory in the context of digital music videos (H10c). Extant literature suggests that previous familiarity reinforces deeper processing (Bettman and Park 1980), however the present study suggests that previous familiarity with a brand does not in fact affect implicit memory, at least in the case of digital music videos.

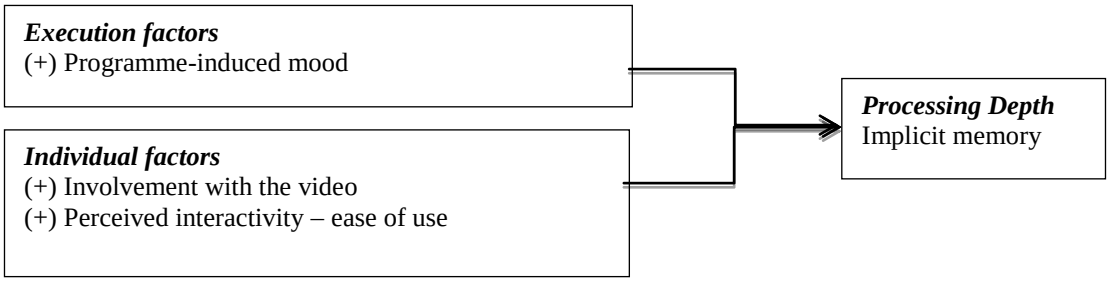
Attitudes towards placement in general had no influence on implicit memory (H10d) in digital music videos. The main reason is that, in the present study, participants were exposed only once to the music video stimuli and therefore had no opportunity to change their attitude towards product placement. They did not get the opportunity to gain advantage of the mere exposure effect. When this hypothesis was studied on a brand by brand basis, attitudes towards placement in general were a strong predictor of implicit memory for one brand only (American Apparel) in the positive *context-induced mood* digital music video. In other words, respondents who had positive a*ttitudes towards placement in general* were more likely to score correctly on the implicit memory test than those who did not. As discussed earlier in this section, American Apparel was a subtle brand presented several times across the digital music video and could only be engaged with interactively. This suggests that participants had the opportunity to gain advantage of the mere exposure effect for this particular brand.

Although Auty and Lewis (2004) found that prominent placements influence implicit memory, the prominence of interactive and non-interactive product placement had no influence on implicit memory (H10e) in digital music videos. This result can be explained by Genre Theory which states that findings can only be applied to the same media-vehicle because of specific genre (media channel)-related characteristics (Russell and Stern 2006). Subtle brands reported statistically significant higher scores in the

implicit memory test in interactive product placement compared to non-interactive product placement. Matthes *et al.* (2012) posit subtle placements as generators of mere exposure effect. This study found that subtle placements in interactive digital music videos produce higher implicit memory effects than prominent placements. It also suggests that subtle interactive placements produced higher implicit memory effects than non-interactive subtle and prominent placements.

Finally, the study shows that watching a positive-induced mood music video had a positive effect on implicit memory (H10f). The same set of analyses was calculated with gender as moderator. Gender was not a significant moderator affecting implicit memory. The factors which influence implicit memory in the case of digital music videos are outlined in Figure 7.2.

Figure 7.2 **Factors which influence implicit memory in the case of digital music videos**



7.3.2 Explicit memory

7.3.2.1 Recall

Interactive placement allows users to decide on the information which they access to and to give them control over their viewing experience. Viewers expand the information about those products and brands in which they are interested in (Liu and Shrum 2002; McMillan and Hwang 2002; Steuer 1992). While this condition increases enjoyment, the option of visualising added information about a brand also reinforces central processing, increasing the likelihood of the activation of the product concept in memory (Shapiro 1999). The visual label which is displayed on interactive objects when a user rolls the cursor on screen also serves to trigger the visual cue for central processing. Unsurprisingly, product placement recall was higher in interactive digital music videos

compared to classical non-interactive ones (H11a). This result was evident in the positive context-induced music video. Although more brands were recalled in the negative context-induced music video (11 out of 18), the overall recall score was not significantly higher (see Table 5.37). This finding extends research in interactive product placement recall (Gupta and Gould 1997; Gupta and Lord 1998; DeLorme and Reid 1999; Gould *et al.* 2000; Law and Braun 2000; Nelson 2002; Stern and Russell 2004; Lai-man and Wai-yee 2008) by providing evidence in the context of digital music videos.

An audience that is aware of the placements within the media vehicle is more able to recall a placement. This awareness creates a connection between the media vehicle and the brand in the audience's mind, which in turn generates long term effects on memory (Shapiro and Krishnan 2001; Segupta *et al.* 1997). Recall one week after exposure was also investigated, and was found to be higher in the interactive condition, in both positive and negative context-induced mood digital music videos.

These results suggest that interactive placement not only increases recall, but also increases the depth of recall, an outcome which is even more evident one week after exposure. Participants did not recall the placements by chance and had the opportunity to give further details in an open question regarding how brands were being used in the video. The following response from a participant is illustrative:

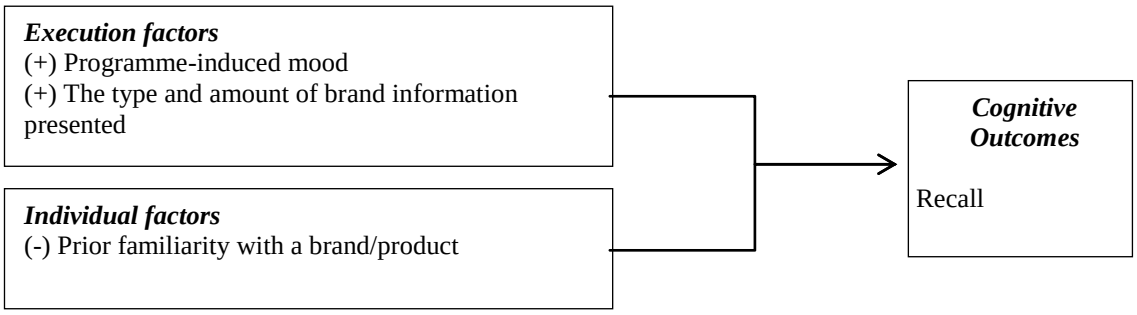
> Beats by Dre headphones appeared in the music video around the neck of a participant in the music video. The headphones appeared briefly for about 2 seconds. A Hewlett Packard mini laptop, which was coloured pink and white, appeared under the arm of a female in the music video. MAC makeup was used by one of the music video's protagonists, Fergie, at the beginning of the video as she prepared for her night out. She was using this product while sitting at a mirror in what was suggested to be her bedroom.

The factors which positively affected *recall one week after exposure* are, after controlling for the effects of video-induced mood (positive/negative), *transformation, involvement with the singer previous to exposure, and familiarity with the video*. In turn, *mood after exposure*, the *strength of the link between the video and the brands*, *involvement with the video* and *video context-induced mood* had a negative effect *on recall one week after exposure.* A post-hoc test was conducted to assess the impact of

interactivity (presence/absence) and *context-induced mood (positive/negative)*, on *recall* scores after exposure and one week after exposure. The tests suggest that the presence of interactivity has a positive effect on recall scores strengthening them one week after exposure. This finding suggests that interactivity triggers incidental learning activating long-term memory. While short-term memory may vanish once the individual switches his attention to a new task, long-term memory is stronger, improves with repetition (i.e. reinforcing advertising stimuli) and it is easier to retrieve (Atkinson and Shiffrin 1968).

Research Objective One investigates the key factors which influence recall and recognition of a non-interactive product placement in digital music videos. It also investigates the moderating effects of positive/negative context-induced mood. Watching a positive context-induced non-interactive music video and perceiving a music video as transformational increased placement recall. *Scepticism towards advertising* and *attitudes towards placement in general* were not predictors of placement recall and recognition in non-interactive digital music videos. This finding supports the argument that the contemporary consumer is less sceptical, more used to the presence of diverse advertising stimuli and is quite comfortable with the existence of product placement within digital music videos. The factors which influence classical non-interactive product placement recall in digital music videos are presented in Figure 7.3.

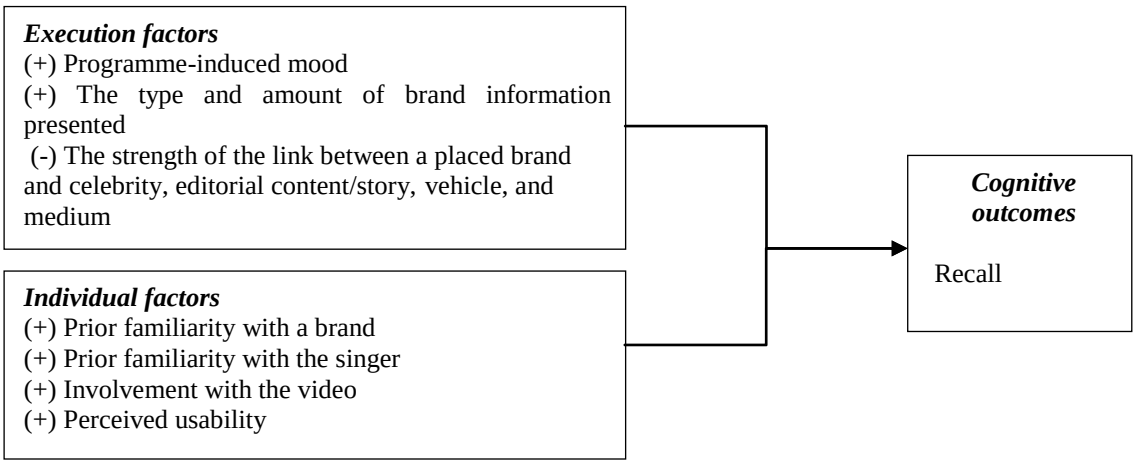
Figure 7.3 **Factors which influence classical non-interactive product placement recall in digital music videos**



Research Objective Two aims to analyse how the factors of the theoretical framework for classical non-interactive product placement fit in the case of interactive product placement. The moderating effect of context-induced mood enhanced the effects of the factors affecting recall and recognition only one-week after exposure. As the present research focuses on the impact of the independent variables on recall and recognition, it

was not included in the final model (see Figure 7.4). These findings are discussed previously on this section. To investigate this objective, regression analysis was run in the interactive dataset combined (positive and negative context-induced digital music videos). Findings suggest that *programme-induced mood* positively affects recall of interactive product placement in digital music videos: watching a positive context-induced video increases placement recall. *Perceived usability* also had a positive effect on placement recall. Media interface is important for viewers, so important that perceiving the interactive music video as easy to navigate increases recall. Prominence was not a predictor for recall. However, prominent interactive placements displayed higher recall compared to non-interactive product placement in a negative context-induced mood music video. As expected, subtle placements benefited from interactivity and the expanded information available in interactive digital music videos (Lynn and Muzellec 2010). Users who chose to interact with the placed brands were more likely to recall them. *Strength of the link* had a negative impact on placement recall suggesting that perceiving a placement as congruent leads to less recall than perceiving a placement as incongruent. *Scepticism towards advertising* and *attitudes towards placement in general* were not relevant in evaluating recall. These factors are outlined in Figure 7.4.

Figure 7.4 **Factors which influence interactive product placement recall in digital music videos**



7.3.2.2 Recognition

Placement recall and recognition both contribute to the generation of brand awareness (Keller 1993) and are cognitive outcomes. While recall implies a participant being aware of the brand recalled, brand recognition requires less cognitive effort. Recognition implies being able to distinguish and identify a brand when given cues,

which is similar to an in-store context where a buyer is exposed to options and has to select one, based on what he or she has seen or heard previously (Keller 1993).

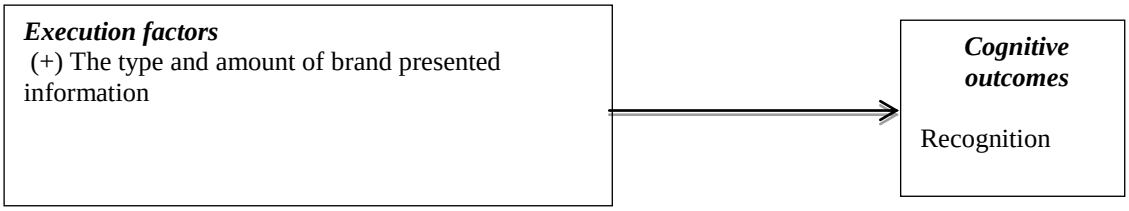
Interactive product placement gives users more opportunities to centrally process stimuli without the need to focus all cognitive efforts. The presence of additional cues, such as added information and the persistent labels on screen when moving the cursor on interactive objects, increases the opportunity for a viewer to interact with content, hence making it easier to recognise the brand later on. Results suggest that product placement recognition is higher in an interactive digital music video than in a non-interactive one (H11b).

Recognition was also assessed one week after exposure to stimuli. In this case, recognition was also higher in the interactive condition compared with the non-interactive one. The factors which positively affected recognition one week after exposure are, after controlling for the effects of video-induced mood (positive/negative), t*ransformation, familiarity and involvement with the singer* previous to exposure, and *perceived usability*. *Involvement with the digital music video* had a negative effect. A post-hoc test was conducted to assess the impact of interactivity (presence/absence) and context-induced mood (positive/negative), on *recognition* scores after exposure and one week after exposure. The tests suggest that a while *positive context-induced mood* increases recognition one week after exposure, a *negative context-induced mood* has no effect on long-term memory. This finding suggests that *positive context-induced mood interactivity* triggers incidental learning activating long-term memory, but does not affect short-term memory (see H1b). This finding supports Mood Congruency Theory (Goldberg and Gorn 1987) in the context of product placement and long-term memory. This finding also contributes to product placement research (Verhellen *et al.* 2013; Scott and Craig-Lees 2010; Brennan and Babin 2004; Nelson 2002; DeLorme and Reid 1999; Gupta and Lord 1998) by examining product placement recognition in a relatively unexplored media channel (e.g. digital music videos); and introducing the study of interactivity in digital music videos (see Section 6.4).

Research Objective One investigates the key factors which influence recall and recognition of non-interactive product placement in the case of music videos. Results suggest that perceiving a digital music video as informational and/or transformational

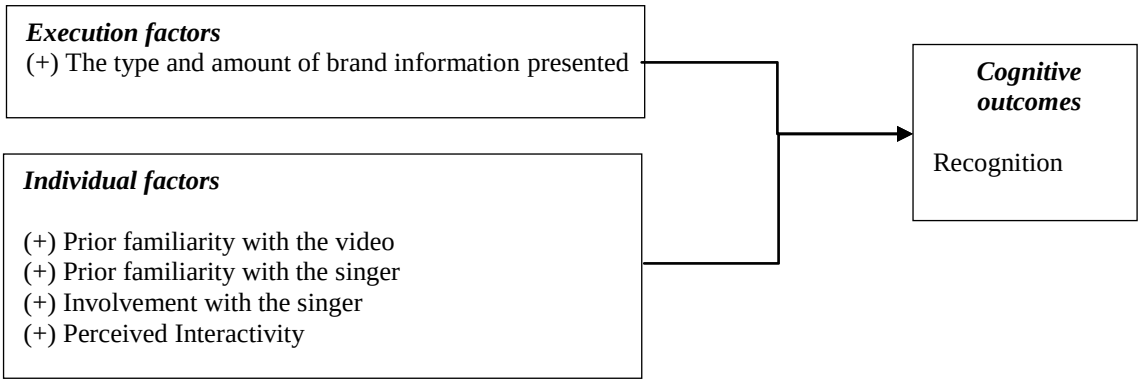
increased placement recognition. Perceived information activates cognitive memory and gives participants more opportunities to recognise a brand (Cutler et al. 2000; Gardner 1994). Perceived transformation implies that participants who engaged not only cognitively but also emotionally with products placed in the digital music videos displayed higher recognition than those who did not. The presence of interactivity also increased recognition. Watching an interactive digital music video increased placement recognition compared to watching a non-interactive digital music video. The factors influencing classical non-interactive product placement recognition in digital music videos differ from Balasubramanian *et al.*'s (2006) Model Framework (see Figure 7.5), a difference that can be explained by the *media context effect* (see Section 8.2).

Figure 7.5 **Factors which influence classical non-interactive product placement recognition in digital music videos**



Research Objective Two aims to analyse how the factors of the theoretical framework for classical non-interactive product placement fit in the case of interactive product placement. The moderating effect of context-induced mood enhanced the effects of the factors affecting recognition only one-week after exposure. As the present research focuses on the impact of the independent variables on recognition after exposure, it was not included in the final model (see Figure 6.6). Results suggest that perceiving a digital video as transformational increases placement recognition. Interacting with a digital music video gives participants the opportunity to emotionally engage with the placed brands, thus increasing placement recognition. This finding is consistent with the positive of having prior familiarity with the video and the singer, and being involved with the singer. Findings also suggest that perceiving a digital interactive music video as interactive, specifically easy to navigate, increases recognition. This is consistent with the finding in the case of placement recall that the interface is critical and must be treated as such in digital contexts (see Figure 7.6).

Figure 7.6 **Factors which influence interactive product placement recognition in digital music videos**



7.4 Perceived interactivity

Interactive placement occurs in the context of user-to-machine interaction (Liu and Shrum 2002). This interaction allows users to control the amount of information they want to access (Hang and Auty 2011). The interface design is critical to influence users' decision to interact with a given medium by promoting two-way communication (Jiang *et al.* 2010). *Perceived interactivity* refers to users' ability to evaluate how they perceive and/or experience interactivity in a given media vehicle (Liu 2003; McMillan and Hwang 2002). As discussed in Section 3.2, perceived *interactivity* has three main components which help to understand how interactivity is perceived by users. These components are control, two-way communication, and time (Liu and Shrum 2002; McMillan and Hwang 2002). In the current study, two control questions were used to evaluate the ease of navigation of the interactive digital music video interface and one to assess whether the digital music video was perceived as interactive (see Section 4.5.1.3).

Results were analysed in the two interactive experimental combinations (positive/negative *context-induced mood*). While *perceived interactivity* was higher in the negative than in the positive context-induced video, the difference was not significant. However, the negative context-induced video was reported to be easier to navigate compared to the positive context-induced interactive digital music video. When referring to the videos, the negative context-induced video was a relatively slower song while the positive context-induced video was a faster song. The speed of the song influenced the video scenes' sequence. This implies faster placement

appearances in the positive context-induced video compared to the negative context-induced video.

Results also indicated that, even though recall was higher in interactive digital music videos compared to non-interactive ones (H11a), *perceived interactivity* did not have a significant effect on product placement recall (H12a). However, a test of the overall model (see Section 5.3) showed that *perceived interactivity* had a positive effect on product placement recall. In particular, *control of navigation or perceived usability* (McMillan and Hwang 2002) had a positive effect on placement recall. *Perceived usability* measures perceived interface design and usability by asking participants whether it was easy to find their way through the music video and whether they considered it was manageable (McMillan and Hwang 2002). These findings are consistent with Jiang *et al.* (2010). The context of this finding, and the importance given to it by participants, is illustrated in the following response from a participant:

> Los Angeles [as a persistent label within the video while moving the cursor] was present in the whole video and it bothered me when I wanted to click on a different product/brand.

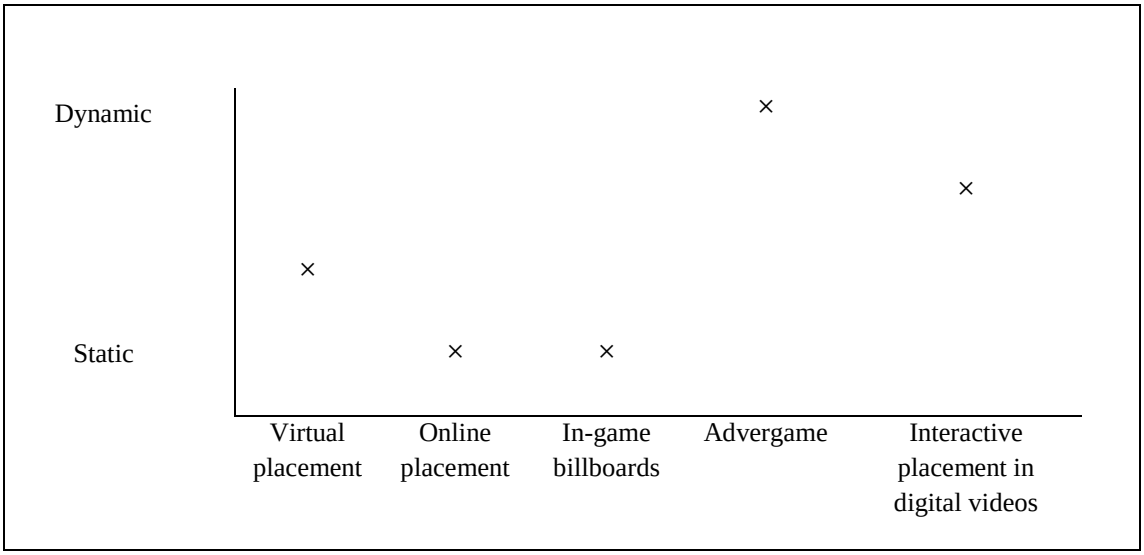
This example shows how hyperlinks should be limited to certain regions and objects on screen to avoid superimposing hyperlinks and/or objects. Digital music videos are presented in the context of software which enables interactivity, and by definition involve some form of human-computer interaction. Because of this, interface is critical.
Perceived interactivity in an interactive product placement had a positive effect on product placement recognition (H12b). Consistent with H12a, perceiving a digital interactive music video as easy to navigate increased recognition, suggesting that *perceived usability* is important for users (McMillan and Hwang 2002) during their interactive experience. Finally, *perceived interactivity* had a positive effect on attitude towards the placement, but only in the case of positive context-induced mood music video (H12c).

Perceived interactivity was higher in the negative context-induced video; however, this relation was not significant. To understand perceived interactivity and the factors which may have influenced participants on their judgement of the interactivity features of the digital music video, a post-hoc test was conducted to assess the effects of the variables on *perceived interactivity* in the interactive dataset, controlling for the effects of

context-induced mood. The model predicted 65.6 cent of the variance in *perceived interactivity*, and *context-induced mood* was a moderator of this relation. However, only *familiarity with the digital music video (β=.08, p =.01), connectedness (β=1.197, p =.02), perceived information (β=.342, p =.00)* were significant and positively predicted perceived interactivity. *Perceived usability* was also examined as a moderator of the relation between the IV and the DV of the overall model. The moderation effect of *perceived usability* is not significant for the case of recall and recognition.

Placement literature has classified placement forms as either passive or interactive (van Reijmersdal *et al.* 2010). Passive placements are static and include in-game billboards, static logos, virtual and online placement (e.g. Grigorovici and Constantin 2010; Lee and Faber 2007; Nelson *et al.* 2006; Yang *et al.* 2006). Interactive placements are dynamic and include *advergames* (Mallinckrodt and Mizerski 2007; van Reijmersdal *et al.* 2010) and interactive placement in digital music videos (Lynn *et al.* 2014) (see Figure 7.7).

Figure 7.7 **Static versus dynamic product placement**

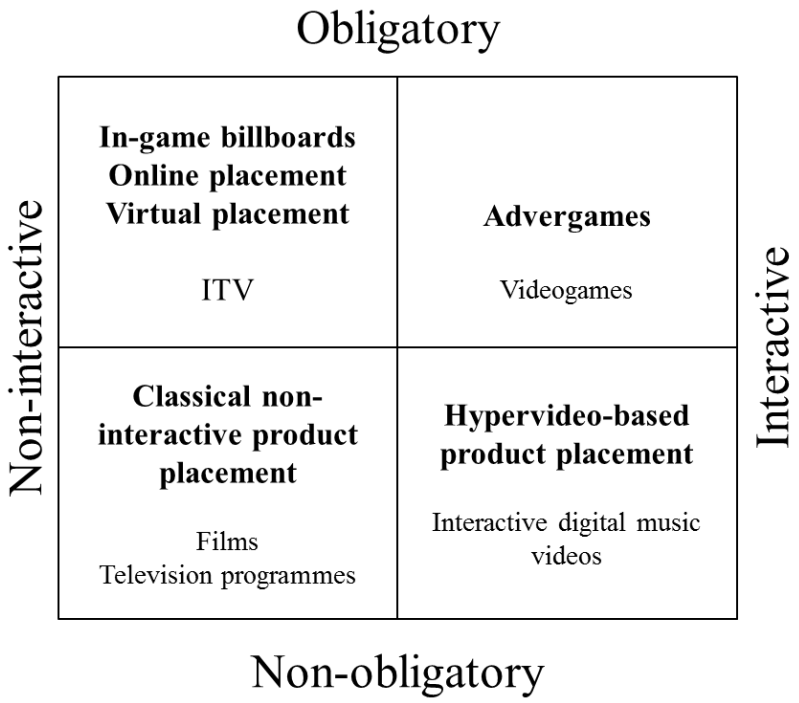


Source: Adapted from Lynn *et al.* 2014 and van Reijmersdal *et al.* 2010

Different levels of interactivity occur in different media vehicles. Russell and Stern (2006) utilised Genre Theory to understand the differences between sitcoms and other genres, and how product placement was shaped by the genre yielding different outcomes from one genre to another. van Reijmersdal *et al.* (2010) noted that levels of interactivity differ among gaming studies (e.g. from static placements to *advergames*). More recently, Lynn *et al.* (2014) claimed that digital music videos create a distinctive

media context effect. The study of hypervideo-based product placement was introduced by Lynn and Muzellec (2010) and Lynn *et al.* (2014). Hypervideo-based placements differ from interactive placements as outlined by Mallinckrodt and Mizerski (2007) and van Reijmersdal *et al.* (2010) with respect to both their level of interactivity and the media channel in which they are embedded. Moreover, the notion of 'machine interactivity' suggests that different machines enable different types of interaction (Steuer 1992). Different machines give (or take away) the power to control the viewing experience, the information they make available, the sequence and flow of that information, and the time that can be devoted to it (Sicilia *et al.* 2005; Liu 2003; Liu and Shrum 2002; Ariely 2000). Grigorovici and Constantin (2010) foresaw that presence and immersion do indeed vary along a continuum (low to high) which is determined by the level of interactivity which a technology supports. These findings suggest a Product Placement Interactivity Grid to visualise and understand how different levels of interactivity and whether this interactivity is mandatory affect media channels and carries repercussions for product placement (see Figure 7.8).

Figure 7.8 **Product Placement Interactivity Grid**



Conclusion

The main finding in this chapter was that product placement recall and recognition were higher in interactive compared to non-interactive digital music videos. Interactivity has also a positive influence on placement recall one week after exposure. These findings suggest that interactivity increases recall and recall depth by activating central processing. Central processing is activated because users select which objects (e.g. product placements) they want to interact with. Central processing is also activated because users can visualise additional information relating to the placed brands in the form of labels on the interactive objects or in the form of banners expanding brand information. This also applies to placement recognition. *Programme-induced mood*, perceiving a video as transformational, *prior familiarity with a brand, prior familiarity with the singer and perceived interactivity* increased placement recall while *strength of the link* and unfamiliarity with the brand (in a positive context-induced mood music video) had a negative effect on placement recall.

Product placement recognition was higher in an interactive digital music video compared to a non-interactive one. Recognition of interactive placement was also higher than that of non-interactive placement one week after exposure. The presence of interactivity and the added information that interactivity involves, made it easier for participants to recognise brands. *The type and amount of brand information presented*, interactivity, *prior familiarity with the video, prior familiarity with the singer, involvement with the singer and perceived interactivity,* specifically *perceived usability,* increased placement recognition.

CHAPTER EIGHT
CONCLUSION

Introduction

The final chapter concludes this thesis by considering its overall contribution to knowledge within the field of marketing. The chapter begins by briefly reviewing the main elements of the study before considering the contribution of the research to the development of product placement and interactivity theories and integrated marketing communications. Additionally, the methodological contribution to the study is assessed. The implications for research practice are then explored and some of the limitations of the study and areas for future research are considered. The chapter concludes with some reflections on the research journey.

8.1 Context of the research

Product placement has a long established history dating back to the 1900's (Lehu 2007; Galician Ed 2004; Segrave 2004; Karrh 1998). However, it was not considered a well-defined practice until the 1970's. Since then, there have been a number of comprehensive studies investigating product placement history (Newell *et al.* 2006; Galician Ed 2004; Kretchmer 2004; Segrave 2004) and product placement's impact on viewers (van Reijmersdal *et al.* 2010; Balasubramanian *et al.* 2006; Nelson *et al.* 2004; Karrh 1998). In particular, a number of studies have investigated placement recall and recognition (van Reijmersdal *et al.* 2010; Scott and Craig-Lees 2010; Brennan and Babin 2004; D'Astous and Chartier 2000; Gupta and Lord 1998; Karrh 1998). In the main, these studies have been situated in the context of passive media such as films, television programmes, and music videos.

More recently, product placement has expanded from offline to online media, following an evolutionary path similar to that taken by cinema in moving to television (Hudson and Hudson 2006; Galician Ed 2004; Kretchmer 2004; Segrave 2004). Examples of online media featuring product placement include *advergames*, computer/video games and digital music videos (Okazaki and Yagüe 2012; Hang and Auty 2011; Cauberghe

and De Pelsmacker 2010; Grigorovici and Constantin 2010; van Reijmersdal, Jansz, *et al.* 2010; Mackay *et al.* 2009; Mallinckrodt and Mizerski 2007). The shift from offline to online media adds new dimensions of interactivity to both the media themselves and to brand placement. The present study is situated precisely where digital technologies incorporate enhanced interactivity with digital music videos.

8.2 The theoretical contribution of the study

This study contributes to the product placement literature in addressing product placement recall and recognition in digital music videos, a media channel which had remained relatively unexplored despite its increasing popularity among practitioners. It examined whether interactivity increases brand recall and recognition of product placements embedded in interactive digital music videos and explored how the presence of interactivity impacts the mix of factors influencing classical non-interactive product placement as portrayed by commonly accepted product placement frameworks such as Balasubramanian *et al.* (2006). The research also investigates the effects of context-induced mood on memory (recall and recognition) and its impact on the relation between Balasubramanian et al.'s (2006) theoretical framework in an interactive and non-interactive digital music video. While Balasubramanian *et al.* (2006) synthesised a wide body of literature relating to classical product placement in one framework, this is the first study that integrates these in to one integrated empirical study for digital music videos. The study assessed 10 individual and execution factors affecting placement's cognitive outcomes, specifically recall and recognition.

In taking this approach, the thesis examined a previously unexplored relationship in the extant literature (i.e. product placement, interactivity and cognitive effects in digital music videos), and tested an existing framework (product placement classical theoretical framework) by adding new components (interactivity and *perceived interactivity*) (Colquitt and Zapata-Phelan 2007). Three objectives formed the basis for the research underpinning this thesis:

i) To empirically test the key factors which influence recall and recognition of a classical non-interactive product placement in digital music videos and the moderating effects of positive/negative context-induced mood.

ii) To analyse how the factors of the theoretical framework for classical non-interactive product placement apply in the case of interactive product placement and the moderating effects of positive/negative context-induced mood.

iii) To test whether recall and recognition levels for product placement in an interactive online medium are greater than those for product placement with the moderating effects of interactivity.

Table 8.1 below provides a summary of findings as per research objective.

Table 8.1 **Summary of findings as per research objective**

	RO 1		**RO 2**		**RO3**	
	Non-interactive		**Interactive**		**Combined dataset**	
	Recall	***Recognition***	***Recall***	***Recognition***	***Recall***	***Recognition***
Conditions						
Video type					(+)	(+)
Context-induced mood.	(+)		(+)		(+)	
Factors						
Mood after exposure			(-)		(-)	
The type and amount of brand information presented	(+)	(+)	(+) Transf	(+) Transf	(+) Transf	(+) Infor (+) Transf
Prior familiarity with a brand	(+)					
Prior familiarity with the video				(+)		
Prior familiarity with the singer			(+)	(+)		
The strength of the link between brand and singer			(-)		(-)	
Involvement with the singer				(+)		
Involvement with the video			(-)			
Perceived interactivity				(+)	(+)	(+)
Perceived usability			(+)	(+)		
Moderators						
Context-induced mood						
Interactivity						(+)
Information					Opportunity to process a placement (+)	(+)

Research Objective One focused on testing the key factors which influence the recall and recognition of classical non-interactive product placement in digital music videos. As noted by Russell and Stern (2006) different media vehicles produce different audience outcomes because of their specific genre-related characteristics. Product placement has been studied in the context of the media in which they are embedded. These media include *advergames*, computer/video games, digital games, movies, television, novels, online games, simulation games, songs, radio and virtual environment (Kureshi and Sood 2010; Karrh 1998; Gupta and Gould 1997). However, only a very small amount of empirical research has been undertaken in the case of music videos, particularly compared to that undertaken on other media (Hudders *et al.* 2012; Matthes *et al.* 2012; Schemer *et al.* 2008).

In order to investigate Research Objective One, a model framework that has been utilised in the study of classical non-interactive product placement (Balasubramanian *et al.* 2006) was tested in the context of digital music videos (non-interactive). In testing this framework for a context in which it had not previously been utilised, the aim was to make a contribution to the product placement literature. It was found that of the 10 factors proposed in this framework only three had an effect on product placement recall in the context of digital music videos. These factors are *programme-induced mood*, *the type and amount of brand information presented*, and *prior familiarity with a brand/product*. First, in regard to *programme-induced mood* and consistent with Mood Congruency Theory (Aylesworth and Mackenzie 1998; Goldberg and Gorn 1987; Isen 1984), the present study suggests that *context-induced mood* in digital music videos has a positive effect on product placement recall confirming van der Weele *et al.'s* (2009) findings in the context of television programmes.

Second, only one factor, *the type and amount of brand information presented*, had an effect on product placement recognition. *The type and amount of brand information presented* had not been previously analysed in product placement research. The present study suggests that informational placements increase recall and recognition in digital music videos, similar to the effects reported in advertising research (Park *et al.* 2008; Puto and Wells 1984; Berger 1962). Third, the present study suggests that *prior familiarity with a brand/product* does not increase either recall or recognition. Consistent with the von Restorff effect, and product placement research (Nelson 2002;

Balasubramanian 1994), recall of unfamiliar brands was higher than that of familiar brands in positive *context-induced mood* digital music videos. This finding suggests that the novelty of new brands prompts viewers to focus on them. However, although product placement research suggests that familiar brands are more frequently recognised than unfamiliar ones in films (Scott and Craig-Lees 2010; Brennan and Babin 2004; DeLorme and Reid 1999) and video games (Nelson *et al.* 2006; Nelson 2002), this was not found to be the case in the context of digital music videos. Finally, *context-induced mood* does not moderate the relation between the IV and the DV of the model.

The aim of Research Objective Two was to analyse how the factors within the theoretical framework for classical non-interactive product placement apply in the case of interactive product placement. The execution and individual factors affecting product placement recall and recognition according to Balasubramanian *et al.'s* (2006) theoretical framework were re-evaluated to assess their relevance and influence in the case of interactive digital music videos.

Positive *programme-induced mood* increased recall in interactive digital music videos, a finding that is consistent with Mood Congruency Theory which suggest that positive mood facilitates stimuli processing depth (Goldberg and Gorn 1987; Isen 1984). The findings are also consistent with van der Weele *et al.*'s (2009) study, although their study was applied in the context of non-interactive television programmes, relied on a relatively small sample and did not utilised extracts of the television programme, but written scripts thus reinforcing cognitive processing. The present study overcomes these limitations.

The type and amount of brand information presented was studied to see whether perceived transformation and information increased brand recall and recognition in interactive digital music videos. The study suggests that the *type and amount of brand information presented* has a positive effect on product placement recall and recognition in interactive digital music videos. *Perceived information and transformation* individual were analysed individually. First, *perceived information* in an interactive product placement embedded in a positive context-induced digital music video had a positive effect on product placement recall and recognition, a finding consistent with existing advertising research (Park *et al.* 2008; Cutler et al.

2000; Gardner 1994; Aaker and Stayman 1992; Puto and Wells 1984; Berger 1962). It is worth noting that this effect was not observed in the negative *context-induced mood* digital music video. Although classical non-interactive product placement does not display a substantial amount of brand-related information (Balasubramanian *et al.* 2006; Russell 1998), interactive product placement is distinctly informational. *Perceived information* was expected to affect recall and recognition in positive and negative context-induced interactive digital music videos because users had the opportunity to 'click on' and display factual information about any element hyperlinked in the video content. Several factors could have affected the results in the negative *context-induced mood* interactive digital music video, such as participants' lack of motivation to interact, or the *context-induced mood* itself.

Second, the present study suggests that *perceived transformation* in an interactive product placement has a positive effect in product placement recognition. Although product placement is transformational (Balasubramanian *et al.* 2006; Gould *et al.* 2000; Russell 1998), it was deemed necessary to assess whether it was perceived as such and whether it influenced recall and recognition. The transformational effect was expected because it links the digital music video with the placed brand, which can be identified by clicking on the hyperlinked area. By linking with emotions, perceived transformation facilitates recall and recognition (Aaker and Stayman 1992; Goldberg and Gorn 1987; Puto and Wells 1984). The present study did not reveal any significant effect of perceived transformation on recall of interactive placement. This finding can be explained by Puto and Well's (1984) observation that transformational advertisements need repeated exposure to generate the emotions which link brands to the medium in which they are embedded. Other studies support this observation (Park *et al.* 2008; Berger 1962). However, the present study only exposed participants to the stimulus once. Contrary to extant research (Goldberg and Gorn 1987), *perceived transformation* was not influenced by the *context-induced mood* of an interactive digital music video. Finally, the present study contributes to the product placement literature by providing experimental evidence on how *the type and amount of presented brand information* affects recall and recognition of interactive product placement in digital music videos.

This study also suggests that the *strength of the link between a placed brand and celebrity*, *editorial content/story*, *vehicle, and medium* had a negative effect on product placement recall one week after exposure, a finding that contradicts extant product placement literature (Russell 2002; D'Astous and Chartier 2000; DeLorme and Reid 1999). The findings can be explained in line with Hudders *et al.* (2012) who noted that individuals focus their cognitive functions on the liked artist, thus paying less attention to any placed brand.

The present study suggests that *prior familiarity with a brand/product* has a positive effect on interactive product placement recall and recognition one week after exposure. Long-term memory was activated by i) *prior familiarity* and ii) *interactivity*. Participants could have reflected on the experiment after exposure, trying to free-recall the brand they had been exposed to.

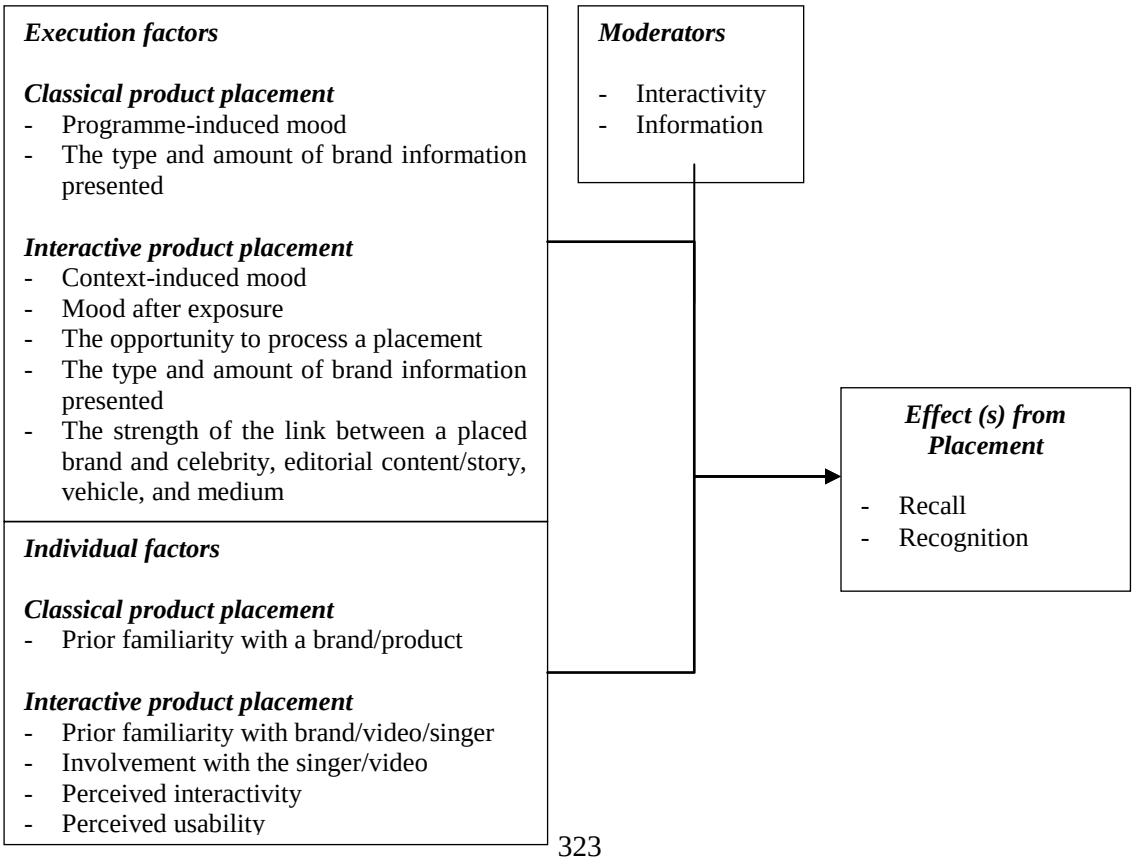
A number of changes in the factors which influence classical non-interactive product placement, compared to the factors which influence interactive product placement, were identified. For example, *the type and amount of brand information presented* and *programme-induced mood* both increased placement recall, while *the strength of the link between a placed brand and celebrity*, *editorial content/story* decreased recall. *The type and amount of brand information presented*, and *perceived usability* increased recognition (see Figure 8.1).

The results of this experiment suggest that the sample holds very low scepticism towards advertising in general. *Neither scepticism nor attitudes towards placement in general* were predictors of placement recall and recognition in digital music videos. *The opportunity to process a placement* was not a predictor of recall and recognition originally. However, prominent interactive placements displayed higher recall compared to classical non-interactive product placement in a negative *context-induced mood* music video, and recognition was higher in both negative and positive *context-induced mood* music videos. Subtle placements also benefited from interactivity. A post-hoc test was conducted to assess the moderation effect of interactivity and information in the relation between *opportunity to process a placement* and *recall* and *recognition*. *Information* has a positive moderation effect on placement recall. *Interactivity* was not a moderator. The *judgement of placement*

fit had no effect on placement recall and recognition. However, it is worth noting that the presence of interactivity has no effect on how placements are perceived. Congruent and incongruent placements are perceived as such whether they are embedded in classical non-interactive or interactive digital music videos.

The present study yielded a number of important insights which help to understand interactive product placement and the differences between non-interactive and interactive placement. For example, in a non-interactive digital music video only *programme-induced mood, the type and amount of brand information presented* and *prior familiarity with a brand/product* were the factors affecting placement recall and recognition. However, in an interactive digital music video, the factors affecting recall and recognition were *programme-induced mood*; *the opportunity to process a placement; the type and amount of brand information presented*; *the strength of the link between a placed brand and celebrity, editorial content/story, vehicle, and medium*; *interactivity*; *prior familiarity with brand/video/singer, involvement with the singer/video, perceived interactivity and perceived usability* (see Figure 8.1).

Figure 8.1 **Research Framework for the Study of Non-interactive and Interactive Product Placement in Digital Music Videos**



Finally, the study makes a contribution to the implicit memory literature, in particular in how memory is affected by interactive product placement, by showing that *involvement with the video*, consistent with the Elaboration Likelihood Model (Cacioppo *et al.* 1984), and video type (positive/negative *context-induced mood*), have a positive effect on implicit memory. This relationship has not been previously explored.

The third objective was to test whether recall and recognition levels for product placement in an interactive online medium are greater than those for product placement in a non-interactive version of the same medium. It also investigates the moderation effects of interactivity and context-induced mood. The present research incorporated *perceived interactivity* as an individual factor. In so doing, it drew on interactivity theory to throw light on possible outcomes of product placement when situated in interactive media. An underlying assumption of the study is that interactivity constitutes an altered relationship between medium and recipient and that this, in turn, would have repercussions for the workings and impact of product placement in such media. Table 8.2 summarises the factors contributing to higher scores in the interactive condition when compared to the non-interactive one.

Table 8.2 **Factors contributing to higher scores in the interactive condition when compared to the non-interactive one**

Factor	Recall	Recognition
Video- induced mood	+	+
The opportunity to process a placement	+	+
The type and amount of brand information presented	+	+
The strength of the link between a placed brand and celebrity,	+	
Perceived interactivity	+	+
Condition		
Interactivity	+	+
Moderators		
Interactivity	*	*
Context-induced mood		*
Information		*

Perceived interactivity influenced both recall and recognition, specifically perceived control of navigation (or perceiving an interactive digital music video as easy to navigate). *Perceived interactivity* is a relatively recent measure which entails users assessing directly their perception of their interaction with the media channel. This is important in the context of user-to-machine interaction and helps to understand how

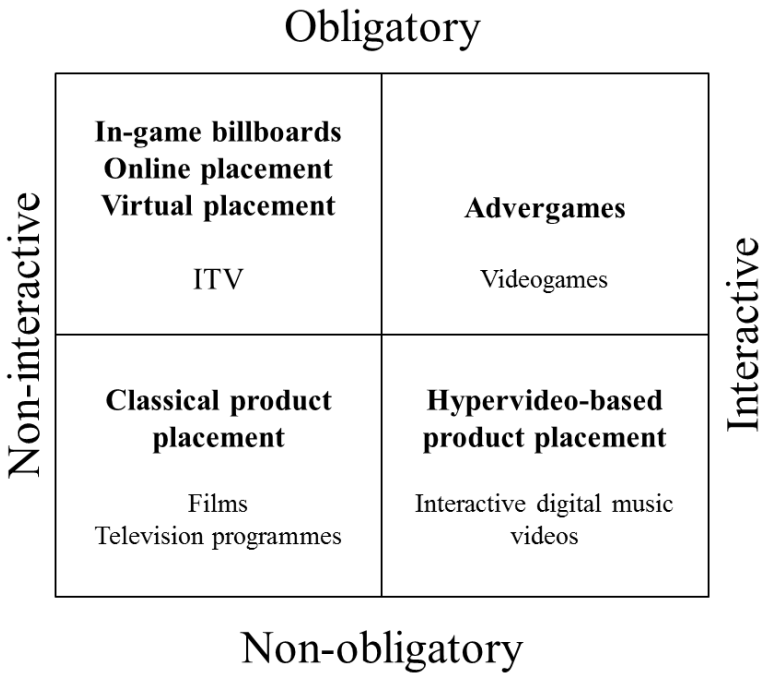
users perceive interactivity and the user interface. The *opportunity to process a placement* was higher in the presence of interactivity. For example, prominent interactive placements were more recalled than non-interactive placements in a negative *context-induced mood* music video. Subtle interactive placements were more recalled and recognised than subtle non-interactive placements. An important finding was the moderating effect of information on the relation between prominence and placement recall. Finally, *involvement with an interactive music video*, in the negative induced-mood condition, had a positive effect on perceived information. This finding is consistent with Aylesworth and Mackenzie (1998). Participants connect with the video and interact with video content more readily in a negative context-induced music video, because negative programme induced mood leads to more thoughtful problem solving.

The present study suggests that interactivity increases product placement recall and recognition immediately after stimulus exposure and one week after exposure in interactive digital music videos compared to non-interactive ones. This finding suggests that central processing is heightened in the presence of interactivity. Interactive product placements provide the option of *selective interactivity*, which means that users can choose whether to interact with hyperlinked objects. When a user chooses to interact with a placement, this disposition to engage increases central processing (e.g. placement recall and recognition). The visual label which is displayed on interactive objects when a user rolls the cursor on screen also serves to trigger the visual cue for central processing. This conclusion concurs with product placement literature in video games and *advergames* (Hang and Auty 2011; Grigorovici and Constantin 2010; van Reijmersdal *et al.* 2010; Mackay *et al.* 2009; Lee and Faber 2007; Molesworth 2006; Nelson *et al.* 2006), and interactive TV (Grigorovici and Constantin 2010; McDonnell and Drennan 2010; Cauberghe and de Pelsmacker 2006).

It has to be noted, however, that the aforementioned studies addressed different media vehicles and different levels of interactivity. After analysing literature on product placement and interactivity, the present study proposes the existence of a Product Placement Interactivity Grid. This grid acknowledges that there are different types of interactivity between the media vehicle and the product placement, and that these different types are taken into account when evaluating placement outcomes. Thus, the

effects of interactivity cannot be generalised to different types of product placements or different media. The Product Placement Interactivity Grid posits hypervideo-based product placement as a type of placement which allows selective interactivity, which means that interactivity is not mandatory. In the Product Placement Interactivity Grid, classical non-interactive product placement corresponds to null interaction with the placement (no active control, two-way communication or synchronisation) and *advergames* corresponds to full interactivity, placing the different variations explored by literature alongside the grid (see Figure 8.2).

Figure 8.2 **Product Placement Interactivity Grid**



The level of interactivity afforded by product placement in an advergame or in-game billboard will differ significantly from the level afforded by placement in a digital music video. Thus, interactive placement yields different effects from non-interactive placement even when embedded in the same digital music video. Additionally this study maintains that different interactive placements embedded in different media types will yield different effects (Nelson 2002; Russell and Stern 2006), thus contributing to the interactivity and product placement literature.

A further result of this experiment is that *perceived usability* in an interactive digital music video increased recall and recognition, suggesting that in the context of human-

computer interaction, interface is critical for users and must be treated as such in a digital context (Jiang *et al.* 2010; Liu 2003; Liu and Shrum 2002; McMillan and Hwang 2002).

Finally, when investigating research objectives one and two, the interactive and non-interactive conditions, the factors directly influencing recall and recognition were identified (see Table 8.1). Research objective three, however, presented a different combination of factors contributing to higher scores in the interactive condition when compared to the non-interactive one (see Table 8.2). Possible moderation effects (e.g. interactivity, context-induced mood, information, perceived interactivity and gender) were investigated to understand these differences. Findings suggest that interactivity positively enhanced recall and recognition, and so it did information for the case of recognition. The *opportunity to process a placement* (namely placement prominence) was the only factor which had a positive effect on recall and recognition on interactive placements when compared to non-interactive ones, but had no significant effect on the models. A post-hoc test suggested that while *interactivity* had no moderation effects, *information* positively enhanced the relation between prominence and recall. However, there are not enough observations to generalise this finding, and further research should be conducted in order to understand the moderation effects of information on placement prominence.

Interactivity is a moderator and enhances the viewing experience and the opportunity to connect with video content, and so the performance of the factors conforming the research model. After controlling for interactivity, while the model was positive, only strength of the link and mood after exposure noticeably incremented their impact on recall negatively. The models were estimated accounting for the moderating effects of interactivity. For the case of recognition, only familiarity with the video (-), perceived usability (+) and information (+) incremented their impact on placement recognition. After controlling for interactivity and information, only mood after exposure noticeably incremented its influence on recognition.

For the case of recognition, information was an important moderator because in interactive placements users have the opportunity to click on objects and expand information, while this is not the case in non-interactive placements. Interactivity and

added information make hypervideo an important vehicle for generating brand awareness in digital media.

8.2.1 Contribution to research methodology

The methods utilised for the research extend the range of techniques used in product placement research. First, the study utilised human-computer interaction remote observation recording software, in this case, Morae Recorder. This software is an action tracker which records the 'clicks' sequence of the subjects during stimuli exposure. The use of Morae Recorder allowed the experiment to be carried out simultaneously in three computer laboratories, each with 30 subjects, because the experiment could be set up beforehand as an automated session. Further, this thesis incorporated full-stimuli exposure and this exposure was observed by the researcher via Morae Recorder. This condition ensured that all participants watched the digital music videos in a synchronised way. From a research point of view, the study of music videos, due to their length, allows the exposure of the sample to the complete stimulus. Full-stimuli exposure is not a common practice in product placement research (Lehu 2009; Brennan and Babin 2004), mainly because of the added difficulties that it imposes on research designs.

During the study, a wealth of data was collected utilising the Morae recorder software. Time spent, clicking behaviour, cursor behaviour, which will help to understand what consumers focused on the most. However, the data was not relevant to any proposed research objective. This will be analysed in post- work related to digital hypervideo consumer journey, to provide a deeper understanding on customer engagement. This thesis focused on exploring memory and utilised Morae as a project management tool to conduct seamlessly the experiments.

Second, this thesis operationalised interactivity by adding a measure of perceived interactivity. This is consistent with similar research such as Sicilia *et al*. (2010), McMillan and Hwang (2002) and Cauberghe (2008). The measurement was taken from valid and reliable scales within the interactivity literature (Liu 2003; McMillan and Hwang 2002). While most studies only incorporate a manipulation check involving a

control group (Jiang *et al.* 2010), this thesis included a measure to self-assess the interface design.

8.3 Implications for practice

The World Wide Web and digital technologies have led to a shift from analog to digital media shaping consumer behaviour. Contemporary society is increasing cross-media usage and merging online and offline worlds to allow consumers to interact with different media and devices simultaneously. The increased use of multi-screen viewing, ubiquitous Internet access and digital content delivery means that enablers for more sophisticated forms of product placement are in place. One of these new forms of placement includes interactive product placement. The present study suggests that interactive product placement produces greater recall and recognition than classical non-interactive placements, meaning that marketers need to consider this technology in the years ahead. New interfaces to interact with technology are always advancing (e.g. multi touch screens, mobile interfaces) therefore interactive product placement presents an alternative to invasive marketing techniques, responding to more sophisticated forms of consumption.

As the popularity of digital music videos increases, so too does the desire of advertisers to be part of this phenomenon. One promising way for them to benefit from this development is by considering product placement in interactive video. Interactive digital music videos create a distinctive *media context effect*, one which is likely to have a distinctive effect on how placed products and brands are perceived and evaluated by viewers. The *media context effect* discussed in Section 7.2 is closely related to the notion of *selective interactivity* and the Product Placement Interactivity Grid. The presence of interactivity in different media implies that i) different media channels allow different interactivity levels and ii) individuals are willing –and able- to interact in different degrees with the media channel. Practitioners may find it useful to take these considerations into account before deciding which media channel to use.

Resonance with latest trends

This thesis resonates neatly with the latest digital marketing trends: digital video as the most popular way to reach consumers (PwC 2016).

Superiority of interactive product placement over classical non-interactive placement

This thesis suggests that interactive product placement produces greater recall and recognition than classical non-interactive placements, meaning that marketers can continue using and exploring future ways to engage by using interactive digital music video.

Elective interactivity

Viewers can click on a product placed and display further information about it but they can also move the cursor on top of the video screen and see the labels which appear on top of hyperlinked objects (e.g. brands, people, products and places) featured. Viewers can choose to extend the digital experience to real life with a simple click, using the in-video purchase option. A viewer could then choose to watch and interact with a digital video several times, which implies involved users.

Interactivity enhances product placement prominence

This thesis also supports a different approach to weighting the importance of *the opportunity to process the placement* (placement prominence) in interactive music videos. In the presence of interactivity, even subtle placements were recalled and recognised more than non-interactive ones. This finding implies that prominence is no longer critical for recall and recognition of interactive product placement, thus subtle placements could be accommodated more successfully in digital music videos.

Perceived interactivity and context-induced mood

This thesis provides evidence which suggests that *perceived interactivity* increases product placement recall and recognition, and that *perceived usability* is influenced by *context-induced mood* (positive/negative). Participants in the *negative context-induced* video found it easier to navigate compared to participants in the *positive context-induced* interactive digital music video.

The effect of perceived usability on product placement recall and recognition

Overall, *perceived usability* is highly regarded by participants. In fact, is directly related to recall and recognition. For example, they were sensitive to speed and whether

hyperlinked areas were easily identified or not. Some scenes moved too fast in the positive context-induced video, superimposing hyperlinks on the wrong brands and this was noted by participants. In this sense, practitioners would be wise to prioritise usability testing when designing user-friendly interfaces. These are all significant advantages of interactive product placement over classical non-interactive product placement for practitioners.

Ex post facto interactive product placement

Interactive product placement can also be incorporated into the media vehicle ex post facto. The possibility of placing brands *a posteriori* allows advertisers to choose the medium which has proven successful to embed retro-interactive placements. This characteristic makes it possible to keep video content up-to-date while customising it to different markets. For example, some products may be out-dated, out-of-fashion or out-of-stock depending on the year they were first released (Lynn *et al.* 2014).

Change in consumers attitudes towards product placement

This thesis also suggests that consumers are more receptive of digital advertising techniques such as interactive product placement (e.g. less *scepticism* and more positive *attitudes towards advertising* and *product placement*).

8.4 Limitations and future research

There are some limitations to the study. First, the study could have included a demographic based research, looking for differences beyond gender, such as income levels, and nationality. For instance, in this thesis, gender was not found to be a moderator and to have an impact on the final results. This could also be an opportunity for future research. Second, the thesis utilises a convenience sample. The relatively homogeneous sample may influence and limit the generalisability of the results. For instance, the sample included business students with knowledge on marketing and advertising, which could have influenced their *attitudes towards product placement* and *scepticism towards advertising in general*. This demographic group shared the same educational background, and could have led to over-representation. The sample represents a particular group age (between 25 and 34 years-old), who could have been a bit more conservative in their approach to measures such as connectedness. Younger

populations could have shown a higher connectedness. Further research could include a probabilistic sample to strengthen the analysis of implications for practice.

Third, the statistical techniques used in the analysis of the data were confined to hierarchical regression and moderation analysis due to issues of fit and therefore it was not possible to use more sophisticated statistical analysis techniques, such as hierarchical linear modelling, in order to provide a multi- level understanding of the relationships among factors. Fourth, the laboratory setting could lead to participants focusing more on the stimuli than in normal conditions (van Reijmersdal *et al.* 2010). Fifth, the nature of the stimuli constitutes a limitation. There is an inherent problem with using existing media stimuli in product placement research because the researcher cannot control for *prominence, amount of brand information* or any factor related to the featured brands. Many of these factors become conflated. That is why authors such as Russell (2002) used 'theatre methodology' to create their own stimuli. Future research would benefit from having its own controlled experimental stimuli.

Sixth, this thesis exposed participants to the stimulus only once. Future research could expose participants to the stimulus more than once to address the mere exposure effect and its effects on implicit memory, and *perceived transformation*. Seventh, during the pilot study, participants had no chance to assess their *perceived interactivity* and *interactivity* was assessed as a manipulation check (presence/absence). To amend this situation, the main study incorporated a measure of *perceived interactivity* which allows users to directly assess the level of interactivity, and the potential impact on their interaction with the media (Liu and Shrum 2009; Sicilia *et al.* 2005; McMillan and Hwang 2002). However, it would also be interesting to apply the *perceived interactivity* measurement to both interactive and non-interactive conditions to evaluate the differences in consumers' perception (e.g. degrees of interactivity). Further research should study how participants evaluate perceived interactivity in both non-interactive and interactive media channels to contribute to the discussion of perceived degrees of interactivity proposed in this thesis.

This thesis constitutes a first step towards the development of a conceptual framework of the study of interactive product placement in digital music videos. New avenues of research featuring both product placement and interactivity theories should be explored.

For example, future research could explore the effects of interactivity on affective and conative product placement outcomes to understand whether interactivity affects these outcomes and how digital music videos differ from other media such as television and films.

It is worth noting how the *media context effect* affected factors such as *connectedness*. Connected subjects tend to imitate behaviours observed on their television programmes. In this particular media channel, periodicity of exposure allows fans to connect with artists. Examples of a different type of *connectedness* with artists can be found in digital music videos, with pop-culture singers such as Justin Bieber, and bands such as One Direction. This media channel will allow the creation of fan communities around the artists. As noted, the type of *connectedness* is slightly different in this context and constitutes a promising area for further research.

The study of the *media context effect* should be expanded. Future research should address interactivity on television and video comparatively, a research agenda that could be extended to identifying the best media channel for specific products, and to compare how consumers react to each. Such research could also be replicated in tablet and mobile environments. It would be interesting to address whether the type of interactivity on touch-based devices (e.g. using one's finger obscures the screen), could affect the absorption of information. While the usage of triple screen is increasing, it would be useful to study the differences among media vehicles to further elaborate on the *media context effect*. This could be beneficial for practitioners in that specific media vehicles (e.g. mobile interactive digital music videos) could be crafted as a way to engage with consumers. The Product Placement Interactivity Grid could prove useful for practitioners to understand how different levels of interactivity are allowed in different media vehicles and to what extent this interactivity is obligatory.

The use of eye tracking software (Boerman *et al.* 2014) to understand the ways in which product placement is disclosed to viewers is also an area of future research. For example, do people look for cues in digital music videos which highlight whether an embedded object is interactive? Is there a capacity to form a habit once viewers have been exposed once to an interactive music video? Would it be possible to develop a new r*outine* of searching for interactive objects within music videos without necessarily

engaging with them? What would happen if there was no interactivity? Would subjects get disappointed? In addition, eye tracking could be combined with electroencephalogram (EEG) analysis to look at cognitive and emotional processes, and even analyse the impact of cultural differences extending this research to neuromarketing and a deeper understanding of consumer behaviour.

Another area of further research relates to *perceived interactivity*. Further analysis of the dataset should be conducted to analyse *perceived interactivity* findings in depth and how these are affected by the different execution and individual factors. In addition, it would be useful to compare perceptions of *perceived usability* versus actual navigation. This thesis collected data utilising the remote observation recording the software Morae Recorder. Future research will be conducted including analysis of this database to explore and understand consumer behaviour in interactive digital music videos. For example: the clicking patterns of participants in the interactive condition; the amount of time spent; whether it was random clicking or purposively clicking. This analysis will further advance the understanding of digital consumer behaviour.

Finally, interactive product placement can be explored in connection with augmented reality. It would be pertinent to explore how product placement can be enhanced for ecommerce, blended learning (e.g. tourism enhanced apps, virtual learning).

Conclusion

Based on Balasubramanian *et al.'s* (2006) theoretical framework, this research measured 10 factors (execution and individual), and two levels of processing depth (explicit and implicit) that affect placement recall and recognition in digital music videos (interactive and non-interactive). Choosing product placement and interactivity as the core elements of the research has enabled insights into the factors influencing product placement recall and recognition in interactive digital music video. As such, this study contributes to product placement literature by providing evidence of the factors influencing product placement recall and recognition in i) digital music videos, ii) interactive digital music videos, and iii) by providing evidence on how different levels of interactivity affect product placement cognitive outcomes.

Overall, interactive product placement is more effective than classical product placement for digital music videos. As digital technologies and consumer behaviour are evolving, the present study represents a major opportunity for both researchers and practitioners in exploring alternative non-invasive advertising techniques, techniques which, instead of obligating users to interact with a set of pre-determined brands, gives them the opportunity to decide which brands they choose to interact with.

Final remarks

This thesis is the product of a long and sometimes winding research journey. It has both strengthened my character and my academic knowledge. The feedback process served to develop my ability to recognise when my work was not conveying the right messages. It also encouraged me to persevere with reformulations examining the approach from different perspectives, so that the end results were much improved. This is a process which requires discipline, and commitment while combining work and research, in an attempt to excel in both. My supervisors became my allies, and my examiners became my lighthouse. My research journey also strengthened my confidence in my ability to question arguments, to identify flaws, and to inspire others.

As an independent learner, research is a tough journey. I dedicated my first years to learning about the existing theories and literature, to understand the ongoing academic conversation and identify a gap and an issue worth studying. I learned to have a clear structure and to apply and an analytical methodology to approach an issue. I leaned to prove a point, based on primary and secondary research. I learned to defend my arguments when academics where testing and scrutinising my knowledge and findings. I learnt the value of crafting a well-structured experimental design, of establishing robust patterns and of identifying the variables and relationships that explain and predict such patterns. Milestones included my first research model, the pilot study, my first conference paper, my first conference presentation, my first lecture, my first journal rejection, my first journal acceptance, my first keynote speech.

I observed and studied consumer behaviour (online and offline) and how it is being shaped by technology. I truly enjoyed gaining a deeper knowledge of marketing

practice, of advertising and of consumer behaviour. This fuelled my passion about high technology, business strategy, and innovation. My research focused on the effects of branded content in interactive/non-interactive digital media on millennials.

Reflecting on my overall journey, the reward has been immeasurable. I have had the opportunity of adding to the collective body of knowledge through the theoretical and methodological contributions. Research is not a finished product. It is an honour to be part of the community where scholars review and revise studies to advance knowledge and understanding of a given phenomenon, to add new variables, to understand how digital technologies contribute to reshape today's society’s behavioural patterns.

References

Aaker, D.A., Stayman, D.M. (1992) 'Implementing the concept of transformational advertising', *Psychology and Marketing*, 9(3), 237–253.

Aaker, J.L. (1997) 'Dimensions of brand personality', *Journal of Marketing Research*, 34(3), 347.

Aeropostale (2014) Bethany Mota [online], available: http://ow.ly/NMaM306RThX [accessed 15 Nov 2014].

Aguinis, H. (1995) 'Statistical Power with Moderated Multiple Regression in Management Research', *Journal of Management*, 12(6), 1141 – 1158.

Ajzen, I., Fishbein, M. (1977) 'Attitude-behavior relations: a theoretical analysis and review of empirical research', 84(5), 888–918.

Alasuutari, P., Bickman, L., Brannen, J. (Eds.) (2008) *The SAGE handbook of social research methods*, SAGE Publications Ltd.: London.

Alderson, W., Cox, R. (2006) 'Towards a theory of marketing', in Wooliscroft, B., Tamilia, R.D. and Shapiro, S.J., eds., *A Twenty-First Century guide to Aldersonian marketing Thought*, Springer, 39–59.

Amos, C., Holmes, G., Strutton, D. (2008) 'Exploring the relationship between celebrity endorser effects and advertising effectiveness: a quantitative synthesis of effect size', *International Journal of Advertising*, 27(2), 209–234.

Anderson, L.M. (1994) 'Marketing Science: where's the beef?', *Business Horizons*, 37(1), 8–16.

Anderson, P.F. (1983) 'Marketing, scientific progress, and scientific method', *Journal of Marketing*, 47(4), 18–31.

Ariely, D. (2000a) 'Controlling the information flow: effects on consumers' decision making and preferences', *Journal of Consumer Research*, 27(2), 233–248.

Athanasiadis, E., Mitropoulos, S. (2010) 'A distributed platform for personalized advertising in digital interactive TV environments', *Journal of Systems and Software*, 83(8), 1453–1469.

Atkinson, R.C. and Shiffrin, R.M., 1968. 'Human memory: A proposed system and its control processes'. *Psychology of learning and motivation*, 2, pp.89-195.

Aubert, O., Prie, Y. (2005) 'Advene: active reading through hypervideo', in *16th ACM Conference on Hypertext and Hypermedia.*, 1–10.

Auty, S., Lewis, C. (2004) 'Exploring children's choice: the reminder effect of product placement', *Psychology and Marketing*, 21(9), 697–713.

Avery, R.J., Ferraro, R. (2000) 'Verisimilitude or Advertising? brand appearances on prime-time television', *The Journal of Consumer Affairs*, 34(2), 217–244.

Aylesworth, A.B., Goodstein, R.C., Kalra, A. (1999) 'Effect of archetypal embeds on feelings: an indirect route to affecting attitudes?', *Journal of Advertising*, 28(3), 73–81.

Aylesworth, A.B., Mackenzie, S.B. (1998) 'Context is key : the effect of program-induced mood on thoughts about the ad', *Journal of Advertising*, 27(2), 17–31.

Babin, L.A., Carder, S.T. (1996) 'Viewers' recognition of brands placed within a film', *International Journal of Advertising*, 15(2), 140–151.

Balasubramanian, S.K. (1994) 'Beyond advertising and publicity: hybrid messages and public policy issues', *Journal of Advertising*, 23(4), 29–46.

Balasubramanian, S.K., Karrh, J.A., Patwardhan, H. (2006) 'Audience response to product placements: an integrative framework and future research agenda', *Journal of Advertising*, 35(3), 115–141.

Balfanz, D., Finke, M., Jung, C., Wichert, R. (2001) 'An interactive video system supporting e-commerce product placement', in *Information Visualization*, WSEAS Conference: Malta.

Barrie, J. (2012) James Bond drinking Heineken in Skyfall? Whatever next... [online], *The Independent*, available: http://ow.ly/79tg306RTmv [accessed 4 Oct 2014].

Barry, T.E. (1987) 'The development of the hierarchy of effects: an historical perspective', *Current issues and Research in Advertising*, 10(2), 251–295.

Barry, T.E., Howard, D.J. (1990) 'A review and critique of the hierarchy of effects in advertising', *International Journal of Advertising*, (9), 98–111.

Beacham, F. (1995) 'Movies of the future: storytelling with computers', *American Cinematographer*, 6(4), 36–48.

Bearden, W.O., Netemeyer, R.G., Haws, K.L. (Eds.) (2011) *Handbook of Marketing Scales: multi-item measures for Marketing and Consumer Behavior Research (Association for Consumer Research)*, Third. ed, SAGE Publications, Inc.: USA.

Belk, R.W. (1984) 'Applications of mood inducement in buyer behaviour: comments', *Advances in Consumer Research*, 11(1), 544–548.

Bellman, S., Schweda, A., Varan, D. (2009) 'A comparison of three interactive television ad formats', *Journal of Interactive Advertising*, 10(1), 14–34.

Berger, S.M. (1962) 'Conditioning through vicarious instigation.', *Psychological Review*, 69(5), 450–466.

Berners-Lee, T., Connolly, D. (1993) Hypertext markup language (HTML): a representation of textual information and metainformation for retrieval and interchange [online], *W3C*, available: http://ow.ly/kWpc306RToU [accessed 4 Oct 2014].

Bettman, J.R., Park, C.W. (1980) 'Effects of prior knowledge and experience and phase of the choice process on consumer decision processes: a protocol analysis', *Journal of Consumer Research*, 7(3), 234–248.

Bieber, M. (1995) 'On integrating hypermedia into decision support and other information systems', *Decision Support Systems*, 14(1995), 251–267.

Blum, J.S., Mehrabian, A. (1999) 'Personality and temperament correlates of marital satisfaction', *Journal of Personality*, 67(1), 93–125.

Boerman, S.C., van Reijmersdal, E., Neijens, P.C. (2014) 'Using eye tracking to understand the effects of brand placement disclosure types in television programs', *Journal of Advertising*, 0(0), 1–12.

Bowen, L., Chaffee, S.H. (1974) 'Product involvement and pertinent advertising appeals', *Journal of Marketing*, 51(Winter), 613–621.

Bra, P. De, Ruiter, J. (2001) 'AHA ! Adaptive hypermedia for all', in *WebNet Conference*, 262–268.

Brands&Films (2010) Does the worst product placement exist? [online], available: http://brandsandfilms.com/2010/11/does-the-worst-product-placement-exist/ [accessed 23 Nov 2010].

Brands&Films (2015) Product placement on Billboard Top 100 list from 2014 [online], available: http://ow.ly/Y08o306RTry [accessed 23 Nov 2015].

Brennan, I., Babin, L.A. (2004) 'Brand placement recognition: the influence of presentation mode and brand familiarity', *Journal of Promotion Management*, 10(1), 185–202.

Bressoud, E., Lehu, J.-M., Russell, C.A. (2010) 'The product well placed: the relative impact of placement and audience characteristics on placement recall', *Journal of Advertising Research*, 50(4), 374–385.

Brown, S. (1993) ‘Postmodern Marketing’, *European Journal of Marketing*, 27(4), 19–34.
Brown, S. (1995) *Postmodern Marketing*, International Thomson Business Press: Croatia.
Brown, S. (1996) ‘Art or science?: fifty years of marketing debate’, *Journal of Marketing Management*, 12, 243–267.
Bryman, A. (2008) ‘The end of the paradigm wars?’, in Pertti, A., Bickman, L. and Brannen, J., eds., *The SAGE Handbook of Social Research Methods*, 13–25.
Buckley, J.W., Buckley, M.H., Chiang, H.-F. (1976) *Research Methodology & Business Decisions*, NAA: New York.
Burkhalter, J.N., Thornton, C.G. (2012) ‘Advertising to the beat: an analysis of brand placements in hip-hop music videos’, *Journal of Marketing Communications*, 20(5), 366–382.
Burns, E. (2006) Technology enables product placement in CGM [online], *ClickZ*, available: http://www.clickz.com/clickz/news/1691639/technology-enables-product-placement-cgm [accessed 8 Nov 2010].
Cacioppo, J.T., Petty, R.E. (1984) ‘The elaboration likelihood model of persuasion’, *Advances in Consumer Research*, 11(1), 673–675.
Cacioppo, J.T., Petty, R.E., Kao, C.F. (1984) ‘An efficient assessment of need for cognition’, *Journal of Personality and Social Psychology*, 48(3), 306–307.
Calder, B.J., Phillips, L.W., Tybout, A.M. (1981) ‘Designing research for application’, *Journal of Consumer Research*, 8(2), 197–207.
Carlson, R. (1971) ‘Where is the person in personality research?’, *Psychological bulletin*, 75(3), 203–219.
Cauberghe, V. (2008) *Determinants of the impact of new advertising formats on interactive digital television, advertiser and consumer perspectives*. PhD Thesis. Faculteit Toegepaste Economische Wetenschappen.
Cauberghe, V., Pelsmacker, P. De (2006) ‘Opportunities and thresholds for advertising on interactive digital tv: a view from advertising professionals’, *Journal of Interactive Advertising*, 7(1), 12–23.
Cauberghe, V., De Pelsmacker, P. (2008) ‘The impact of banners on digital television: the role of program interactivity and product involvement’, *Cyberpsychology & Behavior*, 11(1), 91–94.
Cauberghe, V., De Pelsmacker, P. (2010) ‘Advergames’, *Journal of Advertising*, 39(1), 5–18.
Chambel, T., Chhaganlal, M.N., Neng, A.R. (2011) ‘Towards immersive interactive video through 360º hypervideo’, in *8th International Conference on Advances in Computer Entertainment Technology. ACM*, 2–3.
Chan, F.F.Y. (2015) ‘A critical realist and multimethodology framework for product placement research’, *Journal of Promotion Management*, 21(3), 279–295.
Chang, H.H., Wang, I.C. (2008) ‘An investigation of user communication behavior in computer mediated environments’, *Computers in Human Behavior*, 24(5), 2336–2356.
Cisco (2015) ‘Cisco VNI Forecast and Methodology, 2015-2020’[online], available: http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/complete-white-paper-c11-481360.html [accessed 8 Jun 2016].
Colquitt, J.A., Zapata-Phelan, C.P. (2007) ‘Trends in theory building and theory testing: a five-decade study of the Academy of Management Journal’, *Academy of Management Journal*, 50(6), 1281–1303.

Commission, E. (2009) EU audiovisual and media policy regulatory framework: product placement [online], available: http://ec.europa.eu/archives/information_society/avpolicy/reg/avms/index_en.htm [accessed 21 Sep 2014].

comScore (2014) comScore releases March 2014 U.S. online video rankings [online], *comScore*, available: http://www.comscore.com/Insights/Press-Releases/2014/4/comScore-Releases-March-2014-US-Online-Video-Rankings [accessed 21 Sep 2014].

Converse, P.D. (1945) 'The development of the science of marketing: an exploratory survey', *Journal of Marketing*, 10(1), 14–23.

Coolican, H. (2009) *Research Methods and Statistics in Pschychology*, 5th Edition. ed, Hodder education: Malta.

Cowley, E., Barron, C. (2008) 'When product placement goes wrong: the effects of program liking and placement prominence', *Journal of Advertising*, 37(1), 89–98.

Coyle, J.R., Thorson, E. (2001) 'The effects of progressive levels of interactivity and vividness in web marketing sites', *Journal of Advertising*, 30(3), 65–77.

Csikszentmihalyi, M. (1998) *Finding Flow: The Psychology of Engagement with Everyday Life*, Basic Books: New York, New York, USA.

Cutler, B.D., Thomas, E.G., Rao, S.R. (2000) 'Informational/transformational advertising: differences in usage across media types, product categories, and national cultures', *Journal of International Consumer Marketing*, 12(3), 69–85.

D'Astous, A., Chartier, F. (2000) 'A study of factors affecting consumer evaluations and memory of product placements in movies', *Journal of Current Issues and Research in Advertising*, 22(2), 31–40.

DeHaan, J., Reed, M.W., Kuwada, K. (2010) 'The effect of interactivity with a music video game on second language vocabulary recall', *Language Learning and Technology*, 14(2), 74–94.

Dellaert, B.G.C., Kahn, B.E. (1999) 'How tolerable is delay?: consumer's evaluation of internet websites after waiting', *Journal of Interactive Marketing*, 13(Winter), 41–54.

DeLorme, D.E., Reid, L.N. (1999) 'Moviegoers' experiences and interpretations of brands in films', *Journal of Advertising*, 28(2), 71–95.

Dens, N., Pelsmacker, P. De, Wouters, M., Purnawirawan, N. (2012) 'Do you like what you recognize? The effects of brand placement prominence and movie plot connection on brand attitude as mediated by Rrecognition', *Journal of Advertising*, 41(3), 35–53.

Diener, B.J. (1993) 'The frequency and context of alcohol and tobacco cues in daytime soap opera programs: fall 1986 and fall 1991', *Journal of Public Policy and Marketing*, 12(2), 252–257.

Dolce&Gabbana (2013) Street of dreams [online], available: http://www.dolcegabbana.com/beauty/ad-campaigns/the-one/ [accessed 20 Jun 2014].

Duke, C.R., Carlson, L. (1993) 'A conceptual approach to alternative memory measures for advertising effectiveness', *Journal of Current Issues & Research in Advertising*, 15(2), 1–14.

Edelman, B. (2010) 'Commentary: who owns metrics? building a bill of rights for online advertisers', *Journal of Advertising Research*, 49(4), 401.

E-Poll (2010) Brought to you by The Black Eyed Peas [online], *Market Research Blog*, available: http://blog.epollresearch.com/2010/05/10/brought-to-you-by-the-black-eyed-peas/ [accessed 10 Aug 2015].

Erdogan, B.Z. (1999) ‘Celebrity endorsement: a literature review’, *Journal of Marketing Management*, 15, 291–314.
Erdogan, B.Z., Baker, M.J., Tagg, S. (2001) ‘Selecting celebrity endorsers : the practitioner’s perspective’, *Journal of Advertising Research*, (May-June), 39–48.
Eveland, W.P., Cortese, J. (2004) ‘How Web Site organization influences free recall, factual knowledge, and knowledge structure density’, *Human Communication Research*, 30(2), 208–233.
Faiola, A., Newlon, C., Pfaff, M., Smyslova, O. (2013) ‘Correlating the effects of flow and telepresence in virtual worlds: enhancing our understanding of user behavior in game-based learning’, *Computers in Human Behavior*, 29(3), 1113–1121.
Feyerabend, P. (1970) *Against Method*, Verso. ed, London.
Finke, M., Balfanz, D. (2004) ‘A reference architecture supporting hypervideo content for ITV and the internet domain’, *Computers & Graphics*, 28(2), 179–191.
Firat, A.F., Sherry, J.F., Venkatesh, A. (1994) ‘Postmodernism, marketing and the consumer’, *Research in Marketing*, 11, 311–316.
Firat, A.F., Shultz II, C.J. (1997) ‘From segmentation to fragmentation’, *European Journal of Marketing*, 31(3/4), 183–207.
Fisher, C. (2004) *Researching and Writing a Dissertation*, Prentice Hall: financial times: Glasgow.
Fiske, J. (2002) *Television Culture*, Routledge.
Fontaine, I. (2002) *Ètude des rèsponses mèmorielles et attitudinales des spectateurs exposès aux placements de marques dans les films*.
Fournier, S. (1998) ‘Consumers and their brands: developing relationship theory in consumer research’, *Journal of Consumer Research*, March(343-373).
Friestad, M., Wright, P. (1994) ‘The persuasion knowledge model: how people cope with persuasion attempts’, *Journal of Consumer Research*, 21(1), 1–31.
Galician Ed, M. (2004) *Handbook of Product Placement in the Mass Media*, Routledge: New York.
Gardner, M.P. (1985) ‘Mood states and consumer behavior: a critical review’, *Journal of Consumer Research*, 12(3), 281–300.
Gardner, M.P. (1994) ‘Responses to emotional and informational appeals: the moderating role of context-induced mood states’, in Clark, E.M., Brock, T.C. and Stewart, D.W., eds., *Attention, Attitude, and Affect in Response to Advertising*, Lawrence Erlbaum Associates: Broadway, 207–220.
Glass, Z. (2007) ‘The effectiveness of product placement in video games’, *Journal of Interactive Advertising*, 8(1), 1–27, available: http://jiad.org/download?p=96.
Goldberg, M.E., Gorn, G.J. (1987) ‘Happy and sad TV programs: how they affect reactions to commercials’, *Journal of Consumer Research*, 14(3), 387–403.
Gorn, G.J. (1982) ‘The effects of music in advertising on choice behavior: a classical conditioning approach’, *Journal of Marketing*, 46(Winter), 94–101.
Gould, S.J., Gupta, P.B. (2006) ‘“Come on down” How consumers view game shows and the products placed in them’, *Journal of Advertising*, 35(1), 65–81.
Gould, S.J., Gupta, P.B., Grabner-Krauter, S. (2000) ‘Product placements in movies: a cross-cultural analysis of Austrian, French and American consumers’ attitudes toward this emerging, international promotional medium’, *Journal of Advertising*, 29(4), 41–58.
Grigorovici, D.M., Constantin, C.D. (2010) ‘Experiencing interactive advertising beyond rich media: impacts of ad type and presence on brand effectiveness in 3D gaming immersive virtual environments’, *Journal of Interactive Advertising*, 5(1), 22–36.

Gupta, P.B., Balasubramanian, S.K., Klassen, M.L. (2000) 'Viewers' evaluations of product placements in movies: public policy issues and managerial implications', *Journal of Current Issues and Research in Advertising*, 22(2), 41–52.
Gupta, P.B., Gould, S.J. (1997) 'Consumers' perceptions of the ethics and acceptability of product placements in movies: product category and individual differences', *Journal of Current Issues and Research in Advertising*, 19(1), 37–50.
Gupta, P.B., Lord, K.R.L. (1998) 'Product placement in movies: the effect of prominence and mode on audience recall', *Journal of Current Issues and Research in Advertising*, 20(1), 47–59.
Gwinner, K.P., Eaton, J. (1999) 'Building brand image through event sponsorship: the role of image transfer', *Journal of Advertising*, 28(4), 47–57.
Ha, Y., Lennon, S.J. (2010) 'Effects of site design on consumer emotions: role of product involvement', *Journal of Research in Interactive Marketing*, 4(2), 80–96, available: http://www.emeraldinsight.com/10.1108/17505931011051641 [accessed 21 Sep 2011].
Han, S. (2010) 'Theorizing new media: reflexivity, knowledge, and the Web 2.0', *Sociological Inquiry*, 80(2), 200–213.
Hang, H., Auty, S. (2011) 'Children playing branded video games: The impact of interactivity on product placement effectiveness', *Journal of Consumer Psychology*, 21(1), 65–72.
Henrich, J., Heine, S.J., Norenzayan, A. (2010) 'The weirdest people in the world?', *Behavioral and Brain Sciences*, 33, 61–135.
Hey, D.W. (2002) 'Virtual product placement', *Television Quarterly*, 32(4), 24–29.
Hilbert, M. (2014) 'What is the content of the world's technologically mediated information and communication capacity: how much text, image, audio, and video?', *The Information Society*, 30(2).
Hilbert, M., López, P. (2011) 'The world's technological capacity to store, communicate, and compute information.', *Science (New York, N.Y.)*, 332(6025), 60–65.
Hirschman, E.C. (1986) 'Humanistic inquiry in marketing research: philosophy, method, and criteria', *Journal of Marketing Research*, 23(3), 237–249.
Hirschman, E.C. (1988) 'The ideology of consumption: a structural-syntactical analysis of "Dallas" and "Dynasty"', *Journal of Consumer Research*, 15(3), 344–359.
Hirschman, E.C., Holbrook, M.B. (1982) 'Hedonic consumption: emerging concepts, methods and propositions', *Journal of Marketing*, 46(Summer), 92–101.
Hirschman, E.C., Thompson, C.J. (1997) 'Why media matter: toward a richer understanding of consumers' relationships with advertising and mass media', *Journal of Advertising*, 26(1), 43–60.
Hoffman, D.L., Novak, T.P. (2009) 'Flow online: lessons learned and future prospects', *Journal of Interactive Marketing*, 23(1), 23–34.
Hoffmann, P., Herczeg, M. (2006) 'Hypervideo vs. storytelling integrating narrative intelligence into hypervideo', in *Technologies for Interactive Digital Storytelling and Entertainment*, Springer Berlin Heidelberg, 37–48.
Hofstede, G.J. (2005) *Cultures and organizations: software of the mind*, 2nd ed. ed, McGraw-Hill: New York.
Holbrook, M.B. (2004) 'Ambi-diegetic music in films as a product design and -placement strategy: the sweet smell of success', *Marketing Theory*, 4(3), 171–185.
Holbrook, M.B., Chestnut, R.W., Oliva, T.A., Greenleaf, E.A. (1984) 'Play as a consumption experience: the roles of emotions, performance, and personality in the enjoyment of games', *Journal of Consumer Research*, 11(2), 728–739.

Holbrook, M.B., Hirschman, E.C. (1982) 'The experiential aspects of consumption: consumer fantasies, feelings and fun', *Journal of Consumer Research*, 9(2), 132–140.
Holt, D.B. (2002) 'Why do brands cause trouble? a dialectical theory of consumer culture and branding', *Journal of Consumer Research*, 29(1), 70–90.
Homer, P.M. (2009) 'Product placements: the impact of placement type and repetition on attitude', *Journal of Advertising*, 38(3), 21–32.
Hong, S., Wang, Y.J., De Los Santos, G. (2008) 'The effective product placement: finding appropriate methods and contexts for higher brand salience', *Journal of Promotion Management*, 14(1-2), 103–120.
Hors, A. Le, Jacobs, I. (1999) HTML 4.01 specification [online], *W3C Recommendation 24 December 1999*, available: www.w3.org&TR&1999&REC/html1401/19991224& [accessed 4 Nov 2014].
Hovland, C., Janis, I.L., Kelley, H.H. (1953) *Communication and persuasion; psychological studies of opinion change*.
HubSpot (2015) From Ray-Bans to Reese's Pieces: 13 Unforgettable Examples of Product Placement available: http://blog.hubspot.com/marketing/product-placement-examples#sm.000019opghfv8zdcmxsjn5qtkpkoq [accessed 28 Feb 2016].
Hudders, L., Cauberghe, V., Panic, K., Faseur, T., Zimmerman, E. (2012) 'Brand placement in music videos. The effect of brand prominence and artist connectedness on brand recall and brand attitude', in *11th International Conference on Research in Advertising (ICORIA)*.
Hudson, S., Hudson, D. (2006) 'Branded entertainment: a new advertising technique or product placement in disguise?', *Journal of Marketing Management*, 22(July 2012), 489– 504.
Hudson, S., Hudson, D., Peloza, J. (2008) 'Meet the parents : a parents' perspective on product placement in children' s films', *Journal of Business Ethics*, 80(2), 289–304.
Hunt, S.D. (1976) *Marketing Theory: conceptual foundations of Research in Marketing*, Grid Inc.: Columbus, Ohio.
Hunt, S.D. (1994) 'On rethinking marketing: our discipline, our practice, our methods', *European Journal of Marketing*, 28(3), 13–25.
Internet Users [online] (2015) *Internet Live Stats*, available: http://www.internetlivestats.com/internet-users/ [accessed 3 Oct 2015].
Interview with Virtual World Moderator Pam Taggart [online] (2009) *Play as life*, available: http://playaslife.com/2009/05/18/interview-with-pam-taggart/ [accessed 24 Oct 2014].
Isen, A.M. (1984) 'The influence of positive affect on decision making and cognitive organization', *Advances in Consumer Research*, 11(1), 534–537.
Janiszewski, C. (1993) 'Preattentive mere exposure effects', *Journal of Consumer Research*, 20(3), 376–392.
Jiang, Z., Chan, J., Tan, B.C.Y., Chua, W.S. (2010) 'Effects of onteractivity on Website involvement and purchase intention', *Journal of the Association for Information Systems*, 11(1), 34–59.
Johnstone, E., Dodd, C. a. (2000) 'Placements as mediators of brand salience within a UK cinema audience', *Journal of Marketing Communications*, 6(3), 141–158.
Jurgensen, J. (2010) The most corporate band [online], *The Wall Street Journal*, available:

http://www.wsj.com/articles/SB10001424052702303720604575169933636121658 [accessed 10 Aug 2015].
Kaikati, A.M., Kaikati, J.G. (2004) 'Stealth marketing', *California Management Review*, 4(4), 6–22.
Kamins, M.A. (1990) 'An investigation into the "match-up" hypothesis in celebrity advertising: when beauty may be only skin deep', *Jorunal of Advertising*, 19(1), 4–13.
Karrh, J.A. (1998) 'Brand placement: a review', *Journal of Current Issues & Research in Advertising*, 20(2), 31–49.
Karrh, J.A., McKee, K.B., Pardun, C.J. (2003) 'Practitioners' evolving views on product placement effectiveness', *Journal of Advertising Research*, 43(02), 138–149.
Keller, K.L. (1993) 'Conceptualizing, measuring, and managing customer-based brand equity', *Journal of Marketing*, 57(1), 1–22.
Kennedy, J.R. (1971) 'How program environment affects TV commercial.', *Journal of Advertising Research*, 11(1), 33–38.
Kennedy, T. (2013) 10 seriously strange snowboard endorsement deals [online], *Whitelines*, available: http://whitelines.com/features/snowboard-history/10-seriously-strange-snowboard-endorsement-deals.html#WC8QGK9sAZKXhwwS.97 [accessed 24 Oct 2014].
Kim, J., McMillan, S.J. (2008) 'Evaluation of Internet advertising research: A bibliometric analysis of citations from key sources', *Journal of Advertising*, 37(1), 99–112.
Kim, M.S., McClung, S.R. (2010) 'Acceptability and ethics of product placement in sport video games', *Journal of Promotion Management*, 16(4), 411–427.
Kirmani, A., Shiv, B. (1998) 'Effects of source congruity on brand attitudes and beliefs: the moderating role of issue-relevant elaboration', *Journal of Consumer Psychology*, 7(1), 25–47.
Kozinets, R. V., Stefano, C. (2014) 'Between the suit and the selfie: executives' lessons on the social "micro-celebrity "', *GfK Marketing Intelligence Review*, 6(2), 21.
Kretchmer, S.B. (2004) 'Advertainment: the evolution of product placement as a mass media marketing strategy', *Journal of Promotion Management*, 10(1-2), 37–54.
Krugman, H.E. (1983) 'Television program interest and commercial interruption', *Journal of Advertising Research*, 23(1), 21–23.
Kuhfeld, W.F., Tobias, R.D., Garratt, M. (1994) 'Efficient experimental design with marketing research applications', *Journal of Marketing Research*, XXXI(November), 545–557.
Kureshi, S., Sood, V. (2010) 'A review of placement literature: conceptual and managerial implications', *Journal of Marketing Management*, 9(1), 23–39.
Lackey, W.B. (1993) 'Can Lois Lane smoke Marlboros?: an examination of the constitutionality of regulating product placement in movies', *The University of Chicago Legal Forum*, 1, 275–292.
Lai-man, S.S., Wai-yee, S.K. (2008) 'Predicting the effectiveness of product placement: a study on the execution strategy and impacts on hierarch of effects', in *Oxford Business and Economics Conference Program*.
Lamb, R. (2011) Product placement most beneficial way to step-up luxury TV ads: expert [online], *Luxury Daily*, available: http://www.luxurydaily.com/product-placement-most-beneficial-way-to-step-up-luxury-tv-ads-expert/ [accessed 10 Dec 2014].

Laurent, G., Kapferer, J.-N. (1985) ‘Measuring consumer involvement profiles’, *Journal of Marketing Research*, 22(1), 41–53.
Lavidge, R.J., Steiner, G.A. (1961) ‘A model for predictive measurements of advertising effectiveness’, *Journal of Marketing*, 25(6), 59–62.
Law, S., Braun, K. a. (2000) ‘I’ll have what she's having: gauging the impact of product placements on viewers’, *Psychology and Marketing*, 17(12), 1059–1075.
Lazar, J., Feng, H., Hochheiser, H. (2010) *Research Methods in Human-Computer Interaction*, Wiley & Sons: Glasgow.
Lee, A.Y. (2002) ‘Effects of implicit memory on memory-based versus stimulus-based brand choice’, *Journal of Marketing Research*, 39(4), 440–454.
Lee, B., Lee, R.S. (1995) ‘How and why people watch TV: implications for the future of interactive television’, *Journal of Advertising Research*, 35(6), 9–18.
Lee, M., Faber, R.J. (2007) ‘Effects of product placement in on-line games on brand memory: a perspective of the limited-capacity model of attention’, *Journal of Advertising*, 36(4), 75–90.
Lee, Y.H., Mason, C. (1999) ‘Responses to information incongruency in advertising: the role of expectancy, relevancy, and humor’, *Journal of Consumer Research*, 26(September), 156–170.
Lehu, J.-M. (2007) *Branded Entertainment*, Kogan Page: London.
Lehu, J.-M., Bressoud, É. (2009) ‘Recall of brand placement in movies: interactions between prominence and plot connection in real conditions of exposure’, *Recherche et Applications en Marketing*, 24(1).
Levy, S., Nebenzahl, I.D. (2006) ‘Programme involvement and interactive behaviour in interactive television’, *International Journal of Advertising*, 25(3), 309–332.
Levy, S., Nebenzahl, I.D. (2008) ‘The influence of product involvement on consumers’ interactive processes in interactive television’, *Marketing Letters*, 19(1), 65–77.
Lie, H.W., Saarela, J. (1999) ‘Multipurpose Web Publishing using HTML, XML, and CSS’, *Communications of the ACM*, 42(10), 95–101.
Little, T.D.C., Venkatesh, D. (1994) ‘Prospects for interactive video-on-demand’, *IEEE Multimedia*, Fall, 14–24.
Liu, Y. (2003) ‘Developing a scale to measure the interactivity of Websites’, *Journal of Advertising Research*, 43(02), 207–216.
Liu, Y., Shrum, L.J. (2002) ‘What is interactivity and is it always such a good thing? implications of definition, person, and situation for the influence of interactivity on Advertising effectiveness’, *Journal of Advertising*, 31(4), 53–64.
Liu, Y., Shrum, L.J. (2009) ‘A dual-process model of interactivity effects’, *Journal of Advertising*, 38(2), 53–68.
Loken, B., Ward, J. (1990) ‘Alternative approaches to understanding the determinants of typicality’, *Journal of Consumer Research*, 17(September), 111–126.
Lombard, M., Ditton, T. (1997) ‘At the heart of it all: the concept of presence’, *Journal of Computer-Mediated Communication*, 3(2), 0–0.
Lynn, T., Jaramillo, A., Muzellec, L. (2014) ‘Extending the product placement research agenda: the impact of hypervideo on interactivity and timing of product placement decisions.’, *The Marketing Review*, 14(4).
Lynn, T., Muzellec, L. (2010) ‘Hypervideo-based product placement: extending the research agenda’, in *Irish Academy of Management Conference*, Cork, Ireland.
Mackay, T., Ewing, M., Newton, F., Windisch, L. (2009) ‘The effect of product placement in computer games on brand attitude and recall’, *International Journal of Advertising*, 28(3), 423–438.

Malhotra, N.K. (2009) *Basic Marketing Research A Decision-Making Approach*, Third Edit. ed, Pearson: London.

Mallinckrodt, V., Mizerski, D. (2007) 'The effects of playing an advergame on young children's perceptions, preferences, and requests', *Journal of Advertising*, 36(2), 87–100.

Mandler, G. (1981) 'The structure of value: accounting for taste', in Clark, M.S. and Fiske, S.T., eds., *Affect and Cognition: 17th Annual Carnegie Mellon Symposium on Cognition*.

Mano, H., Oliver, R.L. (1993) 'Assessing the dimensionality and structure of the consumption experience: evaluation, feeling and satisfaction', *Journal of Consumer Research*, 20(3), 451–466.

Matthes, J., Wirth, W., Schemer, C., Pachoud, N. (2012) 'Tiptoe or tackle? the role of product placement prominence and program involvement for the mere exposure effect', *Journal of Current Issues & Research in Advertising*, 33(2), 129–145.

McCracken, G. (1989) 'Who is the celebrity endorser? cultural foundations of the endorsement process', *Journal of Consumer Research*, 16(3), 310–321.

McDonnell, J., Drennan, J. (2010) 'Virtual product placement as a new approach to measure effectiveness of placements', *Journal of Promotion Management*, 16(1-2), 25–38.

McGuire, W.J. (1985) 'Attitudes and attitude change', in Gardner, L. and Aronson, E., eds., *Handbook of Social Psychology*, Random House: New York, 233–346.

McMillan, S.J., Hwang, J.-S. (2002) 'Measures of perceived interactivity: an exploration of the role of direction of communication, user control, and time in shaping perceptions of interactivity', *Journal of Advertising*, 31(3), 29–42.

Mehrabian, A. (1996) 'Pleasure-Arousal-Dominance: a general framework for describing and measuring individual differences in temperament', *Current Psychology*, 14(4), 261–292.

Mitchell, T. (2014) *Branded Entertainment in Emotional Scenes: Excitation Transfer or Direct Affect Transfer?*

Molesworth, M. (2006) 'Real brands in imaginary worlds: investigating players' experiences of brand placement in digital games', *Journal of Consumer Behaviour*, 5(4), 355–366.

Mollen, A., Wilson, H. (2010) 'Engagement, telepresence and interactivity in online consumer experience: reconciling scholastic and managerial perspectives', *Journal of Business Research*, 63(9-10), 919–925.

Moorman, M., Neijens, P.C., Smit, E.G. (2007) 'The effects of program involvement on commercial exposure and recall in a naturalistic setting', *Journal of Advertising*, 36(1), 121–137.

Moos, D.C., Marroquin, E. (2010) 'Multimedia, hypermedia, and hypertext: Motivation considered and reconsidered', *Computers in Human Behavior*, 26(3), 265–276.

Moresco, J. (2008) 'Watch out hyperlink, here comes hypervideo', *Red Herring*, Jan, 1.

Mota, B. (2014) About [online], *Youtube Channel*, available: https://www.youtube.com/user/Macbarbie07/about [accessed 15 Nov 2014].

Mozilla (2015) Popcorn.js: The HTML5 Media Framework [online], available: http://popcornjs.org/ [accessed 20 Nov 2014].

Nebenzahl, I., Secunda, E. (1993) 'Consumers ' attitudes toward product placement in movies', *International Journal of Advertising*, 12(1), 1–12.

Nelson, M.R. (2002) 'Recall of brand placements in computer/video games', *Journal of Advertising Research*, (March-April), 80–92.

Nelson, M.R., Devanathan, N. (2006) ‘Brand placements Bollywood style’, *Journal of2 Consumer Behaviour*, 5(June), 211–221.
Nelson, M.R., Keum, H., Yaros, R.A. (2004) ‘Advertainment or adcreep? game players’ attitudes toward advertising and product placements in computer games’, *Journal of Interactive Advertising*, 5(1), 3–21.
Nelson, M.R., Yaros, R. a., Keum, H. (2006) ‘Examining the influence of telepresence on spectator and player processing of real and fictitious brands in a computer game’, *Journal of Advertising*, 35(4), 87–99.
Newell, J., Salmon, C.T., Chang, S. (2006) ‘The hidden history of product placement’, *Journal of Broadcasting Electronic Media*, 50(4), 575–594.
Nicovich, S.G. (2005) ‘The effect of involvement on ad judgment in a video game environment’, *Journal of Interactive Advertising*, 6(1), 29–39.
Nielsen (2015) *2015 Nielsen Music U.S. Mid-Year Report*, available: http://www.melodicrock.com/sites/default/files/Nielsen Music 2015 mid-year report.pdf. [accessed 6 Oct 2015].
Novak, T.P., Hoffman, D.L. (1996) ‘Marketing in hypermedia environment foundations’, *Journal of Marketing*, 60(3), 50–68.
Nussbaum, E. (2005) ‘The effect of goal instructions and need for cognition on interactive argumentation’, *Contemporary Educational Psychology*, 30(3), 286–313.
Oakes, W. (1972) ‘External validity and the use of real people as subjects’, (October), 959–962.
Okazaki, S., Yagüe, M.J. (2012) ‘Responses to an advergaming campaign on a mobile social networking site: an initial research report’, *Computers in Human Behavior*, 28(1), 78–86.
Ozanne, J.L., Hudson, L.A. (1989) ‘Exploring diversity in consumer research’, *Interpretive Consumer Research*, 1–9.
Paivio, A. (1991) ‘Dual coding theory: retrospect and current status’, *Canadian Journal of Psychology*, 45(3), 255–287.
Pallant, J. (2013) *SPSS Survival Manual*, 5th ed, McGraw-Hill: Berkshire.
Papagiannidis, S., Bourlakis, M., Li, F. (2008) ‘Making real money in virtual worlds: MMORPGs and emerging business opportunities, challenges and ethical implications in metaverses’, *Technological Forecasting and Social Change*, 75(5), 610–622.
Park, C.W., McClung, G.W. (1986) ‘The effect of TV program involvement on involvement with commercials.’, *Advances in Consumer Research*, 13(1), 544–548.
Park, D.-J., Berger, B.K. (2010) ‘Brand placement in movies: the effect of film genre on viewer recognition’, *Journal of Promotion Management*, 16(4), 428–444.
Park, J., Stoel, L., Lennon, S.J. (2008) ‘Cognitive, affective and conative responses to visual simulation: the effects of rotation in online product presentation’, *Journal of Consumer Behaviour*, 7, 72–87.
Parker, A., Dagnall, N. (2009) ‘Effects of retrieval practice on conceptual explicit and implicit consumer memory’, *Applied Cognitive Psychology*, 23(January), 188–203.
Peoples, G. (2103) Business matters: Nielsen study examines who is buying music, media [online], *Billboardbiz*, available: http://www.billboard.com/biz/articles/1560117/business-matters-nielsen-study-examines-who-is-buying-music-media [accessed 17 Aug 2015].

Perakakis, E., Levinenko, A., Ghinea, G. (2012) 'HTML5 and companion web technologies as a universal platform for interactive Internet TV Advertising', in *Telecommunications and Multimedia*, 214–219.

Peter, J.P., Olson, J.C. (1983) 'Is Science Marketing?', *Journal of Marketing*, 47(Fall), 111–125.

Peterson, R.A. (2001) 'On the use of college students in social science research: insights from a second- order meta-analysis', *Journal of Consumer Research*, 28(3), 450–461.

Petty, R.E., Cacioppo, J.T. (1986) 'The elaboration likelihood model of persuasion', *Advances in Experimental Social Psychology*, 19, 123–162.

Piech, D. (2013) Online video: a statistical review [online], *comScore*, available: http://www.slideshare.net/loukerner2/comscore-slides-online-video-a-statistical-review [accessed 17 Aug 2015].

Plambeck, J. (2010) 'Product placement grows in music videos', *The New YorkTimes*, July 7, 1–2.

Pollay, R.W., Mittai, B. (1993) 'Here's the beef: factors, determinants, and segments in consurmer criticism of advertising', *Journal of Marketing*, 57(July), 99–114.

Puto, C.P., Wells, W.D. (1984) 'Informational and transformational advertising: the differential effects of time', *Advances in Consumer Research*, 11(1), 638–643.

PwC (2016) 'Global entertainment and media outlook 2016-2020' [online], available: http://www.pwc.com/gx/en/industries/entertainment-media/outlook.html [accessed 15 Oct 2016].

Raney, A.A., Arpan, L.M., Pashupati, K., Brill, D.A. (2003) 'At the movies, on the Web: an investigation of the effects of entertaining and interactive Web content on site and brand evaluations', *Journal of Interactive Marketing*, 17(4), 38–53.

Reading, N., Bellman, S., Varan, D., Winzar, H. (2006) 'Effectiveness of telescopic advertisements delivered via personal video recorders', *Journal of Advertising Research*, 46(2), 217–227.

Van Reijmersdal, E., Jansz, J., Peters, O., van Noort, G. (2010) 'The effects of interactive brand placements in online games on children's cognitive, affective, and conative brand responses', *Computers in Human Behavior*, 26(6), 1787–1794.

Van Reijmersdal, E., Neijens, P., Smit, E.G. (2010) 'A new branch of advertising: reviewing factors that influence reactions to product placement', *Journal of Advertising Research*, 49(4), 429.

Rosen, D.M. (1990) 'Big-time plugs on small company budgets', *Sales and Marketing Management*, 142(15), 48–55.

Rosenthal, R., Rosnow, R. (2008) *Essentials of Behaviral Research: Methods and Data Analysis*, 3rd. ed, McGraw-Hill: Boston.

Russell, C.A. (1998) 'Toward a framework of product placement: theoretical propositions', *Advances in Consumer Research*, 25(1), 357–362.

Russell, C.A. (2002) 'Investigating the effectiveness of product placements in television shows: the role of modality and plot connection congruence on brand memory and attitude', *Journal of Consumer Research*, 29(3), 306–318.

Russell, C.A., Norman, A.T., Heckler, S.E. (2004) 'The consumption of television programming: development and validation of the Connectedness Scale', *Journal of Consumer Research*, 31(1), 150–161.

Russell, C.A., Puto, C.P. (1999) 'Rethinking television audience measures : An exploration into the construct of audience connectedness', *Marketing Letters*, 10(4), 393–407.

Russell, C.A., Stern, B.B. (2006) ‘Consumers, characters, and products. a balance of Sitcom Product Placement Effects’, *Journal of Advertising*, 35(1), 7–21.
Russell, J.A. (1983) ‘Pancultural aspects of the human conceptual organization of emotions’, *Journal of Personality and Social Psychology*, 45(6), 1281–1288.
Russell, J.A., Mehrabian, A. (1977) ‘Evidence for a three-factor theory of emotions.’, *Journal of Research in Personality*, 11(3), 273–294.
Sadallah, M., Aubert, O., Prie, Y. (2011) ‘Component-based hypervideo model: high-level operational specification of hypervideos’, in *11th ACM Symposium on Document Engineering*, ACM, 53–56.
Sadallah, M., Aubert, O., Prié, Y. (2012) ‘CHM: an annotation- and component-based hypervideo model for the Web’, *Multimedia Tools and Applications*, 70(2), 869–903.
Sauer, A. (2014) The envelope, please: the 2014 Brandcameo product placement awards [online], *Brandchannel*, available: http://brandchannel.com/2014/02/27/the-envelope-please-the-2014-brandcameo-product-placement-awards/ [accessed 24 Oct 2014].
Saunders, M., Lewis, P., Thornhill, A. (2007) *Research Methods for Business Students*, Fourth Edi. ed, Prentice Hall: financial times: Essex.
Sawhney, N., Balcom, D., Smith, I. (1996) ‘HyperCafe: narrative and aesthetic properties of hypervideo’, in *Seventh ACM Conference on Hypertext*, New York, NY, USA, 1–10.
Schemer, C., Matthes, J., Wirth, W., Textor, S. (2008) ‘Does “passing the courvoisier ” always pay off? Positive and negative evaluative conditioning effects of brand placements in music videos’, *Psychology and Marketing*, 25(10), 923–943.
Schlosser, A.E. (2003) ‘Experiencing products in the Virtual World: the role of goal and imagery in influencing attitudes versus purchase intentions’, *Journal of Consumer Research*, 30(2), 184–198.
Schmitt, B. (1999) ‘Experiential Marketing’, *Journal of Marketing Management*, 15, 53–67.
Scott, J., Craig-Lees, M. (2010) ‘Audience engagement and its effects on product placement recognition’, *Journal of Promotion Management*, 16(1-2), 39–58.
Sears, D.O. (1986) ‘College sophomores in the laboratory: influences of a narrow data base on social psychology’s view of human nature’, *Journal of Personality and Social Psychology*, 51(3), 515–530.
Segrave, K. (2004) *Product placement in Hollywood films*, McFarland & Company, Inc., Publishers: Jefferson, North Carolina.
Segupta, J., Goodstein, R.C., Boninger, D.S. (1997) ‘All cues are not created equal: obtaining attitude persistence under low-involvement conditions’, *Journal of Consumer Research*, 23(4), 351–361.
Shankar, V., Malthouse, E.C. (2006) ‘Moving interactive marketing forward’, *Journal of Interactive Marketing*, 20(1), 10–13.
Shapiro, S. (1999) ‘When an ad’s influence is beyond our conscious control: perceptual and conceptual fluency effects caused by incidental ad exposure’, *Journal of Consumer Research*, 26(1), 16–36.
Shapiro, S., Krishnan, H.S. (2001) ‘Memory-based measures for assessing advertising effect: a comparison of explicit and implicit memory effects’, *Journal of Advertising*, XXX(3), 1–13.
Shapiro, S., Macinnis, D.J., Park, C.W. (2002) ‘Understanding program-induced mood effects: decoupling arousal from valence’, *Journal of Advertising*, 31(4), 15–26.

Sharma, A. (2000) ‘Recall of television commercials as a function of viewing context: the impact of program- commercial congruity on commercial messages’, *Journal of General Psychology*, 127(4), 383–396.
Shipman, F., Girgensohn, A., Wilcox, L. (2008) ‘Authoring, viewing, and generating hypervideo: an overview of Hyper-Hitchcok’, in *ACM Transactions on Multimedia Computing, Communications, and Applications*, 1–19.
Sicilia, M., Ruiz, S., Munuera, J.L. (2005) ‘Effects of interactivity in a Website: the moderating effect of need for cognition’, *Journal of Advertising*, 54(3), 31–43.
Simmons, G. (2008) ‘Marketing to postmodern consumers: introducing the Internet chameleon’, *European Journal of Marketing*, 42(3/4), 299–310.
Chaffey, D. (2016) ‘Marketing Trends for 2016 – Will we be in a post-digital era?, [online], *Smartinsights*, available: http://ow.ly/viVO306RSOi [accessed 16 Jun 2016].
Smit, E., van Reijmersdal, E., Neijens, P. (2009) ‘Today’s practice of brand placement and the industry behind it’, *International Journal of Advertising*, 28(5), 761–782.
Smith, D.C., Park, C.W. (1992) ‘The effects of brand extensions on market share and advertising efficiency’, *Journal of Marketing Research*, 23(3), 296–313.
Snyder, S.L. (1992) ‘Movies and product placement: is Hollywood turning films into commercial speech?’, *University of Illinois Law Review*, 1, 301–337.
Song, J.H., Zinkhan, G.M. (2008) ‘Determinants of perceived Web Site interactivity’, *Journal of Marketing*, 72(March), 99–113.
Speed, R., Thompson, P. (2000) ‘Determinants of sports sponsorship response’, *Journal of the Academy of Marketing Science*, 28(2), 226–238.
Sperring, S., Strandvall, T. (2008) ‘Viewer’s experiences of a TV quiz show with integrated interactivity’, *International Journal of Human-Computer Interaction*, 24(2), 214–235.
Stein, L. (2009) ‘Playing dress-up: digital fashion and gamic extensions of televisual experience in Gossip Girl’ s Second Life’, *Cinema Journal*, 48(3), 116–122.
Stern, B.B., Russell, C.A. (2004) ‘Consumer responses to product placement in television sitcoms: genre, sex, and consumption’, *Consumption Markets & Culture*, 7(4), 371–394.
Steuer, J. (1992) ‘Defining virtual reality: dimensions determining telepresence’, *Journal of communication*, 42(4), 73/93.
Sutherland, M. (2006) ‘Product placement- regulators gone AWOL’, *International Journal of Advertising*, 25(1), 107–114.
Sweeten, J. (2014) 25 things you didn’t know about the sets on ‘Friends’ [online], *Hooked on Houses*, available: http://hookedonhouses.net/2014/05/19/25-things-you-didnt-know-about-the-sets-on-friends/ [accessed 15 Nov 2014].
The Indecision Amalgamation [online] (2014) *The Big Bang Theory wiki*, available: http://bigbangtheory.wikia.com/wiki/The_Indecision_Amalgamation [accessed 15 Nov 2014].
The Web Standards Project [online] (2003) *HTML versus XHTML*, available: http://www.webstandards.org/learn/articles/askw3c/oct2003/ [accessed 3 Nov 2014].
Thompson, C.J., Locander, W.B., Pollio, H.R. (1989) ‘Putting consumer experience back into consumer research: the philosophy and method of existential-phenomenology’, *Journal of Consumer Research*, 16(2), 133–146.
Thorson, E. (1989) ‘Consumer processing of advertising’, *Current issues and Research in Advertising*, 12(2), 197–230.

Top 10 Celebrity Tech Endorsements [online] (2011) *PCMagazine*, available: http://www.pcmag.com/slideshow_viewer/0,3253,l=260174&a=260174&po=1,00.asp [accessed 15 Nov 2014].

Turner, K.J. (2004) 'Insinuating the product into the message', *Journal of Promotion Management*, 10(1-2), 9–14.

van Noort, G., Voorveld, H.A.M., van Reijmersdal, E. (2012) 'Interactivity in brand Web Sites: cognitive, affective, and behavioral responses explained by consumers' online flow experience', *Journal of Interactive Marketing*, 26(4), 223–234.

Venkatesh, A. (1999) 'Postmodernism perspectives for macromarketing: an inquiry into the global information and sign economy', *Journal of Macromarketing*, 19(2), 153–169.

Verhellen, Y., Dens, N., Pelsmacker, P. De (2013) 'Consumer responses to brands placed in YouTube movies: the effect of prominence and endorser expertise', *Journal of Electronic Commerce Research*, 14(4), 287–303.

W3C (2014) HTML5 Is a W3C Recommendation [online], *28 October*, available: www.w3.org [accessed 4 Oct 2014].

Watkins, M.J., LeCompte, D.C., Kyungmi, K. (2000) 'Role of study strategy in recall of mixed lists of common and rare words.', *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 26(1), 239–245.

Watson, D., Tellegen, A. (1985) 'Toward a consensual structure of mood', *Psychological bulletin*, 98(2), 219–235.

Waiguny, M.K., Nelson, M.R. and Marko, B., 2013. 'How advergame content influences explicit and implicit brand attitudes: When violence spills over'. *Journal of Advertising*, 42(2-3), 155-169.

Van der Weele, Y., Groenland, E., Noordewier, M. (2009) *Program-induced mood effects on the effectiveness of product placement*.

Wells, W.D. (1980) *How advertising works*, Needham Harper Worldwide: Chicago, Illinois, USA.

Weston, A. (2013) 'The evolution of hypervideo', in *Interactive Multimedia Conference*, 6.

Wiles, M.A., Danielova, A. (2009) 'The worth of product placement in successful films: an event study analysis', *Journal of Marketing*, 73(4), 44–63.

Winkler, R. (2015) YouTube: 1 billion viewers, no profit [online], *The Wall Street Journal*, available: http://www.wsj.com/articles/viewers-dont-add-up-to-profit-for-youtube-1424897967 [accessed 10 Sep 2015].

Wright, P. (1973) 'Cognitive processes mediating acceptance for advertising', *Journal of Marketing Research*, 10(February), 53–62.

Yang, H.-L., Wang, C.-S. (2008) 'Product placement of computer games in cyberspace', *Cyberpsychology & Behavior*, 11(4), 399–404.

Yang, M., Roskos-Ewoldsen, D.R., Dinu, L., Arpan, L.M. (2006) 'The effectiveness of "in-game" advertising: comparing college students' explicit and implicit memory for brand names', *Journal of Advertising*, 35(4), 143–152.

Yoo, C.Y. (2008) 'Unconscious processing of web advertising: effects on implicit memory, attitude toward the brand and consideration set', *Journal of Interactive Marketing*, 22(2), 2–19.

YouTube (2015) Create and edit annotations [online], available: https://support.google.com/youtube/answer/92710?hl=en [accessed 4 Oct 2014].

Zaichkowsky, J.L. (1985) 'Measuring the involvement construct', *Journal of Consumer Research*, 12(3), 341–352.

Zaichkowsky, J.L. (1986) ‘Conceptualizing involvement’, *Journal of Advertising*, 15(2), 4–14, available: http://psycnet.apa.org/psycinfo/1987-33149-001.
Zaichkowsky, J.L. (1994) ‘The personal involvement inventory: reduction, revision, and application to advertising’, *Journal of Advertising*, 23(4), 59–70.
Zajonc, R.B. (1968) ‘Attitudinal effects of mere exposure’, *Journal of Personality and Social Psychology Monograph Supplement*, 9(2), 1–27.
Zielske, H.A. (1959) ‘The remembering and forgetting of ddvertising’, *The Jouirnal of Marketing*, 23(3), 239–243.
Zillmann, D. (1971) ‘Excitation transfer in communication-mediated aggressive behavior’, *Journal of Experimental Social Psychology*, 7(4), 419–434.
Zillmann, D. (1999) ‘Exemplification theory: judging the whole by some of its parts’, *Media Psychology*, 1(1), 69–94.
Zina, O. (2004) *The essential guide to doing research*, SAGE Publications: London