

I like you, but don't remember you-Mere Exposure Effects in Videogames and e-Sports.

Michelle Gledhill

Manchester Metropolitan University

Paul Smith

Manchester Metropolitan University

Dominic Medway

Manchester Metropolitan University

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Abstract

This is the first empirical study investigating affective measures by assessing brand attitude formation by contrasting two different modes of consumption in videogaming, active (playing games) and passive (watching games) by assessing the Mere Exposure Effect (MEE). The study adopted a quasi-experiment between groups design, with a control, Watch and Play Group (300 participants, 100 in each group to examine brand attitude for 5 exposed fictitious brands and 5 non-exposed fictitious brands). Results indicate a frequently presented brand placement in a videogame can have a positive effect on players' and watchers' brand attitude when they do not recall the brand.

It contributes to brand placement processing in videogames and builds on the existing paradigms of MEE, low-involvement processing and implicit and explicit processing. For game developers and brand owners it has implications for communications strategy, graphic design and effective position for placements.

Keywords: *brand, placement, videogames*

Track: *Advertising and Marketing Communications*

1. Purpose

In the UK, the media landscape has seen a number of changes in the last twenty years, such as media fragmentation, changing audience-viewing habits and growth of non-traditional marketing communications like brand placement (Fill, 2013). The traditional television advertising model is becoming an increasingly expensive option in terms of audience volumes reached, as a consequence of fragmentation and decline of audience numbers due to on demand and streaming services. Due to this proliferation of media and platforms it is becoming increasingly difficult for marketers to reach and engage consumers using traditional forms of mass media such as print and television advertising. As a result, brand owners and marketers are turning to alternate forms of communication, such as brand placement in videogames, as the games industry continues to grow and this is the central theme of this paper.

The UK is estimated to be the sixth largest videogame market in terms of consumer revenues and value of £3.5bn (NewzooHq, 2017). Moreover, eSports is forecast to generate more than £1bn in global revenue and almost double its audience to nearly 600 million people by 2020 (BBC, 2017). eSports take the form of organised, multiplayer videogame competitions between professional videogame players. Tournaments such as the League of Legends World Championship which is broadcast live and includes prize money of \$1 million.

To date academic research appears inconclusive in terms of validating the use of videogames as a promotional tool. Moreover, there is a lack of empirical evidence concerning the effects on consumers and brands of marketing messages in the videogame environment. The aim of this paper is examine affective measures by assessing brand attitude formation by investigating active consumption in videogaming (i.e. consumption by gamers playing the game) and passive (i.e. consumption by the audience watching a game being played, as in eSports). Specifically, the study aims to establish whether these active or passive consumption modes affect the brand attitude of individuals exposed to brand placements in the videogames concerned by assessing the Mere Exposure Effect (MEE). Thus, the following research propositions have been developed.

R1 Repeated exposure to an unknown brand placement in videogames leads to more positive brand evaluations.

R2 Complex environments such as gaming, which allow exposure to multiple stimuli on screen, limit message processing.

R3 Active and passive consumption modes differently affect the brand attitudes of individuals exposed to brand placements.

2. Brand placement effects in videogames

Early studies were inconclusive in terms of the factors that contribute to recall and recognition of brands with Nelson (2002) asserting that individuals do seem to recall brands placed in videogames, but placements in the form of billboards have limited impact on individuals' recall and purchase intentions (Chaney et al., 2004). Moreover, other studies indicated a disassociation between brand awareness and brand evaluation (Poels et al., 2013; Grigorovici and Constantin, 2004) whilst others reported positive associations between recall and brand evaluation and choice (Hang and Auty, 2011; Mau et al., 2008).

The Elaboration Likelihood Model (ELM) model does not explicitly acknowledge the potential of non-conscious processing and assumes that low-involvement processing and peripheral processing assumes some degree of consciousness and thus the activation of explicit memory by the stimulus response (Petty et al., 1983). A game player actively interacts with a game by modifying and controlling the course of events (Nicovich, 2005). Hence, as a result of their immersive and co-created consumption environment, it may be far more difficult for the gamers to remember brands (Chaney et al., 2004).

However as Lee and Faber (2007) suggest that the more immersed and involved the game player is with a game, the lower the brand recall and recognition but the better their brand attitude. This suggests support for the Mere Exposure Effect (MEE) (Zajonc, 1968). The research suggests that affective measures are more appropriate in subliminal processing studies (Zajonc, 2001), because after subliminal processing participants cannot recall ads and might not recognise those to which they were previously exposed (Acar et al., 2007).

Zajonc (1968) suggested simple, unreinforced exposure leads to increased liking for a stimulus; in short, familiarity leads to liking. If the process were merely cognitive, different individuals would exercise different evaluations to the same content, whereas Zajonc (2001) found when cognitive processes are reduced, emotional influences tend to dominate, producing more uniform reactions. Since the publication of the Zajonc (1968) monograph describing the mere exposure effect there have been more than 200 published experiments investigating the exposure–effect relationship (Bornstein, 1989). The exposure effect has proven to be a robust, reliable phenomenon, yielding strong results for a variety of stimuli for example polygons, drawings, photographs, nonsense words, and ideographs. These have included advertising effects (Sawyer, 1973), social perceptions and behaviours (Saegert et al.,

1973), stereotypes and prejudice (Ball and Cantor, 1974), environmental preferences (Herzog et al., 1976), aesthetic judgments (Berlyne, 1974), verbal learning (Zajonc et al., 1974), implicit memory (Holyoak and Gordon, 1983), and attitude formation (Grush, 1976).

To date four studies into brand placement indicate support for the MEE. In television, when the viewer displays high involvement with the programme, persuasion knowledge is low and exposures to the placement are frequent, MEE occurs (Matthes et al., 2007). Ruggieri and Boca (2013) study demonstrated that in a high involvement context (watching a film) one exposure was sufficient to activate the MEE and positive brand evaluation. Matthes et al. (2011) investigated individual differences in field dependence-independence for the perception of product placements and found support for this concept. Matthes et al. (2012) observed in music videos, MEE is strong for subtle placements in high involvement conditions but has no effect in the low involvement conditions. Matthes et al. (2012) observed prominent placements were more recalled and recognised, than subtle ones in both moderate and high conditions.

However, it is an assumption yet to be empirically tested in videogames and the focus of this paper, therefore, will be how brands are processed in videogames and the impact of this on gamer brand evaluations. Such an analysis could shed light on the potential role of the MEE in videogaming context.

2. Methodology

The study adopted a quasi-experiment between group design, with a control, Watch Group and Play Group (300 participants in total, 100 in each group) and a post exposure questionnaire. The sample subjects were recruited on a convenience basis from undergraduate and postgraduate level marketing related degree courses at a large UK university. In order to ensure no residual memory, which would compromise any results, a professional game developer was sourced. Silo Black Games provided a game demo that they used internally and thus was not publicly available. The game demo was then modified in relation to the visual stimulus provided. This allowed for control over prior exposure and ensured that manipulations were presented unequivocally. Racing games are popular in the study of IGA because the placement of brands within the context is naturalistic (Nelson et al., 2006). The visual stimulus for the experiments consisted of inserting fictitious brand logos for five of the most popular product categories in racing games into the stimulus and these were Double 7 soft drink, MBSB bank, Volare Airlines airline, Dynamix game developer and Copperstone tyres. In order to identify potential confounding variables, an additional 5 non-exposed fictitious brand logos were presented in the post exposure questionnaire.

In Study 1, gamers played the racing game with brand placements inserted as billboards (Play Group) and the second condition is a control group where gamers play the game but no billboards are inserted (Control Group). Participants were randomly assigned to either the play or control condition. This was done by randomly assigning number 1(control), 2 (play) to the participants. The participants were unaware of the meaning of the assigned numbers. The participants were asked to complete three laps of the track which ensured that they were exposed to all the brands in the racing game and concurs with research on the MEE, which suggests that repetition increases the chances of the MEE occurring. After playing the racing game, the participants were asked to complete a distractor activity and complete a post exposure questionnaire by accessing a link on the laptop that they had previously played the game on.

For Study 2, participants watched the racing game being played in a lecture theatre. Three gamers played the game, one after each other at the front of the lecture hall and competed to see who could achieve the fastest lap time. Collecting the watch condition data in this manner, it more realistic as it created e-Sports conditions by creating a quasi-naturalistic setting. Immediately after watching the three gamers, the participants completed a distraction activity then went to a link on their course Moodle page to complete the post exposure questionnaire.

Bornstein (1989) meta-analysis on mere exposure effects, liking ratings, goodness ratings and appealing ratings showed the best results in terms of MEE. Zajonc (1968) found a significant positive relationship after 25 exposures of photographs of students and mean liking. Moreover, Zajonc *et al.* (1974) found stronger effects for liking ratings than for goodness ratings of merely exposed photograph stimuli. Thus, liking ratings were utilised in the post exposure questionnaire for both the exposed and non-exposed brand logos. The liking ratings formed the (5) dependent variables in the two MANOVA analyses, one for exposed brands and one for non-exposed brands. It was the first question respondents were asked as this acknowledges the possibility that the MEE might be short term (Bornstein, 1989). Further, in Matthes *et al.* (2007) liking, goodness and appeal measures were utilised as MEE necessitates an unprompted, unelaborated assessment of brand preference. The design was consistent with previous studies using racing game manipulations (Hang and Auty, 2011; Lee and Faber, 2007).

3. Results

The findings do indicate that frequent exposure to an unknown brand logo leads to a significant increased liking effect and thus can have an effect on the players' and watchers' attitudes see Table 3.1. This progresses the idea that the impact of brand placements on gamers' attitudes can be interpreted as the MEE (Zajonc, 1968; Bornstein, 1989). The results do suggest that the MEE increases implicit memory and this was apparent for the Double 7 brand logo and supports the work of Yang (2006). This is supported by results of discriminant analysis. One discriminant function explained 91.5% of the variance between groups, and Double 7 loaded highly onto that discriminant function ($r = 0.918$). Further, the results do offer some support that the interactive, multi-dimensional environment of videogames does not totally inhibit gamers from processing secondary messages. The results in do indicate that that game players are able to both play a videogame (the primary task) and process the placements (the secondary task) simultaneously. There is therefore support for the Elaboration Likelihood Model low involvement, peripheral route of elaboration for some of the brand placements in this study (Petty et al. 1980).

Table 3.1: Summary multivariate results MANOVA for the brand placements for the exposed brands.

Multivariate Tests ^a						
Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.947	1041.326 ^b	5.000	293.000	0.000
	Wilks' Lambda	0.053	1041.326 ^b	5.000	293.000	0.000
	Hotelling's Trace	17.770	1041.326 ^b	5.000	293.000	0.000
	Roy's Largest Root	17.770	1041.326 ^b	5.000	293.000	0.000
Group	Pillai's Trace	0.083	2.534	10.000	588.000	0.005
	Wilks' Lambda	0.918	2.563 ^b	10.000	586.000	0.005
	Hotelling's Trace	0.089	2.592	10.000	584.000	0.004
	Roy's Largest Root	0.081	4.775 ^c	5.000	294.000	0.000

a. Design: Intercept + Group b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level

All the tests are considered robust due to equality of group size. Using Pillai's trace there are significant differences in brand attitude between the groups where the brand logos are exposed in the racing game, $V = 0.08$, $F(10, 588) = 2.53$, $p = 0.005$. Using Hotelling's trace there are significant differences in brand attitude between the groups where the brand logos were exposed in the racing game, $V = 0.09$, $F(10, 584) = 2.59$, $p = 0.004$. There were no significant differences in the multivariate tests of brand attitude for the 5 non-exposed brands as shown in Table 3.2. This gives

support to the argument that no confounding variables are present which could explain the effects shown in Table 3.1.

Table 3.2: Summary multivariate results MANOVA for the brand placements for the non-exposed brands.

Multivariate Tests ^a						
Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.952	1172.079 ^b	5.000	293.000	0.000
	Wilks' Lambda	0.048	1172.079 ^b	5.000	293.000	0.000
	Hotelling's Trace	20.001	1172.079 ^b	5.000	293.000	0.000
	Roy's Largest Root	20.001	1172.079 ^b	5.000	293.000	0.000
Group	Pillai's Trace	0.036	1.065	10.000	588.000	0.387
	Wilks' Lambda	0.965	1.068 ^b	10.000	586.000	0.385
	Hotelling's Trace	0.037	1.071	10.000	584.000	0.383
	Roy's Largest Root	0.033	1.942 ^c	5.000	294.000	0.087

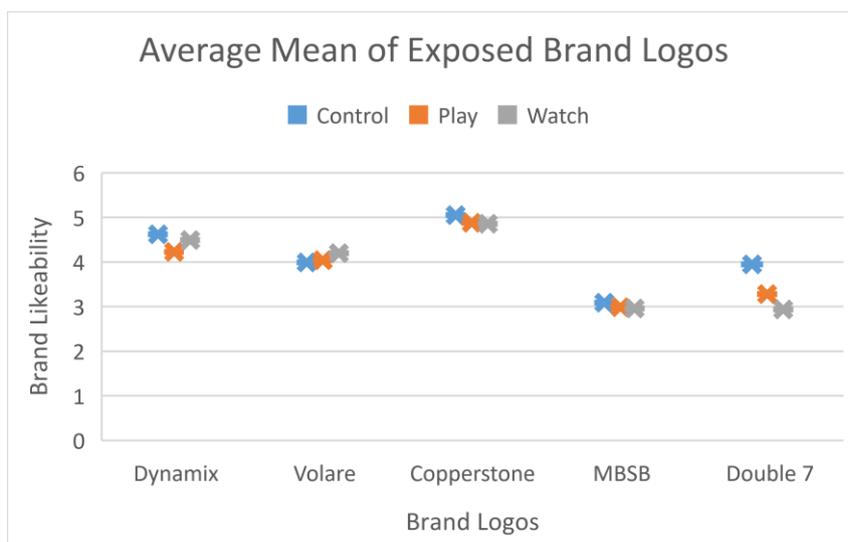
a. Design: Intercept + Group

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

There were observable effect differences in the way the placements are processed in interactive videogame environments for gamers and watchers, with watchers reporting more positive brand attitudes as displayed in Figure 3.1.

Figure 3.1 Average mean of exposed brand logos for control, play and watch groups



Key Brand Likeability

1-Strongly agree

2-Agree

3-More or less agree

4-Undecided

5-More or less disagree

6-Disagree

4.Theoretical Contribution

This is the first empirical study assessing brand placement and the MEE in videogames. This study contributes to knowledge concerning brand placement processing in videogames and builds on the existing paradigms of MEE, low-involvement processing, implicit and explicit processing and brand attitude formation. Further, the current study contributes to the brand placement literature by addressing brand placement implicit processing in videogames. Whilst there is considerable research on cognitive measures such as recall and recognition, there is scant research on affective measures in videogames and this paper has addressed this issue.

However, as not all the brands were processed there is support and evidence that the multisensory environment of videogames does inhibit processing which concurs with Yang (2006). Therefore, this study provides further support for Persuasion Knowledge Model Friestad and Wright (1994) and reactance effects Brehm (1988). But as some of the brand placements were processed by the game players it does further support the finding that game players are able to both play a videogame (the primary task) and process the placements (the secondary task). Thus, the results are inconclusive as some of brand placements exposure effects did produce positive attitudes but some did not and further research is required to determine that processing fluency is not resulting from placement graphic design elements such as colour, easy-to-read fonts, or contrast of colour against the racing track.

5. Practical Contribution

The results of this research offer some valuable insights for brand owners, game developers, and the use of brand placement. For game developers and brand owners, the study has implications for marketing communications strategy, graphic design for placements, design of videogames and the most effective position for placements in a game. The present study does demonstrate that video game players and watchers are processing unknown brands in videogames and their implicit memory is influenced by placements.

The findings offer some evidence for brand owners and game developers that brand placements do indeed influence implicit memory and this may affect later purchase decisions, as there was significance for the exposed brands but non for the non-exposed brands. Hence, this provides justification for brand placement as part of the brand strategy for relevant brands. The watchers demonstrated better implicit than explicit processing in this study and this has implications for eSports. Although the current study does not establish how strong or

enduring the MEE is, it does have implications for new brand launches as attitude could be tested virtually prior to physical launch.

The product categories used in the study: tyres, soft drinks, airlines, banks and game developers are those typically placed in racing games and therefore the findings have direct relevance to these types of businesses and potentially their marketing communications strategy.

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