

Research Reports

At the Roots of Product Placement: The Mere Exposure Effect

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Abstract

The present study aims to analyze the effect of product placement on attitude change and takes into consideration psychological models of the mere exposure effect. A sample of high school students watched an excerpt from two widely-distributed movies in which several products were shown by using the technique known as product placement. The results indicate that students who saw the commercial brand liked the products more than those who didn't see it. This effect, in line with the literature on the product placement effect, seems to be independent from the recognition of the brand in the movie excerpt. This study also shows that, in the high involvement condition, one exposure is enough to produce a positive attitude toward the brand.

Keywords: mere exposure effect, product placement, attitude change

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Introduction

The Product Placement Effect

Research in the field of advertising has evolved over the last fifty years and has developed increasingly innovative techniques aimed at producing specific purchasing behaviors. Often however, the bizarre hearsay surrounding hidden messages – whose true effects on people's behavior have not been demonstrated by empirical evidence – has managed to influence a great deal of advertising related to so-called “subliminal stimulation” (Balasubramanian, 1994; D'Astous & Chartier, 2000).

Repeated exposure to a product in order to associate a positive affect to it is in fact the most common approach in advertising. One of the techniques based on this concept is known as product placement, where brands of cars, accessories, clothes, drinks, and other products appear clearly in video segments without however giving the impression of watching a commercial. Brand placement offers advertisers a potentially successful alternative to traditional advertising because the advertiser's message is integrated within the editorial content (Roehm, Roehm, & Boone, 2004). Apparently, the actors in a film are simply using a particular object, and often the presence of the commercial brand is not even noticed by the spectator. The products are placed in advantageous, natural, and credible contexts that offer advertisers an opportunity to add favorable associations to their brands (Karrh, 1998). Companies using this advertising approach exploit the cinema as a promotional showcase, sharing a portion of the production costs in exchange for adequate visibility of their products in the film. Oddly, this approach

goes back to the beginnings of cinematography. The Lumière brothers were the first to insert a detergent in one of their films back in 1895. At first, this approach developed greatly with the proliferation of cinema, then more so with television. Among the most common examples are the films featuring Agent 007, which over the years have become ever more crowded with watches, automobiles, and hi-tech products, that cast their image alongside that of James Bond.

Despite the frequent use of product placement, there are few scientific studies which prove they are indeed effective. Even marketing studies have not yet demonstrated clearly that mere product placement can guarantee sales, nor that it determines a more positive attitude towards the product. The most common measure of product placement effectiveness has been consumer memory, especially in regard to brand attitude, image and choice, but the evidence is inconclusive (Balasubramanian, Karrh, & Parwardhan, 2006; Law & Braun, 2000; Matthes, Schemer, & Wirth, 2007). Studies on the effect of product placement have employed explicit and implicit memory tests. In explicit (or direct) tests, participants' memory of recently viewed episodes (Law & Braun, 2000) is tested to evaluate the impact of product placement and, more specifically, free recall (asking them to recall brands seen in the film) (D'Astous & Chartier, 2000; Gupta & Lord, 1998), aided recall (asking them to recall a given product category cue) (Auty & Lewis, 2004; Karrh, 1994; van Reijmersdal, Neijens, & Smit, 2007) and recognition (asking them to judge whether they remember seeing a brand in the film) (Babin & Carder, 1996; Gupta & Lord, 1998; Law & Braun, 2000). In implicit tests participants are not asked to remember events, but simply to perform some task. Here memory is measured as an increase in performance (relative to an appropriate baseline), such as greater accuracy in identifying items seen recently compared to new items, or by a decrease in the amount of time necessary to identify recently seen items (for an extensive review on implicit memory testing techniques, see Schacter, 1987).

Many studies have shown that these two types of memory can be uncorrelated (Auty & Lewis, 2004; Hang & Auty, 2011; Holden & Vanhuele, 1999; Law & Braun, 2000; Shapiro, MacInnis, & Heckler, 1997), suggesting that certain tests may be better than others for assessing different aspects of exposure, which would lend support to the idea that brand image and brand memory are processed differently (Auty & Lewis, 2004; Law & Braun, 2000; van Reijmersdal, Neijens, & Smit, 2007).

Although there have been many studies on brand placement, the effects of brand image on attitudes has remained largely unexplored. This is surprising, because image change is often considered one of the benefits of brand placement for advertisers (DeLorme & Reid, 1999; Karrh, 1998). van Reijmersdal, Neijens, & Smit (2007) found that the integration of a brand into the editorial content of a program had a significant effect on brand image.

The Mere Exposure Effect

One of the most important variables impacting the effects of persuasive messages is exposure (Krugman, 1972; Zajonc, 1968, 2001). Because brand placement is a kind of persuasive message, repetition is likely to influence placement effects as well. The change in brand image might reflect an overall positive change in brand evaluation regardless of the context in which the brand appeared (van Reijmersdal, Neijens, & Smit, 2007).

The vast literature on the theory of the mere exposure effect shows that repeated exposure to an object leads to an increased positive affect or a reduced negative affect toward that object (Harmon-Jones & Allen, 2001; Zajonc, 1968, 2001). These effects cannot be explained by memory and have even proved to be more pronounced under subliminal conditions than when subjects are aware of the repeated exposure (Zajonc, 2001).

In one of the most influential monographs in the history of social psychology, Zajonc (1968) described the mere exposure effect as an increase in favor towards an object for which a positive attitude exists after the subject is exposed repeatedly to stimuli linked to the object of the attitude¹ (Moreland & Zajonc, 1977; Zajonc, 1968). This effect has been observed in various cultures (Ishii, 2005; Smith & Bond, 1993), species (Zajonc, 1971; Zajonc, Wilson, & Rajecki, 1975), types of sensory stimulation (Brentar, Neuendorf, & Armstrong, 1994; Szpunar, Schellenberg, & Pliner, 2004; Wilson, 1979), and even in a prenatal environment (Rajecki, 1974). For a synthesis of the principal findings, consult the review by Harrison (1977) and the meta-analysis of Bornstein (1989).

Despite the vast amount of data gathered, there is still no complete explanation for the mere exposure effect. In early studies, the emphasis was placed above all on demonstrating the existence of the phenomenon (see Harrison, 1968; Matlin, 1971; Stang, 1975). More recently, research (see Kunst-Wilson & Zajonc, 1980; Wilson, 1979) has delved into the premises and conditions on which it is based. It has been shown, in fact, that the effect occurs even when a person is unaware of having been exposed to stimulus, that is, when the stimuli introduced remain outside the person's awareness (Bonanno & Stillings, 1986; Bornstein, 1989; Bornstein, Leone, & Galley, 1987; Kunst-Wilson & Zajonc, 1980; Mandler, Nakamura, & Van Zandt, 1987; Murphy, Monahan, & Zajonc, 1995; Scaffidi Abbate, & Ruggieri, 2008, 2011; Seamon, Brody, & Kauff, 1983), as is the case with product placement. Cases such as this are referred to as a nonconscious mere exposure effect. Kunst-Wilson and Zajonc (1980), for example, designed experimental situations in which the stimulus was represented by sets of irregular octagons. The participants in the experiment were asked to compare the affect and recognition of octagonal shapes, some of which had been presented previously (target) and others which had never been shown (distractors). The results indicated a clear preference for the octagons which had already been seen, even though no relation to recognition of that shape was found. Later studies confirmed these results, indicating that subjects prefer stimuli they have already been exposed to, even without recognizing them (Bonanno & Stillings, 1986; Bornstein, Leone, & Galley, 1987; Seamon, Brody, & Kauff, 1983).

Two different hypotheses have been formulated to explain these results, and they are still being evaluated. According to the first hypothesis, the nonconscious mere exposure effect indicates the primacy of emotional processes over cognitive ones, in the sense that the former occur more rapidly than the latter and are independent from them (Arcuri, Castelli, Boca, Lorenzi-Cioldi, & Dafflon, 2001; Murphy & Zajonc, 1993; Zajonc 1980, 1984). The alternative hypothesis maintains that the effect of repeated exposition is linked to the "perceptual fluency" of implicit memory, in the sense that the relative ease of recall of information can be heuristic in making affect judgments (Bornstein & D'Agostino, 1992; Seamon et al., 1983, 1995).

Let us attempt to analyze in detail these different explanatory hypotheses. According to Zajonc (1980), the non-conscious mere exposure is produced on the basis of a diverse elaboration of emotional and cognitive processes and, in particular, because emotional reactions precede cognitive reactions. More specifically, affect judgments are crude thoughts; they are generic entities which do not permit the recognition of stimuli, only their evaluation. On the contrary, cognitive processes are crucial to the analysis of the stimulus' components, and they make possible the differentiation and recognition of the stimulus itself. Neuro-anatomical and neuro-physiological studies (LeDoux, 1996; Zola-Morgan, Squire, Alvarez-Royo, & Clower, 1991) have confirmed that cognitive and emotional aspects, though they both participate in the determination of behavior, are in reality quite different, both on a psychological and on a neurological level. Zola-Morgan et al. (1991), for example, in studies on primates, observed that lesions of the amygdala (an organ supervising emotional stimulation) influence affect, but do not alter cognitive aspects, while a lesion of the hippocampus (an organ fundamental to memory processes) will alter cognitive

functions while leaving emotional functions undisturbed. Other studies have shown that emotional processes can be induced without triggering awareness. [Elliott and Dolan \(1998\)](#) used PET (positron emission tomography) measures to show that the acquisition of preferences is a function of exposure to repeated subliminal stimuli and they evidenced certain neuroanatomical correspondences. In particular, the authors found that recognition judgments were localized in the frontopolar cortex and the parietal areas, whereas preference reactions showed right lateral frontal activation. The hypothesis that recognition and preference reside in different areas supports the hypothesis that emotional and cognitive systems act independently, at least in the early phases of elaboration of stimuli. Given the independence of the two systems, it is possible to explain why the mere exposure effect is strong and clear when it occurs subliminally, rather than when subjects are aware. If the process was merely cognitive, different individuals would tend to attribute different qualities to the same content, and intra-participant variability would increase. On the contrary, when the contribution of cognitive processes is reduced, emotional influences tend to dominate behavior, producing a more uniform set of reactions ([Zajonc, 2001](#)).

In an alternative explanatory hypothesis, the mere exposure effect is described as an expression of recognition memory based on perceptual fluency ([Bornstein & D'Agostino, 1992](#); [Schacter, 1987](#); [Schacter, Cooper, & Delaney, 1990](#); [Squire, 1992](#)). Perceptual fluency can be considered the ease with which stimuli are re-codified after repeated codifications have already taken place ([Jacoby & Dallas, 1981](#)), while recognition memory is considered a non-intentional and non-aware process of recalling previously acquired information. Several researchers have suggested that familiarity with the stimuli plays an important role in preference judgments ([Bornstein & D'Agostino, 1992](#); [Klinger & Greenwald, 1994](#); [Seamon et al., 1983](#)). For example, [Seamon et al. \(1983\)](#) have argued that the non-conscious mere exposure effect can be explained by Mandler's ([Mandler, Nakamura, & Van Zandt, 1987](#)) two process recognition model, which assumed that forced choice judgments are based on either stimulus familiarity or a memory search. Having to choose between target and distractor stimuli in a preference task, participants preferred elements to which they had been exposed previously because they were familiar with the way to process that information. [Seamon et al. \(1995, 1997\)](#) hypothesized that this ease of elaboration, or difference in the perceptual fluency of target and distractor, was essentially why the target stimulus was chosen. And in the same perspective, when familiarity judgments are made without the intervention of memory, participants prefer stimuli to which they have been previously exposed, even though they do not recognize them. Consistently, the authors found that preferential affect tests also measure recognition memory. A meta-analysis of exposure and affect ([Bornstein, 1989](#)) concludes that subliminal stimuli may be processed affectively without any concomitant cognitive processing.

Although not strictly subliminal, product placements may not be consciously encoded even by participants who are capable of doing so, but certainly the brand is processed affectively, since this reaction is spontaneous and does not require the allocation of attentional resources.

Few studies have focused on the effects of the frequency of exposure to brand placements and brand image. [Van Reijmersdal, Neijens, and Smit \(2007\)](#), for example, studied the effects of repeated exposure to brand placement on brand image and found that exposure frequency is an important variable that affects brand image. In their survey, two or more exposures were needed to produce an effect on brand image. [Auty and Lewis \(2004\)](#) found that reminding subjects of prior exposures had an effect on choice-related behavior: children who saw a film excerpt in which the brand Pepsi-Cola was present were more likely to then choose Pepsi instead of Coke. [Ferraro, Bettman, and Chartrand \(2009\)](#) demonstrated that individuals are exposed to brands during their daily encounters with other consumers, and this may influence their choice of products. Even if results like these seem

to bring irrefutable proof of the effect of product placement, they may be due to processes that leave the attitude toward the brand untouched.

Closer to the aim of the present study are the results of [Matthes, Schemer, and Wirth \(2007\)](#), who found that after repeated brand exposures, participants with a high level of involvement and low persuasion knowledge ([Russell, 2002](#)) develop a positive attitude toward the brand.

The Research

The aim of the present experiment was to investigate if a single exposure to a product in a high involvement condition was able to affect attitudes toward a brand. The studies heretofore conducted on product placement and attitude change use repeated exposures to private brands to change brand image ([Matthes, Schemer, & Wirth, 2007](#); [van Reijmersdal, Neijens, & Smit, 2007](#)). To test this hypothesis, researchers used natural stimuli. Participants watched 20 minute excerpts of popular films in which various private brands were visible, thus reproducing in a controlled situation what commonly happens in film theaters.

Specifically, we will analyze the nonconscious mere exposure effect with the goal of replicating the effect of product placement on brand attitude with a single exposition, thus demonstrating at the same time that exposure awareness is totally absent.

The effect of product placement is evaluated for all the brands that appear in the film excerpts.

Since so many commercials are directed at young people and since extremely popular films, especially, are watched mostly by teenagers, they represent the best sample group for testing our hypothesis.

Method

Participants

78 high school teenagers (40 males and 38 females) with ages 14 to 16 ($M = 15.03$, $DS = 1.76$) participated in this study. They were divided into two independent groups and randomly assigned to one of two experimental conditions, each group functioning as control for the other.

Procedure

After assembling in a film theater, having been told they would participate in a study of the language of young people, each of the two groups were shown a film made up of three film excerpts lasting 15-20 minutes each and designed to be particularly appealing to young people.

Two of the three excerpts had a masking function and no commercial brands were visible in them, while one was the target excerpt containing product placement. The target segment was always shown in the central position of the sequence. The first group viewed a portion of film in which Adidas, UMM, Cremeria, Volkswagen and Nike brands were present. The second group viewed a portion of film in which Guru, Ray Ban, Coke, TIM and Samsung brands were present. Brand exposure lasted from about one to about two minutes (at times brand exposures partially overlapped each other).

The participants' involvement was increased by telling them that they would answer a few questions about the content of certain scenes after viewing the film. The five participants who gave the most correct answers would be awarded two free tickets for watching a recently released film at the same film theater.

To verify that the brands had indeed been noticed during the viewing of the film, each of the two groups completed a questionnaire containing questions about the non-target segments they had seen and other questions designed to investigate how the presence of brands in the target film was perceived. In particular, since each group was the control group for the other, subjects were asked to indicate whether all 10 brands were present in the target film, though only 5 were present in the target film for one group, and 5 in the other.

Subjects were then asked how well they liked each of the 10 brands, using a 7-point Likert scale ranging from "I like it very much" to "I don't like it at all".

Results

First we analyzed the level of affect for each of the brands presented as a function of exposure to that brand. The results, illustrated in Figure 1, show significant differences between the two conditions (exposure to brand vs. non-exposure to brand) for all brands ($15.86 < F_s < 64.49$; $p < .01$). It can be seen that subjects who were exposed to commercial brands clearly preferred those brands to others, regardless of the type of product.

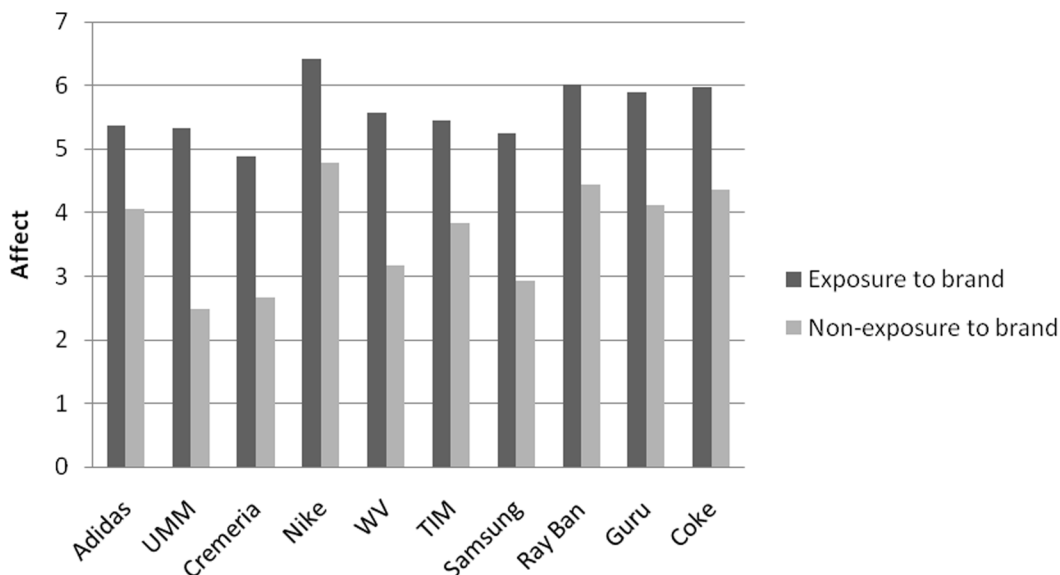


Figure 1. Level of affect.

In subsequent analyses we explored whether this greater preference was linked to an aware recognition of the brand in the film excerpt. Introducing the recognition of the brand as a variable in our analysis, we expected that if greater preference was linked to recognition, then we would find a significant interaction between exposition and preference. Vice-versa, lack of interaction would signify that the increase in preference after exposure does not depend on an aware recognition of that brand.

The results (shown in [Table 1](#)) clearly illustrate that in none of the ten statistical tests was there any indication that the recognition of a brand had an effect on preference for that brand.

Table 1

Effect of Exposure and Recognition of Brand

		F	Sig.
ADIDAS	Exposure brand	15.112	0.001
	Recognition brand	0.273	0.662
	Exposure x Recognition	1.098	0.298
UMM	Exposure brand	39.307	0.000
	Recognition brand	2.983	0.088
	Exposure x Recognition	0.007	0.935
TIM	Exposure brand	24.815	0.000
	Recognition brand	3.825	0.054
	Exposure x Recognition	3.130	0.081
SAMSUNG	Exposure brand	17.167	0.000
	Recognition brand	0.108	0.743
	Exposure x Recognition	0.927	0.339
CREMERIA	Exposure brand	11.447	0.001
	Recognition brand	0.254	0.876
	Exposure x Recognition	0.190	0.664
RAY-BAN	Exposure brand	12.364	0.001
	Recognition brand	0.108	0.796
	Exposure x Recognition	0.179	0.616
NIKE	Exposure brand	20.880	0.000
	Recognition brand	0.113	0.737
	Exposure x Recognition	0.008	0.927
GURU	Exposure brand	22.354	0.000
	Recognition brand	0.552	0.460
	Exposure x Recognition	0.162	0.680
WV	Exposure brand	26.242	0.000
	Recognition brand	0.275	0.602
	Exposure x Recognition	0.347	0.558
COKE	Exposure brand	6.600	0.012
	Recognition brand	0.075	0.786
	Exposure x Recognition	0.589	0.445

Thus an extremely interesting aspect emerges – the mere placement of a brand in a film tends to generate a positive attitude in an immediate post-test designed to evaluate how well subjects like the product, regardless of whether the product is recognized or not.

The mere exposure to the message in a context like this seems to lead to a positive attitude towards the brand.

Discussion and Conclusion

The pervasiveness of the mere exposure phenomenon, as stated above, has been well-documented in over fifty years of research, rendering it one of the most stable and verified phenomena in all of social psychology. Even though our understanding of the mere exposure effect is incomplete, the effect is so strong that it is studied quite frequently, even outside the sphere of psychological research, and is often considered a form of subliminal stimulation. Things do not change in the case of product placement, given that these effects are complementary: mere exposure is strictly connected with psychology and product placement with marketing.

Results of this study showed that in the high involvement condition, one exposure is enough to produce a positive attitude toward the brand. Mere exposure theory suggests, in fact, that the limited processing that occurs with a single product placement exposure is enough to produce a feeling of familiarity that is later mistaken as a preference for the stimulus (Janiszewski, 1993; Zajonc, 1980).

In the case of brand placement, when high involvement gives rise to high levels of attention toward the film, even a short exposition time and a reduced number of repetitions are enough to produce an effect on brand image.

The results of this study confirm yet again the heuristic capacity of this construct in advertising, especially in regard to product placement, which continues to proliferate in cinema and TV production. These results in fact explain the extensive use of product placement in the last decades.

The data gathered have shown moreover, consistently with the most recent theories, that the effects of exposure do not depend on the awareness of having been exposed to stimuli. These conclusions are in line with those of [Auty and Lewis \(2004\)](#), [Law and Braun \(2000\)](#), and [van Reijmersdal, Neijens, and Smit \(2007\)](#), who showed that brand placement effects on brand choice were unrelated to memory.

Results confirm that teenagers act like adults in relation to product placement and mere exposure effect. Though this sample has many characteristics and variables that differ from adult samples, ([Pace & Zappulla, 2009, 2011](#)), it is nevertheless coherent with adult samples as far as the effects of exposure to commercial brands are concerned.

As for the limitations of this study, let us mention first those related to the use of self-reported attitude measures unaccompanied by choice behavior assessment. The focus of the present experiment was on attitude change, but certainly a better understanding of the phenomenon will require future investigation of both attitude and behavior resulting from exposure to commercial brands.

Another critical issue is the delay between brand exposition and attitude assessment. The aim of product placement is that of changing consumer's attitude and behavior for a relatively long period, certainly a period long enough to increase the likelihood of purchasing the advertised product. The present research evidences the effect of product placement immediately after the exposition to commercial brands. A delayed post-test is needed to test whether the expectations of the manufacturers with regard to product placement were met.

Product placement has often been incorrectly assimilated to subliminal advertising, which is a field of enquiry that is still nebulous and void of documented certainties, where myths and legends often obfuscate available empirical evidence. The observation of product placement in a controlled environment, the documentation of its persuasive capacity, and its placement within the framework of a detailed psychological model such as the mere exposure

effect, can increase our understanding of the phenomenon and lay the grounds for further and more complete investigations.

Notes

1) In reality the first data gathered concerned the evaluation, in the laboratory, of sets of stimuli for which no preceding attitude existed, such as geometric figures or Chinese ideograms. Later, more ecologically valid research concentrated on more familiar and common attitude objects. It was also shown that, under these conditions, the mere exposure effect was not produced by stimuli when there were clear pre-existing negative attitudes (Bornstein, 1989).

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