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Communicative Effectiveness of Product Placement Among Portuguese and Spanish Audiences

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Abstract

This research project focuses on the effectiveness of product placement in James Bond movies. The results are obtained from a sample of 300 Portuguese and Spanish university students, organized in independent groups at random. Three questionnaires were applied, one for each film as there were different brands in the research corpus, and applied in the sample's native languages. Within the methodological procedure developed by Ángel Rodriguez Bravo of the Universitat Autònoma de Barcelona, a direct observation was carried out to collect data on the placement surface, duration and occurrences of product placement in each of the film productions. The results point out that the subjects recall products and brands in the form of spontaneous and assisted recall; however, the same subjects also indicate fake products and brands. The most recalled brands did not obtain more favorable attitudes or high purchase intention. A relationship between the time and space of product placement and recall was confirmed (Hypothesis 1); subjects who recalled brands also showed more favorable attitudes, but those who did not recall also showed favorable attitudes toward brands (Hypothesis 2). And finally, no association was found between favorable attitudes and purchase intentions (Hypothesis 3).

Keywords: Product placement, cinema, eficácia comunicativa, efeitos cognitivos, afetivos e comportamentais

INTRODUCTION

Although the beginning of the communication technique coincides with the birth of the film industry, through which it has developed , particularly in the United States, there is knowledge that it was already used in other media, not only in films. Exponential growth occurred in the 1980s with the film ET. Since then, it has been growing, and the past 20 years of research are considered the beginning of the knowledge of this communication technique considered hybrid, since it contains paid attempts to influence the public for commercial purposes but also because the placement of products and brands in entertainment content became elements of the narrative which contributes to the enrichment and realism of the argument. Given the development of the technology of this communication technique, the agreements between the various parties were also subject to a natural evolution of a relationship that has become interesting and desirable for producers and broadcasters of entertainment and product manufacturers, including companies providing services.

Product placement is, therefore, a very popular technique for the promotion of products and brands,

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and proves to be advantageous for producers, as it is a source of funding, either directly obtained by paying for the placement of products and brands, or indirectly, by providing goods and services; but also for companies and advertisers, as it is a non-intrusive and less obvious means of broadcasting their products and brands in media whose results are perpetuated over time, and which influence the audience locally and globally. But for that to happen, you don't just have to put your products and brands in the media, you need to integrate them naturally into the narrative, so they naturally also show their attributes to the consumer. And because we cannot live without brands because they are part of our time and set the trends, pre-sent and future, social, cultural, political, or otherwise, the film industry remains, in our opinion, a medium of remarkable excellence, for present and future memory.

The recognition of this technique and the estimated reach it has with the public, developed, improved and used in different ways, has followed the technological evolution with an in-credible plasticity. Therefore, it is necessary to know more and more about the impact of product placement on diverse audiences, not only in films, but also in literature, theatre, video games, TV entertainment programs, mobile phones, thematic channels, songs, music videos, and other digital artefacts. This information is important for companies and advertisers to evaluate the continuity of investment and the selection and integration of their products and brands in different media. It is commonly accepted that this technique has seen major growth and is a reality in our lives, in different communication formats and is an important part of integrated brand communication strategies [1–5].

LITERATURE REVIEW

Product placement is an important component of marketing communication and is often used to reach large audiences in media such as movies, television shows, music videos, console, and online games, among others, to such an extent that millions of dollars are spent annually on product and brand placements to reach large audiences. However, product placement is not necessarily seen as a substitute for traditional advertising, but rather as a complementary technique to it to increase brand growth with audiences. Film productions concentrate the attention of advertisers when it comes to product placement. The reason is that the cinematographic medium provides conditions that do not exist in other communication formats. In cinema, the level of audience involvement is higher because the viewer chooses to be in that context. As such, since it is his choice, he is more attentive to the film and consequently to everything related to the audiovisual narrative. Therefore, also to product placement. In any way, product placement is one of the most sought-after techniques by communication agents and companies seeking to gain value for their brands.

From a conceptual point of view, several authors have contributed to the definition of product placement which consists in showing products, brands and or services in one or more sequences of a film. Thus, it is the deliberate and strategic placement of products, brands, or services in film sequences to promote them to a wide audience. Thus, products, brands and/or services are integrated in the audiovisual narrative, becoming part of it and eventually influencing the viewers' perception, since they figure in the cinematographic shots and the plot. Therefore, product placement works as a type of hybrid communication that includes paid at tempts to influence audiences for commercial purposes. However, the cost is lower than television advertising spaces. It may generate persuasive effects with greater impact than traditional advertising if it is not perceived as a commercial message.

In this statement, the author already raises the question of the attitudes of the spectator in relation to the technique and gives it a communicational component and not an advertising component. From Balasubramanian's definition, there have been several authors and studies on product placement, in its strategic, communicational and marketing aspects. Baños & Rodriguez extend the scope of application of product placement to brands and services and situate it in various media (audiovisual, graphic or literary, etc.), whose remuneration can be of a monetary nature or agreed between the company and the production and that can also pass through the supply of goods for the production and teams, advice, promotion of the work, among others. This definition is more realistic and comprehensive, but very focused on the way it is used in film productions.

Product placement is a tool with many advantages for advertisers and producers, since it facilitates the encounter of potential consumers with products or brands. However, product placement is a complex technique which has other objectives than commercial ones. Hence, either by excess or by default the result of product, brand or service co-location can be negative. Therefore, product placement can be more powerful than traditional advertising if it is not perceived as an attempt at persuasion. In this way agents, marketing and entertainment directors work with television, scriptwriters and directors in order to find solutions and opportunities for placement that seems natural to viewers; but at the same time, enriches and gives realism to the script. However, in situations where the brand has a determining role in the narrative or its presence in a show is suspect, the audience may consider this an attempt at persuasion and perceive the placement as just another traditional advertising situation. Regardless of the attitudes toward product placement, this technique has had a progressive growth and is a reality in several film and television formats, becoming a main piece in the integrated communication strategies of brands.

Since this communication technique started and has been spreading in different media, several authors have studied how to place products, brands, and services. Reference authors have proposed ways of categorization that have been used to know, place, identify and measure the effectiveness of product placement. As we have seen throughout this work, this communication technique may be visual, verbal/auditory, or combined to maximize the audience's impact. It may also be managed or consumed. It may only appear through logos or brand names, through packaging, or through services. The integration may vary between subtle or prominent and be more or less related to the plot of the script.

Therefore, several authors have indicated various typologies of product placement, used in various studies for the construction of hypotheses, and that help clarify and understand the effectiveness of this very recent communication technique. One of these proposals is presented by Gupta and Lord who propose a two-dimensional approach to the level of presentation, where the senses are activated by the stimulus, and the level of prominence, where the product is placed so as to be the center of attention of the audience. Therefore, the authors propose the categorization of product placement into the following modes:

- *Visual:* In this mode, the product is shown through the brand logo, or other brand visualization mode, without any relevant message, sound or verbal reference that draws attention to the product.
- *Audio:* This mode involves verbal mention of the brand, but without showing the product on the screen;
- *Audiovisual:* In this mode, the brand is shown and verbalized simultaneously.

Placement in one of the above modes can be relatively prominent or subtle. They are considered prominent when the product (or other object or brand symbol) is highly visible on screen, either by size, position on screen, or centrality/importance in the action); subtle are placements where the brand or product is not shown prominently (the brand appears in a reduced size in the background, out of the central field of view, among multiple objects and with little exposure time). Again, subtle placements, incorporated into a scene as background or without relevant basis for integration into the action, are more easily placed by film producers and less costly than prominent placements. Thus, both modes and prominence are relevant to the incorporation of the product or brand in a film and the cost borne by the advertiser to reach audiences [5–15].

Regarding the knowledge problem of this research, the Product Placement communicative effectiveness is achieved when the brands are installed in the specter's memory after a movie experience, since the central elements of a mental representation are the ones that are activated first, allowing to improve the recognition and the recall, and may lead to a change in attitudes. The authors state that the mere exposure to an idea significantly increases the likelihood of individual acceptance, and added that an individual is attracted to an idea, by the pleasure of feeling its recognition or, by simple familiarity,

which allows the sedimentation of the attitude. Therefore, the repetition of the message is crucial, becoming a factor of solidification of attitudes in the receivers.

One of the central issues of human memory is Recall. Recall allows the subject to retrieve the intended information when prompted by a stimulus. Psychologists use serial recall exercises (where material is recalled in order) and free recall tests (where information is requested without any order). In recognition, the subject is assisted in choosing the answer related to the episode experienced. Several studies report better performance in recognition tests than in recall exercises. Nevertheless, under special circumstances, remembering may be easier than recognition. In the case of recall, it is necessary to have complete information to recover correctly. In the recognition test, partial information is enough, and the mental effort is significantly reduced since it is present. The advance in recent years in the study of neuroscience has made it possible to prove, among other things, that most consumer attitudes originate in the unconscious mind.

The concept of attitude has been studied for over a century and there are numerous definitions, with approaches that have changed over the years. Thus, attitude is the overall assessment of a concept made by a person. An attitude can be defined as a tendency or predisposition to evaluate an object or react to it. These allow for adaptation to different situations through stereotypes and beliefs. For Pimentel, attitude is the set of knowledge, beliefs (cognitive level) that lead to the development of a feeling (affective level) which results in an intention or predisposition to eat (behavioral level). Attitudes allow individuals to adapt to different situations to simplify a complex world [15–20].

As an object of study, attitudes can be defined as learned predispositions to respond favorably or unfavorably to a given situation, person, behavior, belief, or object. There are three components of attitude interconnected in a hierarchical dynamic involving cognitive, affective, and behavioral aspects. First, changing an attitude includes a cost for the individual. This cost is greater when the attitude is related to a value, a significant experience or, in the case of products, brands or services, when it is considered important or risky to buy. It is generally easier to modify beliefs (cognitive level) than feelings (affective level), but it is easier to modify feelings than behavior. This is why advertising intervenes at the level of the first two. Marketing in general and communication in particular seek to increase consumer involvement by "dramatizing" the importance of the purchase and basing it on social valuation and relying on fashionable themes.

The techniques used to measure advertising effectiveness can be grouped according to different criteria. Beerli Martín refer that, in the field of advertising, are considered the communicational or perceptual (cognition); the psychosociological (affect); and the behavioral. According to reference authors in the advertising area, criteria such as: Advertising recall—which may be spontaneous or suggested; Brand Notoriety—related to the level of knowledge of the brand; Consumer Attitude—related to the unconscious predisposition of the subject; Predisposition to purchase—criterion associated with the purchase motivation. In each of the stages, there is a set of techniques, which allow us to ascertain whether the qualities of the stimulus are perceived, processed, and retained by the recipients. The techniques for measuring advertising effectiveness can be grouped taking into account cognitive aspects—based on attention, knowledge, and understanding; Affective—measures the type of attitude generated by a stimulus; and behavioral, which corresponds to the action of the subjects. In the following, we will address these measurement techniques, in the three aspects and how they impact the consumer, applicable in advertising, and n hybrid techniques such as Product Placement. Cognitive evaluation techniques are used to measure the ad's capacity to attract attention and evaluate individuals' knowledge and understanding concerning ads. They are also used to assess the ability to memorize and convey the message to be communicated. These techniques are useful when the individual is expected to be aware of the existence of a product, brand or service, as well as its benefits. Brand awareness measures relate to the individual's awareness of the existence of the product, brand, or service. The

awareness stage is an essential moment for the subsequent effects that culminate in purchase behavior to occur. Although the nature of cognitive verification evidence is simple, awareness is an essential condition for the advertiser to achieve communication objectives. Within the scope of awareness, the top-of-mind survey technique is considered the most reliable from the point of view of retrieval. It refers to the first brand evoked by the subject when asked, within the spectrum of the different brands existing in the market, and to indicate a brand of his/her preference, without any other clue. It is called spontaneous awareness because it corresponds to the subject's ability to recall a certain brand without any suggestion. On the other hand, suggested awareness must consider the choice of a brand from a list of several, that is, with the help of Beerli and Martín. The classical literature indicates that top-of-mind is correlated with purchase intention. Therefore, one of two situations may occur, depending on the type of product: if it is a low-commitment product (or low implication), it leads to "impulse conduct" in which the response is almost automatic when the product is seen; or when it is a high-commitment product (e.g., buying a car), notoriety encourages consumers to include the product in their list of options for future purchases. The top-of-mind indicates the first brand identified by the consumer without any clue or suggestion. Thus, by stimulating free evocation, we intend to access information about products and/or brands which are more present in the memory of consumers. In this context, involvement is related to consumers' perception of the importance and relevance of an object. Familiarity stimulates and directs consumers' cognitive and affective processes that influence behavior at decision moments. Therefore, knowledge of consumers' relationships with products largely defines the assumptions of purchase behavior. The classical literature indicates that top-of-mind is correlated with purchase intention. Therefore, one of two situations may occur, depending on the type of product: if it is a low-commitment product (or low implication), it leads to "impulse conduct" in which the response is almost automatic when the product is seen; or when it is a high-commitment product (e.g., buying a car), notoriety encourages consumers to include the product in their list of options for future purchases. The top-of-mind indicates the first brand identified by the consumer without any clue or suggestion. Thus, by stimulating free evocation, we intend to access information about products and/or brands which are more present in the memory of consumers.

The evaluation of affective effects aims to determine the type of attitude that an advertising stimulus is capable of generating in individuals. Regardless of whether it is a new attitude, a change to the same or a reinforcement of the existing one, they are applicable in communicative artifacts in which an effective response is intended, provided they are aware of the existence of a product or a brand advertised. The subject's affective reactions vary between simple evaluations and elaborate judgments such as feelings and emotions. According to Beerli and Martín, Attitudes constitute a predisposition of individuals toward an object, situation or person, which conditions their actions or conduct toward it. However, a favorable attitude created by advertising only constitutes a predisposition that increases the probability of buying the advertised object, but does not ensure its purchase. Multiple factors influence the purchase decision. Among the different affective measurement techniques, we distinguish opinion measures that aim to directly know individuals' opinion about the ads submitted to testing. Among these, we can highlight Liking, which consists in asking the respondent if he or she likes the object shown. Liking is the consumer's reaction to an advertisement and reflects attitudes and emotions that me-desire the effects of the message. Increased liking presupposes greater mental processing, commitment, trust and transfer of affection toward the advertised brand. This technique measures the individual's response behavior, in the predisposition to act in the direction intended as the act of buying. Within this group, the purchase intention stands out, for being directly linked to this study's object, high quantifies the probability of an individual trying or buying the advertised brand, as a consequence of exposure to the ad. The typical way of quantifying purchase intention is to ask the respondent directly, after exposure to the stimulus and using a one-item attitude scale, whether he or she intends to try or use the product, brand or service in the near future. Given that purchase intention is the culmination of the persuasive process, the complexity of purchasing behavior is recognized, which is directly linked to the choice of product(s) as a function of perception and attitude toward the advertisement [20–30].

Research Problem and Hypotheses

Scientific research on film productions has attracted the attention of researchers and academics. But, despite the studies, much remains to be analyzed and verified concerning the communicative efficacy of the product placement technique. In this study, we tried to assess how the cognitive, affective and behavioral effects are manifested in viewers before the insertion of products and brands in films, because, depending on the stimulus, viewers can perceive and be influenced by the strategic placement of products and brands in the audiovisual narrative. Therefore, we set as objectives for this work: To assess the presence and the spatio-temporal nature of product placement of products and brands; Assess spontaneous and suggested recall; Assess attitudes toward brands; Assess the intention to purchase brands inserted in the films under study.

Based on these objectives, and as an answer to the knowledge problem we present the following general hypothesis: Product placement generates cognitive, affective, and behavioral effects in the spectator of films. By segmentation of the general hypothesis, we formulated the following operational hypotheses:

- *Hypothesis 1 (H_1):* Brand recall varies according to the spatial and temporal presence of the placement in films, and viewers of Portuguese and Spanish nationality are equal.
- *Hypothesis 2 (H_2):* Viewers' attitudes are favorable toward recalled brands and are equal in viewers of Portuguese and Spanish nationality.
- *Hypothesis 3 (H_3):* Subjects who present favorable attitudes toward recalled brands present purchase intention and the intention is equal in spectators of Portuguese and Spanish nationality. The data collected were subject to descriptive and inferential statistical analysis. Besides this treatment, a direct observation of products and brands was made in order to measure the occupied surface (visual space); the number of insertions; and the duration of the placements in the films (in seconds) and to study the variables of cognitive, affective and behavioral effects, namely: the spontaneous recall of products and brands; the suggested recall with fake items of products and brands; the measurement of attitudes toward the brand; as well as the intention to purchase the brands visualized and present in the data collection instrument.
- *Sample:* The data from this research result from a non-probability convenience sample composed of 300 undergraduate students, randomly organized into six independent groups with an identical number of participants. The students were attending undergraduate and master's degree courses in various fields of study at the University of Trás-os-Montes e Alto Douro (Vila Real, Portugal) and at the Faculty of Social Sciences and Communication of the University of Vigo (Spain).

Data collection tools was carried out using a structured questionnaire in three versions, due to the specificity and variety of products and brands present and under study in the selected films. These questionnaires were translated into Spanish so that they could be answered without difficulty by the Spanish participant sample. Therefore, the questionnaire was applied in the native language of each of the samples under study (both Portuguese and Spanish). As part of the data collection procedure, the students were only informed that they were going to participate in a study. The purpose of the study was not made known (accidental learning), similar to the study conducted by.

Each independent group of 50 subjects was exposed to one of the three films under study—Die Anoyher Day (DAD); Casino Royale (CR); and Quantum of Solace (QOS), and the questionnaire was administered immediately after the screening. The films in Portugal were shown in their original language with Portuguese subtitles, and the same films were shown in Spain with the characters speaking in Spanish. Before the distribution of the questionnaire, instructions were given on procedures and completion of the data collection instrument. As no incident was detected, either in understanding or in filling in, all the questionnaires were considered valid.

With regard to the statistical treatment of the hypotheses, statistical instruments were identified to test the three operational hypotheses arising from the general hypothesis identified as H1, H2, and H3.

For the inferential statistical treatment, three products/brands common to the three films under study were chosen: Car (brand: Aston Martin) Car_Aston Martin; Watch (brand: Omega) Watch_Omega; and Mobile Phone (brand: Sony Ericksson) - Mobile Phone_Sony Ericksson. Regarding hypothesis H1, the objective was to know if there would be a relationship between Top-of-Mind Spontaneous Recall (RE_TOM) and Suggested Re-call (RS) of the chosen products/brands, with the presence in space and time of these placements in the audiovisual narrative. To test this hypothesis, the presence in space and time of the products Automobile_Aston Martin; Watch_Omega; and Mobile_Sony Ericksson was measured through direct observation using a metric in each of the films under study. In this observation, we collected data regarding the occupied surface (space) and duration of the placement (time), method also used by Brennan et al. and also the number of occurrences in the audiovisual narrative. This registering was done individually for each product/brand in the three films. To calculate the surface occupied by each product/brand on screen, we adopted the methodological procedure developed by Ángel Rodriguez Bravo, through the concept of marco pantalla as an invariable and countable instrument within the audio–visual narrative Figure 1. From this perspective, the screen was divided into 100 equal parts (10 by 10) giving rise to a quantifiable space that made it possible to study any visual alteration in the observation space. Each unit, called surface unit (US) is equivalent to one hundredth part of the screen where each pantalla marco is made up of 100US (see illustration). This measuring instrument allowed us to quantify the surface occupied by the product/brand on the cinematographic plane. We adopted, as sur- face variation any product or logo occupying ≥ 1 US (one-hundredth part of the screen). The screen was divided into four equal parts, with the following designations: right upper quadrant (QSD) and left upper quadrant (QSE); and, right lower quadrant (QID) and left lower quadrant (QIE). This division allows for a more specific indication of the position of the product placement on the screen. An important aspect of this method is its use in screens of any size [30–45].

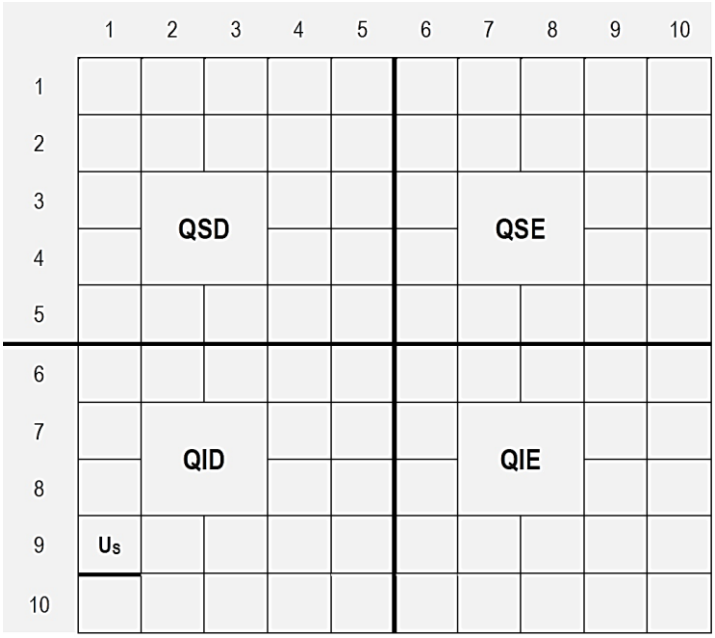

Figure 1. Measurement grid of surface units (US)—(designated by Marco Pantalla according to Bravo).
Source: Adapted from Bravo (1995).

The frames where the marks under study were present were analyzed was done using Adobe Premiere. To carry out this procedure, a Black Video was created, over which a film/grid was placed and manipulated for a better adjustment to the screen size. This way, we registered the appearances of the products/brands under study in the three films, the time of appearance (in seconds) and also the surface occupied by the brand on the screen (in the US; see Figure 2, 3, and 4).

The duration of each product or brand logo placement was also measured through the software previously stated to determine the time of appearance in seconds. This chapter took into account the methodology applied by Berneman and Rubbo, where multiple appearances of the product/brand in the film are treated separately. Thus, each scene was treated as a product placement appearance, even in situations where the same product appeared in several shots. We used dis-critical statistics to assess the presence of space and time occupied by these products and indicated the percentages of subjects that recalled in RE_TOM and RS the products/brands in study and performed a simple analysis of variance (ANOVA One-Way post hoc Bonferroni) for multiple comparisons, in order to check for specific differences in the space and time occupied by these products.

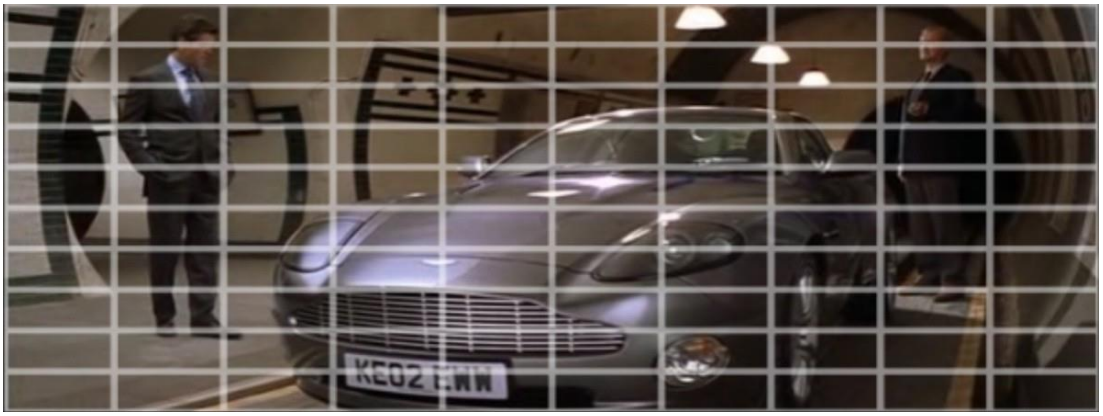

Figure 2. Aston Martin car (example of product/brand measurement on screen).

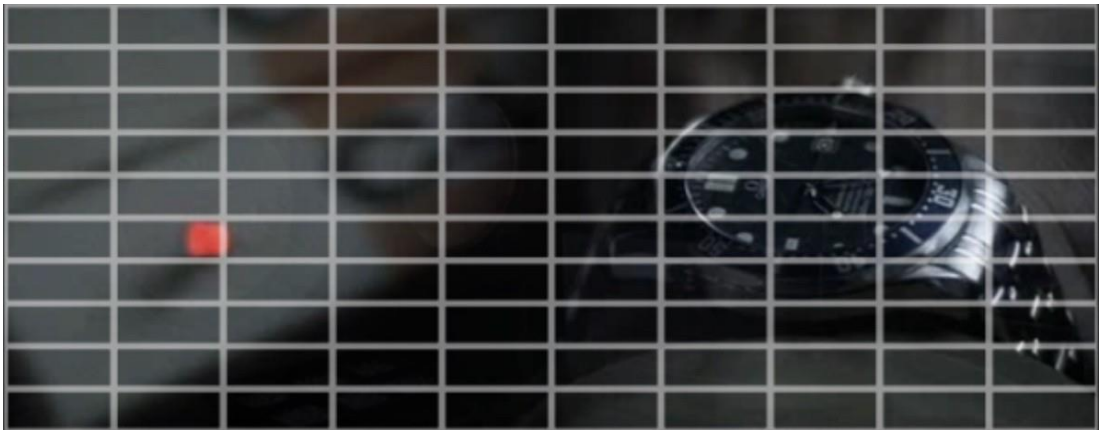

Figure 3. Omega watch (example of product/brand measurement on screen).

Figure 4. Sony Ericsson mobile phone (example of product/brand measurement on screen).

To test H1, in which we wanted to know if recall varied according to spatial and temporal presence, we applied the non-parametric test of the point-to-biserial correlation coefficient, used in situations of an interval variable and a nominal variable, to relate the recall of the sample subjects with the space and time occupied by the products/brand. This test shares the mathematical formula with Pearson's correlation coefficient. According to Pestana and Gageiro (p. 179), an "R lower than 0.2 indicates a very low linear association; between 0.2 and 0.39 low; between 0.4 and 0.69 moderate; between 0.7 and 0.89 high; and between 0.9 and 1 a very high association," applying a "similar logic for negative correlations." The results per nationality were also verified, the latter obtained through the Split File function.

To test hypothesis H2, a Mann–Whitney test was used to see whether the average order of the two independent groups (subjects who recalled and those who did not recall the products/brands under study) at the level of an ordinal dependent variable (average of subjects' attitudes toward the products/brands under study), allowed us to ascertain the existence or not of an association between variables, and to check whether favorable attitudes were related to brand recall. This test is equivalent to the T-test for independent samples, as it allows comparing two groups, but at the level of an ordinal variable (and not interval) as in the T-test. Thus, we used the mean of attitudes as the dependent variable and the independent variable the RE_TOM and SR. In this way we tried to understand if the attitudes toward the recalled products/brands were favorable and we analyzed the results in general and by nationality, the latter obtained through the Split File function. In H3, we tried to find out if subjects with favorable attitudes toward brands had purchase intentions toward them. We used a chi-square test for a nominal variable and an ordinal variable to test this hypothesis. The chi-square test of independence allows us to ascertain whether two variables are related, determining whether there is an association between attitudes (independent variable) and purchase intention (dependent variable).

METHODOLOGY

With this scientific work, we intend to investigate the three stages of the tripartite model of communicative effects that constitute the consumer response at the level of: Cognitive stage: through the exhibition of three films to the six independent groups where they are exposed to take knowledge of products and brands and or services included therein, thus generating knowledge; Affective stage: to be produced during and after the exhibition of the three stimuli, and through which evaluations and emotions will be formed; behavioral stage: to gauge the intention to purchase the brands present in the in the films shown and which constitute the object of study. Based on these effects, an exploratory methodology was used, based on the organization of a public session for each of the three film productions shown to the six independent groups, three Portuguese and three Spanish groups, formed by fifty individuals each, to carry out individual tests of spontaneous and suggested recall (cognitive effects); measuring attitudes toward the brands presented (affective effects), and also the intention to purchase (behavioral effects). In the public sessions, the films were shown in the mother tongues of the groups under study. This study aimed to verify the hypotheses by screening the three films and measuring the viewer's response. Furthermore, to measure the level of recall, the presence of products/brands, as well as attitudes and purchase intention, we carried out a reception analysis by applying a questionnaire for each of the three films to a sample of Portuguese and Spanish subjects.

Despite the exponential growth of product placement in the film industry, the understanding of understanding of implicit messages has not always been conveniently studied. This fact may be due to studies that consider a short duration exposure of subjects to the stimulus (between 5 and 15 minutes), making the global perception of product placement in the movie experience. Qualitatively, the recall of one, or several placement(s) in a short film-me segment cannot be compared with the recall of the placements present in the entire film-me when it is shown in its entirety. Therefore, in this research the selected films that make up the corpus of the research were shown in their entirety. Similarly, to the study carried out by Brennan et al., we created the characteristic conditions of a cinema room, that is to say, we controlled and reduced the sources of distraction (lights and noise), making it compulsory to watch the films in silence, as well as deactivating mobile phones and other possible equipment. The

film productions were shown in the auditorium of the Central Library of the University of Trás-os-Montes e Alto Douro (Portugal) and in the Faculty of Social and Communication Sciences of the University of Vigo–Pontevedra Campus (Spain). We used a laptop computer and a multimedia projector-specific for showing film productions for the projection. The average duration of the experience was 130 minutes, which included the full duration of each film and the time needed to answer the questionnaire.

Three films from the James Bond-007 filmographies were chosen for this research work. In the choice of the cinematographic productions, the profile of the subjects (university students) and the conditions for the integral exhibition of the films without any interval were taken into account. We think that this type of films constitutes an interesting and relevant corpus of research to study the effects of this communication technique. The filmography of James Bond, Her Majesty's secret agent with the code 007, is considered a meta-brand–brand for brands. In economic terms, it generates several billions of dollars and are watched by about half of the planet's population. Thus, as a brand, it can sell itself and sell other brands (meta-brand), which is organized around it, constitutes an opportunity to launch new products at each premiere, thus becoming a worldwide and timeless commercial showcase. But, more than a piece of the film industry, each film is an example of product placement since the Bondian filmography is one of the most successful and profitable collective brands on the planet.

Empirical Results: We chose three different product categories for the inferential analysis, but common to the three films under study. To these products, we matched three brands, also common to the three films: Aston Martin_car, Omega_watch and Sony Ericsson_telemobile. In the inferential statistical analysis, we studied these products/brands in terms of top-of-mind recall, suggested recall, attitudes and purchase intention. Next, we present the information about the space, time, occurrences, RE_TOM and SR of these products/brands in the three films under study.

Below is a summary table and graph of the space, time, and number of occurrences occupied by the three products/brands under study in the three films as a whole. In terms of space, the Aston Martin car stands out from the rest of the products/brands with 7056 US occupied in the three films, followed by the Sony-Ericsson mobile phone, which occupied 877 US and the Omega watch with 210 US. In what concerns time, the Automobile_AstonMartin continues to lead with 309 seconds of presence in the three films, but the Omega_Watch, which had 239 seconds of presence, surpasses the Sony_Ericsson mobile phone which had a total of 207 seconds of presence in the three films. In terms of occurrences, that is, the number of times the branded product appears on screen, the lead remains with the Astomartin_car, with 225 occurrences, followed by Omega_watch with 117 and, far below these values, Sony Ericsson_phone with 60 occurrences in the three films as a whole (Table 1).

Table 1. Case summary of the three products/brand in the three films under study.

Product/brand	Space (US)	Time (Seconds)	Occurrences
Car - Aston Martin	7056	309	225
Watch - Omega	210	239	117
Mobile Phone - Sony Ericsson	877	207	60

Next, we checked the differences in space and time between the products/brand chosen and already mentioned. We performed a One-Way ANOVA test with Bonferroni, and verified that there are statistically significant differences in space and time between products/brand (see Table 2). Regarding the space occupied in the three films there are statistically significant differences between the:

Automobile_AstonMartin and the Watch_Omega (p = .000);
Automobile_AstonMartin and the Telemobile_SonyEricsson (p = .000);
Omega Watch and the Automobile_AstonMartin (p = .000);
Omega Watch and the Sony_SonyEricsson Mobile Phone (p = .001);
Sony Ericsson Mobile Phone and the AstonMartin_Auto (p = .000).
Mobile Phone_SonyEricsson and the Omega_Watch (p = .001).

With regard to time, there are statistically significant differences between the:
Car_AstonMartin and the Mobile_SonyEricsson (p = .000);
Omega_Watch and SonyEricsson Mobile Phone (p =.005);
Telemobile_SonyEricsson and the Automobile_AstonMartin (p = .000);
Mobile Phone_SonyEricsson and the Omega_Watch (p = .005).

In the case of the AstonMartin_Car and the Omega_Watch (and vice versa) there are no statistically significant differences (p = .110; cf. Table 2).

Table 2. Analysis of the differences between space and time by product/brand (One-Way ANOVA with Bonferroni test).

Dependent variable	(I) Product/brand	(J) Product/brand	Mean difference (I – J)	Standard Error	Sig.
Space - Screen Units	Car - Aston Martin	Watch - Omega	29.565*	2.579	.000
		Mobile Phone - Sony Ericsson	16.743*	3.288	.000
	Watch - Omega	Car - Aston Martin	– 29.565*	2.579	.000
		Mobile Phone - Sony Ericsson	–12.822*	3.593	.001
	Mobile Phone – Sony Ericsson	Car - Aston Martin	–16.743*	3.288	.000
		Watch - Omega	12.822*	3.593	.001
Time - Seconds	Car - Aston Martin	Watch - Omega	–.669	.319	.110
		Mobile Phone - Sony Ericsson	–2.077*	.407	.000
	Watch - Omega	Car - Aston Martin	.669	.319	.110
		Mobile Phone - Sony Ericsson	–1.407*	.444	.005
	Mobile Phone – Sony Ericsson	Car - Aston Martin	2.077*	.407	.000
		Watch - Omega	1.407*	.444	.005

Hypothesis 1: Hypothesis intended to know if brand recall varied according to the presence in space and time of the placements, we tried to know if these parameters were associated. We per formed a Point–Biserial Correlation Coefficient test. This test is used when we want to calculate the correlation between a quantitative variable and another dichotomous variable. In this case, the variables are Recall (yes/no) and Space (total value of US) and Time (seconds), for the three brands under study. From the analysis of Table 3, we verify in its majority there is a negative correlation although statistically significant, being the cases of:
Car_AstonMartin in RE_TOM and the Space (rpb = –.173, p = .003);
Mobile_SonyEricsson in SR and the Space (rpb = –.189, p = .001);
Mobile_SonyEricsson in RS and the Weather (rpb = –.176, p = .002);
Automobile_AstonMartin in RE_TOM and the Time (rpb = –.233, p = .000),
Automobile_AstonMartin in RS and the Weather (rpb = –.239, p = .000)
Mobile_SonyEricsson in RE_TOM and Space (rpb = –.330, p = .000)
Mobile_SonyEricsson in RE_TOM and the Weather (rpb = –.327, p = .000);
Omega_Watch in RS and the Time (rpb = –.506, p = .000).

Where the correlation is positive and statistically significant, we have the cases of:
Car_AstonMartin in SR vs Space (rpb = .152, p = .008);
Omega_Watch in RE_TOM vs Space (rpb = .222, p = .000);
Omega_Watch in SR vs Space (rpb = .692, p = .000).

An exception is seen in Clock_Omega in RE_TOM and Time, where there is no statistically significant correlation (rpb = .041, p = .477).

Table 3. Point–biserial correlation test (rpb) for Automobile_AstonMartin, Watch_Omega and Mobile Phone_Sony Ericsson.

Aston Martin	Pearson correlation	SPACE (US)	TIME - Seconds
RE_TOM	Pearson correlation	–.173**	–.233**
	Sig. (bilateral)	.003	.000
RS	Pearson's Correlation	.152**	–.239**
	Sig. (two-sided)	.008	.000
OMEGA	Pearson correlation	.222**	–.041
RE_TOM	Sig.	.000	.477
RS	Sig. (two-sided) Pearson correlation	.692**	–.506**
	Sig.	.000	.000
Sony Ericsson	Sig. (two-sided) Pearson correlation	–.330**	–.327**
RE_TOM	Sig.	.000	.000
RS	Sig. (two-sided) Pearson's Correlation	–.189**	–.176**
	Sig.	.001	.002

***Correlation is significant at the 0.01 level (two-sided).*
**Correlation is significant at the 0.05 level (two-sided).*

POINT-BISSERIAL CORRELATION TEST (RPB)
RE_TOM and RS of the Automobile_AstonMartin, Watch_Omega and Mobile Phone_SonyEricsson and Space and Time

We also checked the correlation by nationality (see Table 4), and it was possible to verify that in Automobile_AstonMartin the relationship is negative in the variables RE_TOM vs Time (rpb= (-0.223) p = .006); Automobile_AstonMartin in SR and Time (rpb = –.208, p = .011); and positive in SR vs Space (rpb = .215, p = .008) in the Portuguese nationality. In the case of Spanish nationality, the relationship is negative in RE_TOM vs. Space (rpb = –.321, p = .000) and Time (rpb = –.244, p = .003) and also in SR vs. Time (rpb = –.272, p = .001). This relationship is statistically significant in both nationalities. There was no statistically significant relationship in Automobile_AstonMartin in RE_TOM and Space in the Portuguese (rpb = .024, p = .770) and Spanish nationalities (rpb = .085, p = .299) - (cf. with Table 4) [45–55].

Table 4. Teste de Correlação Ponto-bisserial (rpb) para o Automóvel_AstonMartin*NACIONALIDADE.

Aston Martin Nationality			Space (Us)	Time Seconds
Portuguese	RE_TOM	Pearson Correlation	–.024	–.223**
		Sig. (bilateral)	.770	.006
	RS	Pearson Correlation	.215**	–.208*
		Sig. (two-sided)	.008	.011
Spanish	RE_TOM	Pearson's Correlation	–.321**	–.244**
		Sig.	.000	.003
	RS	Sig. (two-sided) Pearson's Correlation	.085	–.272**
		Sig.	.299	.001

***Correlation is significant at the 0.01 level (two-sided).*
**Correlation is significant at the 0.05 level (two-sided).*

Point-Bisserial Correlation Test (Rpb): Automobile_AstonMartin in RE_TOM and RS and the Space and Time*NATIONALITY

In the case of the Omega_Watch brand (see Table 5), the Portuguese nationality shows a positive relationship between RE_TOM and space (rpb = .324, p =.000), a moderate positive relationship between SR and space (rpb = .649, p = .000) and a moderate negative relationship between SR and time (rpb = –.586, p = .000). The Spanish nationality shows a high positive relationship in SR and space (rpb

= .759, p = .000) and a moderate negative relationship in SR and time (rpb = –.438, p = .000). This relationship is statistically significant across both nationalities. In this brand (Omega_Watch), there was no statistically significant relationship in RE_TOM and time in Portuguese (rpb = .093, p = .256) and Spanish (rpb = .040, p = .629) nationalities nor, in the latter, at the space level (rpb = .078, p = .341; cf. with Table 5).

Table 5. Point-biserial correlation test (rpb) for Watch_Omega*NATIONALITY.

Omega nationality			Space (Us)	Time - seconds
Portuguese	RE_TOM	Pearson correlation	.324**	–.093
		Sig. (bilateral)	.000	.256
	RS	Pearson correlation	.649**	–.586**
		Sig. (two-sided)	.000	.000
Spanish	RE_TOM	Pearson correlation	.078	.040
		Sig.	.341	.629
	RS	Sig. (two-sided) Pearson's correlation	.759	–.438**
		Sig.	.000	.000

*** Correlation is significant at the 0.01 level (two-sided).*

POINT-BISSERIAL CORRELATION TEST (RPB)
Omega_Watch in RE_TOM and RS and Space and Time*Nationality

In the Portuguese nationality, and in what concerns the Sony Ericsson mobile phone, there is a statistically significant negative relationship in RE_TOM and space (rpb = –.302, p = .000), in time (rpb = –.333, p = .000) and a very low negative relationship in SR and space (rpb = - relationship in SR and time (rpb = –.160, p = .051). In the case of Spanish nationality, there is a statistically significant relationship in all the variables, being negative in RE_TOM and space (rpb = –.372, p = .000 and very low negative in SR and Space (rpb = –.188, p = .021) and time (rpb = –.196, p = .016; cf. Table 6).

Table 6. Point–biserial Correlation Test (rpb) for Mobile Phone_SonyEricsson*Nationality.

Nacionality	Sony ericsson		Space (Us)	Time - Seconds
Portuguese	RE_TOM	Pearson Correlation	–.302**	–.333**
		Sig. (bilateral)	.000	.000
	RS	Pearson Correlation	–.192*	–.160
		Sig. (two-sided)	.019	.051
Spanish	RE_TOM	Pearson's Correlation	–.372**	–.349**
		Sig.	.000	.000
	RS	Sig. (two-sided) Pearson's Correlation	–.188*	–.196*
		Sig.	.021	.016

***Correlation is significant at the 0.01 level (two-sided).*
**Correlation is significant at the 0.05 level (two-sided).*

POINT-BISSERIAL CORRELATION TEST (RPB)
Sony Ericsson Mobile Phone in RE_TOM and RS and Space and Time*Nationality

Thus, we can state that H1 is confirmed because recall correlates negatively or positively with the space and/or time occupied by products/brands, although with variable strength. This correlation is statistically significant. However, as far as the Omega brand in RE_TOM vs Time is concerned, this relationship does not hold. The results obtained by nationality allow us to verify that the relationship between variables in the two nationalities is not uniform, verifying this hypothesis only in cases where the relationship between the variables is statistically significant.

In H2, we stated that subjects who recalled the products/brands under study had favorable attitudes toward them. To test this hypothesis, we used the Mann–Whitney test, which allows us to ascertain whether the mean orders of two independent Greater at the level of a dependent variable. The dependent

variable used was the mean of attitudes and the independent variable was RE_TOM and SR. We present below the results obtained. Regarding the Aston Martin brand, there were statistically significant differences in SR, with subjects who recalled this brand having a more favorable attitude (U = 3.488, p = .014). No statistically significant differences were found in RE_TOM concerning this brand, as indicated in the following Tables 7, 8, and 9 [55–65].

Mann Whitney (U) Test Aston Martin

Dependent Variable: Mean Attitudes | Independent Variables: RE_TOM and RS Aston Martin N Middle Order p

Table 7. Mann–Whitney (U) Test Aston Martin.

Aston Martin		**N**	**Middle Order**	**p**
RE_TOM vs Media Attitudes	Yes	78	137.92	
	No	182	127.32	.296
	Total	*260*		
SR vs Media Attitudes	Yes	218	135.50	
	No	42	104.55	.014
	Total	*260*		

p = ≤ 0, 05

With regard to the OMEGA brand, we found statistically significant differences in RE_TOM (U = 1.941, p = .002) and SR (U = 6.613, p = .029), with subjects who recalled this brand having a more positive attitude both in spontaneous recall (RE_TOM) and in Suggested Recall (SR), as can be seen in the following Table 8:

Mann Whitney Test (U) Omega

Dependent Variable: Attitude Mean | Independent Variables: RE_TOM and SR

Table 8. Mann–Whitney (U) Omega test.

Omega		***N***	***Middle order***	***p***
RE_TOM vs Media Attitudes	Yes	27	166.11	
	No	224	121.17	.002
	Total	*251*		
SR vs Media Attitudes	Yes	120	136.39	
	No	131	116.48	.029
	Total	*251*		

p = ≤0.05

Regarding the Sony Ericsson brand, there were no statistically significant differences in subjects who recalled and did not recall in RE_TOM and RS, as can be seen in the following Table 9:

Mann–Whitney (U) Test Sony Ericsson

Dependent Variable: Mean Attitudes | Independent Variables: RE_TOM and RS

Table 9. Mann–Whitney Test (U) Sony Ericsson.

Sony Ericsson		***N***	***Middle order***	***p***
RE_TOM vs Media Attitudes	Yes	33	139.91	.540
	No	263	149.58	
	Total	*296*		
RS vs Media Attitudes	Yes	163	143.65	.279
	No	133	154.44	
	Total	*296*		

p = ≤0.05

After checking the results obtained by nationality, we found that there were only statistically significant differences in SR for the Aston Martin brand (U = 1.083, p = .047) for subjects of Spanish

nationality, with subjects who remembered the brand showing more favorable attitudes. In the remaining cases there were no statistically significant differences between subjects who recalled and those who did not recall the brands under study, as shown in the following Tables 10, 11, 12 and 13:

Teste de Mann Whitney (U)Aston Martin | Omega | Sony Ericsson * Nationality

In H3, we stated that subjects presenting favorable attitudes toward the brands under study, also Tables 10, 11, 12 presented purchase intention toward them. We conducted a chi-square test to test this hypothesis (two nominal variables were under study) Table 13. We intended to ascertain the existence of an association between the variables Attitudes (independent) and Intention to Buy (dependent). From the analysis of the tables, it appears that only in the case of the Omega brand there is a statistically significant association between favorable attitudes and purchase intention ($x2 = 9.306$; $p = .010$). Thus, we can state that H3 is only confirmed for the Omega brand. We present below the results obtained for the three brands under study (see Tables 10, 11, 12, and 13):

Table 10. Mann–Whitney (U) Test ASTON MARTIN | Omega | Sony Ericsson *NATIONALITY.

Teste de Mann–Whitney (U) ASTON MARTIN *NACIONALIDADE		**N**	**Middle order**	**p**
RE_TOM vs Media Attitudes	RE_TOM vs Media attitudes	38	64.91	.285
Portuguese	English	81	57.70	
		119		
		40	72.15	.833
Spanish		101	70.54	
		141		
	Spanish	102	61.81	.158
RS vs Media Attitudes		17	49.12	
Portuguese		119		
		116	74.16	.047
Spanish		25	56.32	
	SR vs Media attitudes	141		
		Portuguese Yes	***Middle Order***	***p***
		21	82.00	.117
Mann–Whitney (U) test OMEGA *NATIONALITY		117	67.26	
		138		
RE_TOM vs Average Attitudes	Spanish Yes	6	80.92	.066
Portuguese		107	55.66	
		113		
		75	71.77	.465
Spanish	Yes	63	66.80	
	No	138		
	Total	45	63.71	.076
SR vs Average Attitudes	Yes	68	52.56	
Portuguese	No	113		
		Total	***Middle order***	***p***
Spanish	Yes	8	74.56	.969
	No	139	73.97	
	Total	147		
	Yes	25	73.84	.883
Mann–Whitney (U) test SONY ERICSSON *NATIONALITY	No	124	75.23	
RE_TOM vs Media Attitudes	Total	149		
Portuguese		72	70.66	.350
	Yes	75	77.21	
	No	147		
Spanish	Total	91	74.58	.881
	Yes	58	75.66	
	No	149		

ASTON MARTIN Chi Square Test (x2) - Intention to Buy vs Attitudes

Dependent Variable: Intention to Buy | Independent Variable: Attitude Level Attitudes

Table 11. ASTON MARTIN Chi Square Test - Level of Purchase Intention vs Attitudes.

Aston Martin			**Attitudes**		**Total**	**x2**	**p**
			Unfavorable	***Favorable***			
Level of purchase intention	Unlikely	Count	13	158	171	5.807	.055
		%	7.6%	92.4%	100%		
	Probable	Counting %	8 16.3%	41 83.7%	49 100%		
	Very likely	Counting	1	38	39		
		%	2.6%	97.4%	100%		
Total		Contagem	22	237	259		
		%	%	91.5%	100%		

Chi Square Test (x2) OMEGA - Level of Purchase Intention vs Attitudes

Dependent Variable: Purchase Intention | Independent Variable: Attitude-Level Attitudes

Table 12. OMEGA Chi Square test: Level of purchase intention vs Attitudes.

OMEGA			**Attitudes**		***Total***	***x2***	***p***
			Unfavorable	***Favorable***			
Level of purchase intention	Unlikely	Count	18	77	95	9.306	.010
		%	18.9%	81.1%	100%		
	Probable	Counting	12	109	121		
		%	9,9%	90.1%	100%		
	Very likely	Counting	0	33	33		
		%	0%	100%	100%		
Total			30	219	249		
		%	%	88%	100%		

Chi-Square Test (x2) SONY ERICSSON: Purchase Intention Level vs Attitudes

Dependent Variable: Purchase Intention | Independent Variable: Attitude Level Attitudes

Table 13. SONY ERICSSON Chi Square Test: Level of purchase intention vs Attitudes.

Sony Ericsson			**Attitudes**		**Total**	**x2**	**p**
			Unfavorable	***Favorable***			
Level of purchase intention	Unlikely	Count	9	52	61	2.410	.300
		%	14,8%	85,2%	100%		
	Probable	Counting	11	122	133		
		%	8.3%	91.7%	100%		
	Very likely	Counting %	8 8.1%	91 91.9%	99 100%		
Total				265	293		
		%	%	90.4%	100%		

When the results by nationality were observed, there was no statistically significant association in the Portuguese and Spanish subjects (see Tables 14, 15, and 16).

ASTON MARTIN Chi Square (x2) Test: Level of purchase intention vs Attitudes *NATIONALITY Dependent Variable: Purchase Intention | Independent Variable: Attitude Level.

Table 14. Aston Martin Chi Square Test: Level of purchase intention vs Attitudes * NATIONALITY.

Aston Martin *Nationality				**Attitudes**		***Total***	***x2***	***p***
				Unfavorable	***Favorable***			
Portuguese	Level of purchase	Unlikely	Count %	6 8%	68 92%	74 100%	1.946	.378
	Intention		Counting	5	25	30		
		Probable	%	17%	83%	100%		
			Counting	1	14	15		
		Very likely	%	7%	93%	100%		
	Total		Counting		107	119		
			%	%	90%	100%		
Spanis	Level of purchase	Unlikely	Count %	7 7%	90 93%	97 100%	3.989	.136
	Intention	Probable	Counting %	3 16%	16 84%	19 100%		
		Very likely	Counting	0	24	24		
			%	0%	100%	100%		
	Total			10	130	140		
			%	7%	93%	100%		

Chi Square Test (x2) OMEGA: Purchase Intention Level vs Attitudes *NATIONALITY

Dependent Variable: Purchase Intention | Independent Variable: Attitude Level

Table 15. Chi Square Test OMEGA- Level of purchase intention vs Attitudes *NATIONALITY

Omega *Nationality				**Attitudes**		**Total**	**x_2**	**p**
				Unfavorable	***Favorable***			
Portuguese		Unlikely	Count	6	38	44	3.290	.193
	Level of purchase intention	Probable	%	14%	86%	100%		
			Counting	6	68	74		
		Very likely	%	8%	92%	100%		
			Counting	0	20	20		
	Total		%	0%	100%	100%		
				12	126	138		
			%	9%	91%	100%		
Spanish	Level of purchase intention	Unlikely	Count	12	39	51	4.936	.085
			% Counting	24% 6	77% 41	100% 47		
		Probable						
			%	13%	87%	100%		
			Counting	0	13	13		
		Very likely						
			%	0%	100%	100%		
	Total				93	111		
			%	16%	84%	100%		

SONY ERICSSON: Level of Purchase Intention vs Attitudes *NATIONALITY

Dependent Variable: Purchase Intention | Independent Variable: Attitude Level

Table 16. SONY ERICSSON Chi Square Test: Level of purchase intention vs Attitudes *NATIONALITY.

Sony Ericsson *Nationality				**Attitudes**		***Total***	***x2***	***p***
				Unfavorable	***Favorable***			
Portuguese	Level of purchase intention	Unlikely	Count %	2 7%	25 93%	27 100%	.930	.628
		Probable	Counting %	7 10%	60 90%	67 100%		
		Very likely	Counting	3	50	53		
			%	6%	94%	100%		
	Total			12	135	147		
			%	8%	92%	100%		
Spanish	Level of purchase intention	Unlikely	Count	7	27	34	4.854	.088
			%	21%	79%	100%		
		Probable	Counting %	4 6%	62 94%	66 100%		
		Very likely	Counting %	5 11%	41 89%	46 100%		
	Total			16	130	146		
			%	11%	89%	100%		

CONCLUSION

Measuring the effectiveness of this technique has been studied by academics, but little information remains available. Various techniques are used to measure effectiveness (recall tests, interviews, among others), but all of them are based on traditional forms of advertising. Return on sales is the most commonly used example to measure the effectiveness of product placement and videos to show advertisers the placement of products and brands. But these media only prove that products and brands were placed there. The most commonly used form of product and brand insertion is the visual, verbal, and audio–visual combination which can be considered subtle, or prominent, or integrated into the storyline, and which can have two levels: low intensity, in the case of a mere combination, with a brief appearance on the screen; and high intensity, when the actor is clearly identified with the brand, or when the brand becomes a key element in the plot.

This constructs a kind of signature in which its product is assigned an important role in developing the story, and sometimes the product, brand, or service may be the protagonist. This mode combines verbal and visual elements, and the products and brands are handled by the characters and have a profound impact on the story. First, however, it is necessary to know how Placements affect cognitive, affective and behavioral development, that is, to know how the consumer absorbs and remembers these products and brands, and what he or she considers about them and whether he or she intends to buy. And because the study of memory and attitudes has been the focus of research topics in this communication technique, usually through surveys and interviews, techniques regularly applied in advertising.

Thus, we confirmed the existence of a positive and negative correlation, of variable but statistically significant strength, between the two forms of recall (RE_TOM and RS) and Space (Us) and Time (seconds) of the three products/brands under study. It is only partially con- firmed by nationality in

some variables, not confirming the assumption that the results would be identical between nationalities. The relationship between recall and more favorable attitudes is only confirmed for the brands Aston Martin and Omega. The existence of a statistically significant association between favorable attitudes and purchase intentions was also verified, but only for the Omega brand, thus only partially confirming this hypothesis. However, based on all of the above, the results confirm that the general hypothesis of this study is confirmed, that is, product placement generates cognitive, affective, and behavioral effects on viewers when they attend film productions.

LIMITATIONS AND FUTURE RESEARCH

As with all studies, we have also found our study limitations. For example, the facto of the sample subjects were university students, although they are consumers, some brands studied are not the most important in this stage of their life, which may limit the generalization to other age groups. Another limitation is related to the fact that this study has focused on the application of this communication technique in films, studies in other media may bring other results that can contribute to a better understanding of the impact of product placement in the consumer's mind [65–69].

This study also leaves room for future areas of research. One will be a different application and statistical analysis of the information collected in the questionnaires and a different statistical treatment, particularly in terms of attitudes. Another will be to understand why the sample has indicated false products and brands in a high percentage, which we think may be associated with the amount of information in the questionnaire and may have caused confusion in information retrieval. The large amount of information shown in the descriptive analysis may also be a starting point for further studies and analysis of other hypotheses put forward. The questionnaire can also be replicated in a real situation, that is, after watching a film in the theatre and after a few hours of viewing. In this case, it would be important to verify that the memory percentages would be the same or lower than those obtained in an experiment such as the one carried out in this study. Another challenge we are going to face is the use of icons created for this work, which indicate visually and in writing, the type of placement of brands and products.

We believe that this can be an important tool for studying the effectiveness of product placement for people with disabilities, including motor, verbal or even physical disabilities. An other challenge, and taking into account the evolution of the media, would be to repeat the experience, but using data collection techniques such as Eye Tracking or neuromarketing laboratories, techniques already used by some consumer goods and technology multinationals such as Microsoft, Google, Mercedes-Benz, McDonald, and FTV to understand the functioning of the mind that allows access to information that the consumer cannot express verbally. Thus, we believe that we have contributed with this work to a better understanding of the Product Placement communication technique, and we have generated the results in subjects of two nationalities, countries with narrow boundaries and sharing the European space. These results will help companies understand this age group of consumers, taking into account the trends and preferences of products and brands placed in films.

In terms of business implications, we intend with this work to contribute to a better understanding of this communication technique, making known the results obtained in subjects of two nationalities, from countries with close borders and that share the European space. Despite being current consumers, these results could help companies get to know and build loyalty among this age group of consumers in the near future, perceiving trends and preferences related to products and brands co-located in films.

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