

The Effectiveness of Product Placement: A Field Quasi-experiment

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Abstract

Using an experimental approach and field settings, the effectiveness of prominent, audio-visual, highly connected to the plot product placement in movies has been examined. An after only with control group design was used. Results show that exposure to prominent, audio-visual, highly connected to the plot product placement causes an increase in brand awareness among film viewers, irrespective of other executional variables of a given placement. However, this particular type of placement does not guarantee positive impact on attitudes and brand choice.

Keywords: product placement, marketing communications, effectiveness, advertising

1. Introduction

During the last three decades, since the success of Reese's Pieces placed in the movie *E.T. the Extraterrestrial*, a dynamic growth in popularity of product placement has been observed, both in the cinema and in other media (Galician & Bourdeau, 2004; PQ Media, 2005; PQ Media, 2006; Newell, Salmon, & Chang, 2006). Product placement, which can be defined as “the purposeful incorporation of a brand into an entertainment vehicle” (Russell & Belch, 2005, p. 74) has become more and more sophisticated and engaged more and more media vehicles – movies, television, video games, novels etc. Product placement in movies, which is the subject of this article, is still one of the most important types of product placement (PQ Media, 2006).

Academic literature on placements is two decades old (for reviews, see Kureshi & Sood, 2010; Balasubramanian, Karrh, & Patwardhan, 2006; Karrh, 1998) and the number of publications has grown considerably in recent years (Kureshi & Sood, 2010; Russell & Belch, 2005). Although many studies have been published, there are still a lot of questions about product placement effectiveness and its influence on consumers.

Studies on product placement effectiveness focus mainly on cognitive aspects, there are very few that deal with affective or conative outcomes (Balasubramanian et al., 2006). Most of product placement research was conducted in a laboratory, using students as subjects. These studies focused on strictly defined single aspects of product placement effectiveness.

Researchers are often skeptical of the external validity of results from laboratory experiments. Critiques emphasize that laboratory studies typically use small samples, non-representative subjects, relatively static environments and inherently artificial settings that do not extrapolate readily to the “real world” (Bertrand, Karlan, Mullainathan, Shafir, & Zinman, 2005). Findings from laboratory experiments can be a subject of concern as well because of forced exposure and hence forced attention (McQuarrie, 1998) and unnatural high levels of involvement. Also students, often used as subjects in laboratory experiments, do not represent typical consumers (Wells, 1993). Thus, generalizations of laboratory findings to the general public should be treated as tentative until they are cross-verified with studies using naturalistic designs (Zhao, Jin, & An, 2003). The problem of an unnatural viewing environment is particularly important in the research of product placement in movies, where the simulated environment does not reflect the real experience of watching a movie in a real cinema.

Some researchers (e.g. Steortz, 1987; Ong & Meri, 1994; Argan, Velioglu, & Argan, 2007; Tsai, Liang, & Liu, 2007; Bressoud, Lehu, & Russell, 2010; Wilson & Till, 2011) have used field studies to investigate product placement in movies but they have not used experimental designs. Thus, there is a need to conduct research which will investigate product placement in movies using field settings and an experimental approach. Such research will enable one to verify and validate laboratory experiments which have been presented in product

placement publications.

The purpose of this article is to gauge the effectiveness of product placement in movies in a natural environment using an experimental approach. The study describes product placement impact on brand awareness, brand attitudes and brand choice. It is limited to one type of product placement – prominent, highly connected to the plot, audio-visual placement. This type of product placement is considered by practitioners (Karrh, McKee, & Pardun, 2003; Balasubramanian et al., 2006) and partly by academic researchers (Russell, 1999; Russell, 2002) as one of the most effective types of product placement.

2. Literature Review and Hypotheses

On the basis of the hierarchy-of-effects model, product placement studies can be divided into three broad classes of this model: cognition, affect and conation (Balasubramanian et al., 2006). Product placement effectiveness studies include all three of the above stages of this model.

Cognitive outcomes are the most common measure of product placement effectiveness. Researchers examine changes in product placement recall, recognition and brand salience/brand awareness which are effects of brand exposure.

Studies show that viewers are able to recall or recognize brands which are placed in films and other media (Steertz, 1987; Ong & Meri, 1994; Babin & Carder, 1996a; Vollmers & Mizerski, 1994; Law & Braun, 2000; Rössler & Bacher, 2002; Ong, 2004; Yang, Roskos-Ewoldsen, Dinu, & Arpan, 2006; Tsai et al., 2007; Brennan, 2008; Delattre & Colovic, 2009) and product placement can increase brand salience/brand awareness (Karrh, 1994; Babin & Carder, 1996b; Johnstone & Dodd, 2000; Yang & Roskos-Ewoldsen, 2007). But product placement can result in either very high or very low recall, recognition or brand salience/brand awareness. Results range from several percent to almost 100% of viewers who can remember a particular brand. Everything depends on how a given brand is portrayed in a film.

In this situation, researchers have been trying to describe product placement characteristics which result in better or worse cognitive outcomes. Gupta & Lord (1998) propose two dimensions for product placement characteristics – modality (visual, audio, audio-visual) and prominence (prominent placement – in which a brand is highly visible; subtle placement – a brand is not shown prominently e.g. as a small background prop). Russell (1999) also proposes two dimensions – modality (visual, audio, audio-visual) and plot connection (degree of plot connection: higher plot placement - highly connected to the plot, that constitutes an important thematic element of the story, taking an important place in the story line or building the persona of a character; lower plot placement – which does not contribute much to the story). Generally, three dimensions can be distinguished – modality, prominence and plot connection.

According to Paivio's coding redundancy hypothesis, information which is presented audio-visually is better remembered than information using one modality only (Paivio, 1971). In the case of the degree of plot connection, the literature suggests that information (event) in the script which is meaningful for viewers (central to the action flow in the script) generates stronger memory retention than peripheral elements of the script because it is processed by viewers at a deeper, semantic level (Russell, 1999; Abelson, 1981; Craik & Lockhard, 1972). The literature also shows that the prominence of a stimulus attracts attention. Stimuli which occupy prominent positions within the visual field (e.g. in retail shelves, print and broadcast media) attract more attention, and vivid stimuli (which are clear and distinct) are better recalled than more pallid stimuli (Gupta & Lord, 1998; Engel, Blackwell, & Miniard, 1993; Higbee, 1979; Kisielius & Sternthal, 1984; Kisielius & Sternthal, 1986).

Most previous product placement academic studies have confirmed findings from cognitive psychology and advertising literature. According to these studies, audio-visual placements are the most effective ones in influencing memory. They are more effective than audio-only placements and visual-only placements (Steertz, 1987; Sabherwal, Pokrywczynski, & Griffin, 1994; Russell, 1999; Law & Braun, 2000; Brennan & Babin, 2004; Bressoud et al., 2010; Wilson & Till, 2011). The prominence of placed brands is the second factor which has been found to improve cognitive effects. Previous research has indicated that prominent placements are better recalled and better recognized than subtle placements (Brennan, Dubas, & Babin, 1999; Gupta & Lord, 1998; Weaver & Oliver, 2000; Cowley & Barron, 2008; Delattre & Colovic, 2009; Lehu & Bressoud, 2009; Bressoud et al., 2010; Wilson & Till, 2011). The third important element which improves brand memory is high connection to the plot. Previous studies have shown that higher plot placements are more effective in influencing memory than lower plot placements (Russell 1999; Russell 2002; Yang & Roskos-Ewoldsen, 2007; Lehu & Bressoud, 2009; Bressoud et al., 2010). Taking into consideration all previous findings, it can be assumed that in the current study (using an experimental approach and field settings) prominent, audio-visual, highly connected to the plot

product placements will increase top-of-mind awareness and spontaneous awareness (unaided awareness) of placed brands (i.e., memory measures used in the current study).

H1: *Consumers exposed to prominent, audio-visual, highly connected to the plot placements will report significantly higher top-of-mind awareness and spontaneous awareness of placed brands than consumers in a control group, who are not exposed to placements.*

Studies of product placement impact on attitudes toward placed brands have revealed mixed results. Some of these studies have shown no product placement impact on attitudes (Karrh, 1994; Vollmers & Mizerski, 1994; Vollmers, 1995; Babin & Carder, 1996b; Gangadharbatla, 2006) or, in some cases, even negative impact (Homer, 2009; Matthes, Schemer, & Wirth, 2007; Schemer, Matthes, Wirth, & Textor, 2008; Mau, Silberer, & Constien, 2008; Cowley & Barron, 2008; Jeong, Bohil, & Biocca, 2011). But, there are also a lot of publications which have revealed positive product placement influence on brand attitudes (Russell, 1999; Russell, 2002; Rössler & Bacher, 2002, Sheehan & Guo, 2005; Matthes et al., 2007; Schemer et al., 2008; Mau et al., 2008; Cowley & Barron, 2008). Thus, an important question becomes which executional variables result in better product placement effectiveness in improving brand attitudes.

According to Russell (2002) a match/congruence between modality and plot connection is the important element mediating product placement impact on attitudes. Congruent placements are these which join high connection to the plot with audio/audio-visual presentation or join visual-only exposure with low plot connection. The above types of placements are the most effective in changing attitudes in a positive direction.

The assumption above was supported by Russell (1999, 2002) in her experiment where it was found that there are two effective methods of influencing attitudes: highly connected to the plot, audio/audio-visual, prominent placements or lower plot, visual-only, subtle placements. In turn, Rössler & Bacher (2002) have shown that product placements have been able to influence not only overall attitudes toward brands but also consumers' evaluation of the specific, different features of these brands. Thus, it can be supposed that, in the current study, prominent, audio-visual, highly connected to the plot product placements (the first effective way of influencing attitudes listed by Russell) will improve overall attitudes toward brands and attitudes toward different attributes of these brands.

H2: *Consumers exposed to prominent, audio-visual, highly connected to the plot placements will report significantly more positive attitudes toward placed brands and their particular image attributes in comparison to consumers in a control group, who are not exposed to placements.*

The other important factor which increases the possibility of positive impact of product placement on brand attitudes is a good fit/congruence between a brand and a program/film in which the brand is placed (Bhatnagar, Aksoy, & Malkoc, 2004; d'Astous & Séguin, 1999; Panda, 2004). Bhatnagar et al. (2004) consider that the degree of congruence between placed brands and the contexts in which they appear determines the extent to which attitudes toward context transfer onto the placed brands. Based on this view, it can be assumed that these attributes of the brand image which are strongly and well connected to the movie content will be better assimilated by viewers because a transfer of these attributes from the movie content onto the perceived brand image will be easier.

H3: *The viewers' perception of brand attributes which are particularly salient and well connected to the movie content (brand attributes particularly highly connected to the plot) will be affected significantly more by product placement than perception of other brand attributes.*

Studies of product placement impact on purchase intentions and brand choice, similarly to attitudinal studies, have given ambiguous results. Some studies have found a positive impact of product placement on purchase intentions and choice (Auty & Lewis, 2004; Baker & Crawford, 1995; Law & Braun, 2000; Morton & Friedman, 2002; Yang & Roskos-Ewoldsen, 2007; Mallinckrodt & Mizerski, 2007), whilst other studies found no impact (Ong & Meri, 1994; Ron, 1996; Chaney, Lin, & Chaney, 2004; Gangadharbatla, 2006). Generally, in some cases, product placement can positively influence purchase intentions and brand choice, but this influence depends on the way a brand is exposed and brand characteristics.

In contrast to memory and attitudinal studies, there is still no clear idea which product placement executional variables increase product placement influence on purchase intentions and brand choice. Law & Braun (2000) found that visual-only placements had the strongest impact on choice and audio-visual placements revealed the weakest impact. But those results are inconsistent with the research among children which found that audio-visual placement had significant impact on choice (Auty & Lewis, 2004), with the beliefs of product placement practitioners, who consider strong, prominent exposure, which include an audio component as the best

type of product placement (Karrh et al., 2003; Balasubramanian et al., 2006), and inconsistent with published examples of product placement impact on sales (e.g. the positive sales impact of the prominent, audio-visual BMW Z3 placement in *Goldeneye*; Fournier & Dolan, 1997). Generally, placement characteristics and their influence on purchase intentions and choice require further studies. It can be assumed that, the same as in the case of product placement impact on attitudes, positive impact on choice can be achieved in two ways: by prominent, audio-visual, highly connected to the plot product placements (this assumption has been supported partly by academic studies, practitioners' opinions and real cases) or by subtle, visual-only placements (this assumption has been supported partly by laboratory studies and corresponds with studies on advertising incidental exposure; Shapiro, MacInnis, & Heckler, 1997).

Thus, on the basis of previous studies (laboratory studies, practitioners' opinions and case studies), it can be assumed that using an experimental approach and field settings, in the case of prominent, audio-visual, highly connected to the plot product placements there will be a positive product placement impact on the choice of placed brands.

H4: *Consumers exposed to prominent, audio-visual, highly connected to the plot placements will choose placed brands from competitive brands significantly more often than consumers in a control group, who are not exposed to placements.*

3. Methodology

3.1 Sample Selection

An after only with control group, quasi-experimental design was used. Because there was no random selection of respondents to the control and treatment group, the study is, according to Cook's & Campbell's (1979) definition, a quasi-experimental project.

The study was conducted in Warsaw, Poland, in five cinemas, among viewers leaving cinemas, who declared that they just had seen one of two films (similar in genre) – *The Terminal* or *The Bench*. 200 viewers were surveyed in face to face interviews – 100 in the treatment group (people who had watched the American comedy-drama film *The Terminal*) and 100 in the control group (viewers who had watched the Polish comedy-drama film *The Bench*). The research was conducted over one week after the movie premieres. Polish moviegoers, the same as other European and American viewers, are often exposed to product placements, due to the popularity of American movies as well as many product placements which are used in national films.

The sample was drawn by quota. The structure of the sample reflects the demographic structure (gender and age) of Polish viewers, who go to the cinema at least once every six months (the structure was taken from the research Target Group Index, SMG/KRC, 2003). According to Target Group Index (TGI) the amount of people who go to the cinema at least once every six months is 18% of the population of Poles aged 15 and over. Quota sample and field settings were used to achieve higher external validity in comparison to laboratory experiments.

Although, in the study, similar films, similar place and time were chosen and quota sampling (gender and age) was used, the results showed that there were some differences between the groups in education and incomes. Generally, respondents who had watched *The Bench* declared better education and higher incomes in comparison to respondents who had watched *The Terminal*. The demographic structure of the control and treatment group is presented in table 1.

Table 1. A comparison of the treatment and control group characteristics

	Treatment group	Control group
n	100	100
<i>Gender</i>		
Female	51%	51%
Male	49%	49%
<i>Age</i>		
15-24 years	48%	48%
25-34 years	23%	23%
35-44 years	14%	14%
more than 44 lat	15%	15%
<i>Education^a</i>		

primary	25%	10%
secondary	33%	25%
higher	41%	65%
no response	1%	0%
Average net income for one person in a household (in PLN) ^b	2009.3	2674.2

Note: ^a Chi Sq, $p < 0.01$; ^b t-test, $p < 0.01$

3.2 Data collecting (Procedures)

The movies which were chosen for the study had to meet the following criteria: similar movie genre (because the treatment and control group had to represent people with similar characteristics and preferences), similar premiere dates, proper (to the research goals) product placements, and to have attendance high enough to survey 200 respondents. Finally, two films were chosen – *The Bench* and *The Terminal*. Both of the films were watched by three independent judges with product placement knowledge. Two prominent, audio-visual and highly connected to the plot product placements were chosen as independent variables in the study. They were the Hugo Boss and Burger King brands placed in *The Terminal*. Both brands had important roles in the film and were used by Tom Hanks, who was the main character in the movie. When the hero, trapped in a terminal at New York's airport, earned his first money he bought a meal in Burger King. In turn, Hugo Boss suits acted as the status symbol. When the hero found a permanent job and had no financial problems, he met a woman and fixed a date with her. To impress her he bought a Hugo Boss suit.

3.3 Research Measures

The study used implicit measures. Because of this, in the questionnaire there were no questions concerning product placement directly. There were only questions about awareness, evaluation and choice of the studied brands in comparison to two competitive brands in a given product category (suits or fast food restaurants). In order to additionally control the homogeneity of the treatment and control groups, there was the control category (toothpaste) added into the study, which did not appear in either movie studied.

In all, there were three product categories in the questionnaire:

- toothpastes – the control category (three brands – Blend-a-med, Colgate, Aquafresh).
- fast food restaurants – one brand, which was placed in *The Terminal* (Burger King), and two competitors (McDonald's and KFC), which were not placed in either movie studied.
- suits – one brand, which was placed in *The Terminal* (Hugo Boss), and two competitors (Giorgio Armani and Pierre Cardin), which were not placed in either movie studied.

At the beginning of each interview each interviewer declared that the questionnaire would have two parts: the first would concern movie evaluation and the second respondents' opinions about various consumer products. Next, after some filtering questions, respondents were asked about film evaluation (*The Terminal* or *The Bench*).

After questions concerning the movies, each interviewer read the statement "Now, we begin the second part of the questionnaire. The purpose of the study is to find out opinions about various consumer products among people who often go to the cinema". The purpose of the statement was to move attention from the movie, focus it on the brands and to separate answers concerning the movie from answers concerning the brands (in order to mask the real research purpose).

Other questions concerned product categories and brands. To additionally move attention from the films and to mask the real research purpose, the second part of the questionnaire began with a question about awareness of toothpaste brands – the control category which was not placed in either movie studied.

The first questions of the second part of the questionnaire concerned top of mind awareness in all categories studied – toothpastes, fast food restaurants and suits (which brand came first in the respondent's mind when she/he thought of a given product category). Next, researchers asked questions about spontaneous brand awareness (unaided brand awareness). In top of mind awareness answers researchers marked only one brand from three studied in a given product category. If respondents answered any other brand (other than the three studied) researchers marked it as "others".

Further questions concerned attitudes toward the brands in the chosen product categories. For each product category (toothpastes, fast food restaurants and suits) interviewers read a list of six statements concerning this

category. Respondents were asked to choose which brand (from the three competitive brands in a given product category) fit the best and which brand fit the worst to a given statement. The third brand in a given category (which neither fitted the best nor the worst to a given statement) was marked as neutral. There was a possibility to choose “I don’t know”, but this possibility wasn’t read by researchers and was marked only if a respondent found all given possibilities inadequate. There were cases in the study in which respondents indicated only a brand which fitted the best but they did not indicate which brand fitted the worst. In that case two brands were marked as “neutral”.

The list of statements for each category was created from the Internet sites of the brands studied and their marketing communications (which described the product features which were communicated to consumers of a given product category) and from the content analysis of the movie *The Terminal*. As after watching the film there was no consistency between judges, as to which image attribute of Burger King was connected to the movie plot most strongly (most closely), in order to test the hypothesis H3 there was one statement concerning Hugo Boss used (“a suit which impresses women”), which according to the judges had the strongest connection to the movie content.

Other questions in the questionnaire concerned brand choice. These questions also used three brands in each product category. Respondents had to answer which brand (from three competitive brands) in a given product category she/he would buy the most willingly and which the least. For fast food restaurants the question was “in which from three fast food restaurants would you have a meal most willingly and in which least willingly?”. In the case of men's suits and female respondents the question was “if you bought a suit for a man which one from the suits shown on the card would you buy most willingly and which least willingly?”

Whilst asking about attitudes and choice, respondents were shown cards with the brand names in the three studied product categories. The order of the brands on the cards was rotated.

In the coding process of the answers concerning attitudes and brand choice the following procedure was used: the brand which fitted the least to a given statement (or declaration that this brand would be chosen least willingly) got 1 point, the brand with a neutral declaration (neither the best nor the least fit or neither most willingly nor least willingly a respondent would buy it) got 2 points, and the brand which fitted the best to a given statement (or declaration that this brand would be chosen most willingly) got 3 points. On this basis, after summing up all answers concerning a given statement, for each brand the average attitude toward this statement (which symbolized brand attribute) was counted and for brand choice – the brand choice ratio was estimated.

Additionally, the overall attitude toward particular brands was counted as an average from all six statements concerning a given brand.

At the end of the questionnaire there were additional questions concerning demographics (education, incomes) and a blank space for qualitative comments from interviewers concerning respondents’ behavior during the interview. Respondents who during the interview referred to product placement or brands in films, were not excluded from the sample. Such a procedure was chosen because in the real world movies are watched both by people who are not conscious of product placement and people who knows about this practice.

4. Results

4.1 The Control Product Category

In order to estimate how differences between the treatment and the control group influenced internal validity, the control category was added and a comparison of awareness, attitudes and brand choice in the treatment and the control group for three brands in the control category was made.

In the case of top of mind awareness and spontaneous awareness chi-square tests did not show any significant differences between the treatment and the control group ($p > 0.05$).

Chi-square tests of six image attributes of three control brands showed statistically significant result for one brand Aquafresh for two statements – “the best to prevent caries”, $\chi^2(2, n=200)=6.609, p < 0.05$ and “provide the complex teeth protection”, $\chi^2(2, n=200)=9.042, p < 0.05$. In the case of these statements for Aquafresh, in the treatment group there were less neutral answers and more positive and negative answers in comparison to the control group. But additional comparison of average grades for statements by independent samples t-test revealed no significant differences ($p > 0.05$) between average grades for all attributes (statements) for all three control brands between the treatment and the control group.

A comparison of brand choice measures showed statistically significant differences between the groups in choice ratio for Aquafresh brand. Both chi-square test, $\chi^2(2, n=200)=10.286, p < 0.01$ and t-test, $t(198)=2.033, p < 0.05$,

showed that the brand choice ratio for Aquafresh was significantly lower in the treatment group in comparison to the control group. For the two other control brands, differences were not significant.

Generally, there were no significant differences between the treatment and the control group in case of brand awareness and brand attitudes (brand attributes evaluation). The only significant difference concerned the choice ratio for one out of three control brands.

4.2 Product Placement Impact on Brand Awareness

The hypothesis H1 concerning memory was tested by chi-square tests. Table 2 shows both top of mind and spontaneous awareness of Burger King, Hugo Boss (product placements of these brands were independent variables) and the competitive (control) brands in the treatment and the control group.

The first part of H1 assumed that consumers exposed to prominent, audio-visual, highly connected to the plot placements would report significantly higher top-of-mind awareness in comparison to consumers in the control group, who were not exposed to placements. Results of the chi-square tests support the first part of H1 for both placed brands. Top of mind awareness of Burger King in the treatment group (13%) was significantly higher than in the control group (1%), $\chi^2(1, n=200)=11.060, p<0.001$. For the second placed brand, Hugo Boss, the difference was even higher. Top of mind awareness for Hugo Boss in the treatment group was 74%. In the control group it was 9%, $\chi^2(1, n=200)=87.015, p<0.001$. Thus, the first part of H1 is supported.

The second part of H1 supposed that consumers exposed to prominent, audio-visual, and highly connected to the plot placements would report significantly higher spontaneous awareness than the control group. Results revealed higher spontaneous awareness of brands placed in the movie *The Terminal* in the treatment group than in the control group. Spontaneous awareness of Burger King in the treatment group was 40% and was significantly higher than in the control group (24%), $\chi^2(1, n=200)=5.882, p<0.05$. Even higher effect was for Hugo Boss with 81% of spontaneous awareness in the treatment group and 22% in the control group, $\chi^2(1, n=200)=69.683, p<0.001$. The second part of H1 is supported. Thus, the whole of H1 is confirmed.

Table 2. Product placement impact on top of mind and spontaneous awareness of Burger King and Hugo Boss

	Treatment group (n=100)	Control group (n=100)	Chi-sq	df	Sig
Top of mind awareness					
<i>category - fast food:</i>					
McDonald's	60%	70%	2.198	1	0.138
Burger King	13%	1%	11.060	1	0.001
KFC	20%	10%	3.922	1	0.048
<i>category - suits:</i>					
Hugo Boss	74%	9%	87.015	1	<0.001
Giorgio Armani	3%	9%	3.191	1	0.074
Pierre Cardin	0%	9%	9.424	1	0.003
Spontaneous awareness					
<i>category - fast food:</i>					
McDonald's	85%	81%	0.567	1	0.451
Burger King	40%	24%	5.882	1	0.015
KFC	49%	57%	1.285	1	0.257
<i>category - suits:</i>					
Hugo Boss	81%	22%	69.683	1	<0.001
Giorgio Armani	14%	21%	1.697	1	0.193
Pierre Cardin	12%	19%	1.871	1	0.171

4.3 Product Placement Impact on Attitudes

Hypotheses concerning attitudes were tested by chi-square and t-tests. The results of chi-square tests and t-tests for product placement impact on attitudes toward Burger King and Hugo Boss (in comparison to competitive, control brands) are shown in table 3 and 4.

The hypothesis H2 supposed that consumers exposed to prominent, audio-visual, highly connected to the plot

placements would report significantly more positive attitudes toward placed brands and toward their particular image features than consumers in a control group, who were not exposed to placements.

In the case of Burger King both chi-square tests and t-tests did not reveal any significant differences in attitudes toward this brand between the treatment and control group ($p > 0.05$). On the contrary, chi-square tests showed significantly better evaluation of the Hugo Boss brand as the one fitting the statements (brand attributes) “a suit which impresses women”, “every man’s dream”, “the best brand of men’s suits” in the treatment group than in the control group. Additionally, t-tests revealed significantly higher Hugo Boss average grades in the treatment group for statements “a suit which impresses women”, “every man’s dream”, “the best brand of men’s suits” and “a suit for special occasions”.

A comparison of overall attitudes toward Burger King and Hugo Boss also showed no differences for Burger King and significantly better attitudes toward Hugo Boss in the treatment than in the control group, $t(198) = 3.236$, $p < 0.01$. Thus, H2 is supported for Hugo Boss and not supported for Burger King.

The hypothesis H3 assumed that the viewers’ perception of brand attributes which were particularly salient and well connected to the movie content (brand attributes particularly highly connected to the plot) would be affected significantly more by product placement than perception of other brand attributes. As it has been already written in the previous part of this article, according to the judges, one statement, “a suit which impresses women”, which concerned Hugo Boss suits, had the strongest connection to the movie content in comparison to other statements concerning Hugo Boss. Results of chi-square tests and t-tests show that grades for this statement improved the most in the treatment group (in comparison to the control group) among all statements. Additionally, the V-Cramer coefficient (table 5) has the highest value for the statement “a suit which impresses women”, which shows that perception of this attribute of Hugo Boss changed the most in the treatment group in comparison to the control group. Thus, H3 is supported.

Table 3. Product placement impact on attitudes toward Burger King

Statements/brands/groups ^a	The worst fit	Neutral	The best fit	Chi-square test			M	SD	t-test		
				Chi-sq	df	Sig			t	df	Sig
Burger King - Fast and skilful service for clients											
treatment group	31%	64%	5%	3.697	2	0.150	1.74	0.54	-0.141	198	0.888
control group	26%	73%	1%				1.75	0.46			
Burger King - You can eat your fill there											
treatment group	23%	67%	10%	0.114	2	0.945	1.87	0.56	0.249	198	0.804
control group	25%	65%	10%				1.85	0.58			
Burger King - They have good ketchup in this restaurant											
treatment group	24%	72%	4%	2.036	2	0.371	1.80	0.49	-1.353	196	0.178
control group	16%	79%	5%				1.89	0.45			
Burger King - The service there is very nice											
treatment group	26%	67%	7%	2.167	2	0.338	1.81	0.54	-0.419	198	0.676
control group	20%	76%	4%				1.84	0.47			
Burger King - They serve tasty dishes there											
treatment group	27%	65%	8%	1.015	2	0.602	1.81	0.56	-0.779	198	0.437
control group	21%	71%	8%				1.87	0.53			
Burger King - A very good fast food restaurant											
treatment group	30%	61%	9%	5.565	2	0.062	1.79	0.59	-0.665	188	0.507
control group	20%	76%	4%				1.84	0.47			
Burger King – overall attitude											
treatment group							1.80	0.40	-0.677	198	0.499
control group							1.84	0.36			
McDonald’s - overall attitude											
treatment group							2.02	0.48	-0.730	198	0.466
control group							2.07	0.46			
KFC – overall attitude											
treatment group							2.22	0.45	0.613	198	0.541
control group							2.18	0.43			

Note: ^a treatment group n=100, control group n=100.

Table 4. Product placement impact on attitudes toward Hugo Boss

Statements/brands/groups ^a	The worst fit	Neutral	The best fit	Chi-square test			M	SD	t-test		
				Chi-sq	df	Sig			t	df	Sig
Hugo Boss - A suit for special occasions											
treatment group	22%	52%	26%	5.151	2	0.076	2.04	0.70	2.275	198	0.024
control group	33%	52%	15%				1.82	0.67			
Hugo Boss – A prestigious suit											
treatment group	33%	44%	23%	5.675	2	0.059	1.90	0.75	1.230	198	0.220
control group	33%	56%	11%				1.78	0.63			
Hugo Boss - A suit which impresses women											
treatment group	14%	49%	37%	21.700	2	<0.001	2.23	0.68	4.548	194	<0.001
control group	28%	62%	10%				1.82	0.59			
Hugo Boss - An elegant suit											
treatment group	24%	55%	21%	4.304	2	0.116	1.97	0.67	1.960	198	0.051
control group	32%	57%	11%				1.79	0.62			
Hugo Boss - Every man's dream											
treatment group	18%	50%	32%	7.679	2	0.022	2.14	0.70	2.781	198	0.006
control group	30%	53%	17%				1.87	0.68			
Hugo Boss - The best brand of men's suits											
treatment group	22%	59%	19%	6.681	2	0.035	1.97	0.64	2.517	198	0.013
control group	33%	59%	8%				1.75	0.59			
Hugo Boss - overall attitude											
treatment group							2.04	0.52	3.236	198	0.001
control group							1.81	0.52			
Giorgio Armani - overall attitude											
treatment group							2.34	0.47	-0.607	198	0.545
control group							2.38	0.38			
Pierre Cardin - overall attitude											
treatment group							1.78	0.52	-2.541	197	0.012
control group							1.96	0.49			

Note: ^a treatment group n=100, control group n=100.

Table 5. Strength of change of respondents' perception of particular attributes of Hugo Boss

Image attributes of Hugo Boss ^a	V-Cramer coefficient	
	Value	Approximate significance
Hugo Boss - A suit for special occasions	0.160	0.076
Hugo Boss - A prestigious suit	0.168	0.059
Hugo Boss - A suit which impresses women	0.329	<0.001
Hugo Boss - An elegant suit	0.147	0.116
Hugo Boss - Every man's dream	0.196	0.022
Hugo Boss - The best brand of men's suits	0.183	0.035

Note: ^a treatment group n=100, control group n=100.

4.4 Product Placement Impact on Brand Choice

Hypothesis H4 assumed that consumers exposed to prominent, audio-visual, highly connected to the plot placements would choose placed brands over competitive brands (in choice/purchase situation) significantly more often than consumers in the control group, who were not exposed to placements. This assumption was tested by chi-square tests and t-tests for brand choice ratio in the same way as in the case of testing attitudes.

Results of the chi-square tests and t-tests for brand choice of Burger King, Hugo Boss and the competitive brands in the treatment and control group are shown in table 6. Similarly to the attitudinal results, there was no statistically significant difference for Burger King's choice in the treatment and control group ($p > 0.05$).

On the contrary (again, as in the case of attitudes) there was significantly more frequent choice of Hugo Boss in

the treatment group, $\chi^2(2, n=200)=6.500$, $p<0.05$, $t(197)=2.252$, $p<0.05$. Altogether, H4 is supported for Hugo Boss and not supported for Burger King.

Additionally, both in the case of attitudes and brand choice, the study revealed an interesting relation between Hugo Boss and the competitive brands in the suit category. Product placement improved attitudes toward Hugo Boss and the choice for Hugo Boss but not at the expense of the leading brand Giorgio Armani (which was the most positively perceived brand and the most often chosen brand both in the treatment and in the control group). However the improvement of attitudes toward Hugo Boss and choice for Hugo Boss weakened the brand Pierre Cardin whose grades were significantly lower in the treatment group than in the control group. In the control group Hugo Boss was the least positively perceived and the worst chosen brand in the suit category (among the three competitive brands), but in the treatment group Hugo Boss was promoted to the second place and Pierre Cardin fell to the third (last).

Table 6. Product placement impact on choice for Burger King and Hugo Boss

Brands/groups ^a	I would buy it least willingly	Neutral	I would buy it most willingly	Chi - sq			T -test				
				Chi-sq	df	Sig	M	SD	t	df	Sig
McDonald's											
treatment group	37%	37%	26%	0.661	2	0.718	1.89	0.79	-0.805	198	0.422
control group	32%	38%	30%				1.98	0.79			
Burger King											
treatment group	44%	43%	13%	2.038	2	0.361	1.69	0.69	-0.426	198	0.670
control group	37%	53%	10%				1.73	0.63			
KFC											
treatment group	8%	41%	51%	1.850	2	0.397	2.43	0.64	1.045	198	0.297
control group	14%	39%	47%				2.33	0.71			
Hugo Boss											
treatment group	25%	51%	24%	6.500	2	0.039	1.99	0.70	2.252	197	0.025
control group	42%	40%	18%				1.76	0.74			
Giorgio Armani											
treatment group	13%	31%	56%	7.827	2	0.020	2.43	0.71	0.428	192	0.669
control group	6%	49%	45%				2.39	0.60			
Pierre Cardin											
treatment group	50%	35%	15%	13.390	2	0.001	1.65	0.73	-3.106	197	0.002
control group	25%	54%	21%				1.96	0.68			

Note: ^a treatment group n=100, control group n=100.

5. Discussion

The study, which has been reported above, has gauged the effectiveness of prominent, audio-visual, highly connected to the plot product placement in movies in field settings, using an experimental approach.

The results of the study show that prominent, audio-visual, highly connected to the plot product placement in movies improves brand awareness, irrespective of other executional variables of a given placement. These findings are consistent with the results of previous studies which have shown the positive impact of such placements on brand awareness and product placement recall and recognition (Russell, 1999; Russell 2002; Law & Braun, 2000; Gupta & Lord, 1998; Brennan et al., 1999; Steertz, 1987; Brennan & Babin, 2004; Delattre & Colovic, 2009; Johnstone & Dodd, 2000; Yang & Roskos-Ewoldsen, 2007; Cowley & Barron, 2008; Lehu & Bressoud, 2009).

The results concerning product placement impact on attitudes and brand choice do not lead to clear conclusions. The study revealed significant Hugo Boss placement impact on attitudes toward this brand and brand choice. On the contrary, there was no Burger King placement impact on attitudes and brand choice. Therefore, results from previous studies which have shown product placement impact on attitudes and purchase intentions/choice (Russell 1999; Russell 2002; Rössler & Bacher, 2002; Auty & Lewis, 2004; Sheehan & Guo, 2005; Yang & Roskos-Ewoldsen, 2007; Mallinckrodt & Mizerski, 2007), have only been partly confirmed. The attributes of both placements (Hugo Boss and Burger King) were very similar – both were audio-visual, prominent, highly

connected to the plot and both brands were used by the main character. Hence, results show that in the case of very similar executional features of two placements (modality, prominence, plot connection), other factors may decide if a given placement is effective in influencing attitudes and choice.

The other interesting conclusion from the study (although it is not directly connected to tested hypotheses) was that the product placement of Hugo Boss significantly improved its position (attitudes and choice) with regard to and at the expense of the weaker competitive brand – Pierre Cardin. But the increase of overall attitudes toward Hugo Boss and the choice of Hugo Boss did not decrease attitude and choice measures for the strongest brand (in the respondents' opinion) – Giorgio Armani. Thus, it is possible that product placement helps to improve attitudes toward a placed brand and choice of this brand (with regard to competitors) only in a situation when positive attitudes toward competitive brands are not held very strongly. The assumption above may possibly explain why two similar product placements (Hugo Boss and Burger King) may differ in affecting attitudes and brand choice. It is possible that the product placement of Burger King did not improve attitudes and the choice of Burger King, because attitudes and purchase intentions toward competitors (McDonald's and KFC) were too strongly held by respondents to be weakened to the advantage of Burger King.

The study also showed that product placement had the strongest impact on viewers' perception of this brand's attribute, which was particularly salient and well connected to the plot, which confirmed assumptions presented in the literature concerning congruence between placed brands and the contexts in which they appeared (Bhatnagar et al., 2004).

Marketers are increasingly interested in the effectiveness of product placement and they want to know the rules which enable positive impact on consumers. This study shows that not only laboratory experiments but also field experimental designs find that product placement can be an effective marketing communication tool in the scope of improving brand awareness, influencing brand attitudes and brand choice. But it is very difficult to find simple rules which will cause product placement to be effective. Such rules can only be applied in the case of improving brand awareness. If a brand is placed in a film prominently, with both audio and visual components, and is highly connected to the plot (additionally a brand interacts with a movie hero) such product placement will probably significantly increase awareness of the placed brand among viewers, irrespective of other placement attributes. But making prominent, audio-visual, highly connected to the plot product placement does not guarantee positive impact on attitudes and brand choice. There are other factors (product placement creativity, image context, brand and product category characteristics etc.) which cause two product placements that are similar in execution (e.g. prominent, audio-visual, highly connected to the plot) to result in totally different effectiveness of influence on attitudes and brand choice.

Thus, all generalizations of product placement influence on attitudes and brand choice which include only such factors as modality, prominence and plot connection are a big simplification which does not reflect the whole diversity of factors which affect product placement effectiveness. On the contrary, such generalizations can be justified in the case of product placement influence on brand awareness.

Product placement can improve not only overall attitude toward a brand. Using product placement, marketers can influence brand image in a more sophisticated way by improving the perception of particular brand features. The strongest change of consumers' perception concerns these brand attributes which refer strongly to the movie plot. Thus, product placements should be created in a way which enables strong (close) connection of the movie plot to the brand attributes, which are important for marketers.

There are some limitations of the study. The advantage of the study is that it uses field setting and quota samples of real moviegoers (most of the previous academic studies were conducted in laboratories). It can be assumed that this study characterizes a higher external validity in comparison to laboratory studies. But, it should be remembered that the study was conducted within a limited area, in Warsaw, Poland, and results may be different in other geographical locations. In spite of very careful sample selection, which tried to gain maximum similarity of both the treatment and control group in order to maximize internal validity, significant differences in education and incomes between the treatment and control group were revealed. However, analyses of differences in awareness, attitudes and choice of the three brands in the control category did not reveal significant differences in the treatment and the control group. The only significant difference was a value of choice ratio for one out of the three brands in the control category.

The study gauged only immediate, short-term effects of product placement. The scope of the study did not embrace long-term measures. It also did not deal with real purchase behaviors which are the final effect of product placement influence. Besides, only two brands from the two product categories were subjects of the study. It is possible that research in other product categories may reveal slightly different product placement

effects.

Additionally, respondents are moviegoers, not strictly defined target groups for the two studied brands. The study which covers only respondents from target groups might reveal other results (but this limitation refers to most of academic studies of product placement).

There are only a few published field studies which investigate product placement effectiveness. Limitations in a number of brands and product categories in the current study lead to a need for further field studies which will gauge the effectiveness of product placement for other brands and product categories using an experimental approach. Future research should also deal with long-term product placement impact on brand awareness, brand attitudes and brand choice with taking into consideration real purchase behaviors.

There are also many executional variables of product placement (brands connected to villains and violent scenes, showing of products' flaws, a placement in a humorous or dramatic context etc.) which need further laboratory and field research, as well as many theories concerning product placement which have not been field-tested yet.

The current study was conducted among moviegoers. But marketers most often try to appeal to strictly selected target groups with strictly defined demographics and behavioral patterns. Future product placement studies should take this fact into consideration, and therefore be conducted among the targeted consumers of particular brands placed in films.

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