

Subtitling vs. Dubbing and Original Version

The Effects of Different Translation Methods on Consumer Behavior Towards Product Placement on Audiovisual Content

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Abstract

The main objective of this dissertation was to investigate whether different versions of a program concerning audiovisual translation formats as well as multitasking would influence product placement effectiveness on audiences. Also, if there would be any relation between levels of multitasking and the version of the program being watched.

The first problem to be addressed was determining whether the above-mentioned questions have not been the subject of research in the past. A systematic search on the three most prominent research databases available (Scopus, Web of Science, and EBSCO) followed by a manual analysis of the publications was conducted and research items of these publications were further investigated to identify effects caused by placements as well as variables or drivers of product placement effectiveness.

Some 320 research items (hypotheses, research questions, empirical generalizations, and results) featured effects caused by placements. The total of effects identified was 11. Brand attitude and brand recall were the two most prominent effects identified.

In the case of variables, or drivers of effectiveness, 417 research items included 57 different variables that could be divided into 2 categories: 33 variables derived from characteristics of the audience and 24 variables pertaining to the content, medium, or placement. None of the publications featured audiovisual translation formats as variables, confirming the research gap in the field. For multitasking, 2 publications were identified that covered the subject, nevertheless, in a different form than the intended of this dissertation.

The empirical investigation was performed through an experiment where participants could freely choose between four options of pre-defined episodes of two different sitcom series as well as the version between original, dubbed, and subtitled, the last only as a choice for those that could not understand the spoken dialogues. Some 2302 participants were recruited and

answered a questionnaire containing questions about aided recall of brands placed in the episode, and multitasking behavior while watching the program.

Results on brand recall of placements remained constant between groups watching different versions of the programs. Punctual percentual differences could be identified, nevertheless, reversed results appeared for different products, and Chi-square tests revealed no statistically significant differences. The presence of subtitles did not significantly alter brand recall. Brand recall also remained stable among viewers of programs in original, dubbed, and subtitled versions.

Results compared brand recall of placements between viewers who declared that they engaged in other activities while watching the program and viewers who did not multitask. The levels of brand recall did not differ significantly between these two groups.

The time spent not looking at the screen was the next aspect evaluated in the experiment. Here, no significant difference in the levels of brand recall was identified between the viewers who did not look at the screen for less than 1 minute and the viewers who looked away from the screen for between 1 and 5 minutes during programs of around 20 minutes in length.

The different versions of the program were tested with regard to their influence on multitasking behavior. The presence of subtitles decreased viewers' levels of multitasking when compared with those of viewers who watched the program in its original or dubbed versions with no subtitles added to enhance comprehension of the spoken dialogues. The levels of multitasking remained constant between viewers of the dubbed and original versions of the program.

To increase the validity of the results, a method of observing the respondents was also implemented. A total of 274 respondents were recorded in videos that were later analyzed manually. This method was introduced to more precisely determine the time they spent not looking at the screen as well as to detect false positives on the respondents' answers.

The average time spent not looking at the screen during the program was 2 minutes and 3 seconds, which amounts to around 10% of the total duration of the program.

The main outcomes of this dissertation were that different versions of the program did not alter brand recall of placed products significantly, nor did a reasonable amount of multitasking while viewing the program. Concerning the relationship between audiovisual translation formats and multitasking, the presence of subtitles decreased levels of multitasking of viewers.

Zusammenfassung

Das Hauptziel dieser Dissertation war es zu untersuchen, ob verschiedene Versionen eines Programms in Bezug auf audiovisuelle Übersetzungsformate sowie Multitasking die Wirksamkeit von Produktplatzierungen beim Zuschauer beeinflussen. Außerdem sollte untersucht werden, ob es einen Zusammenhang zwischen dem Multitasking-Niveau und der angesehenen Programmversion gibt.

Die erste Herausforderung bestand darin festzustellen, ob die oben genannten Themen in der Vergangenheit nicht bereits untersucht wurden. Es wurde eine systematische Literaturrecherche in den drei bekanntesten verfügbaren Forschungsdatenbanken (Scopus, Web of Science und EBSCO) durchgeführt, anschließend erfolgte eine manuelle Analyse der Publikationen. Die Forschungsgegenstände dieser Publikationen wurden weiter untersucht, um die durch die Placements verursachten Effekte und die Variablen oder Einflussfaktoren von Produktplatzierungen zu ermitteln.

In 320 Forschungselementen (Hypothesen, Forschungsfragen, empirische Generalisierung und Ergebnisse) wurden Auswirkungen von Placements genannt. Insgesamt wurden 11 publizierte Wirkungen ermittelt. Die Einstellung zur Marke und die Markenerinnerung waren die beiden am häufigsten identifizierten Effekte.

Hinsichtlich der Variablen, oder Einflussfaktoren auf die Wirksamkeit, umfassten die 417 Forschungselemente 57 verschiedene Variablen, die sich in zwei Kategorien unterteilen lassen: 33 Variablen, die sich aus den Merkmalen der Zuschauer ableiten, und 24 Variablen, die sich auf den Inhalt, das Medium oder die Platzierung beziehen. In keiner der Veröffentlichungen wurden audiovisuelle Übersetzungsformate als Variablen aufgeführt, was die Forschungslücke in diesem Bereich bestätigt. Zum Thema Multitasking wurden 2 Publikationen identifiziert, die das Thema jedoch in einer anderen Form als in dieser Dissertation behandelt haben.

Die empirische Untersuchung wurde im Rahmen eines Experiments durchgeführt, bei dem die Teilnehmer zwischen vier vordefinierten Episoden zweier verschiedener Sitcom-Serien sowie zwischen der Original-, der synchronisierten und der Untertitelten Version frei wählen konnten, wobei letztere nur für diejenigen zur Auswahl stand, die die gesprochenen Dialoge nicht verstehen konnten. Rund 2302 Teilnehmer wurden rekrutiert und beantworteten einen Fragebogen mit Fragen zur gestützten Erinnerung (*aided recall*) von in der Episode platzierten Marken und zum Multitasking-Verhalten beim Ansehen der Sendung.

Zwischen den Gruppen, die verschiedene Programmversionen sahen, gab es keine Unterschiede bei den Ergebnissen der Erinnerung an die platzierten Marken. Es konnten zwar vereinzelt prozentuale Unterschiede festgestellt werden, jedoch zeigten sich für verschiedene Produkte umgekehrte Ergebnisse, und Chi-Quadrat-Tests ergaben keine statistisch signifikanten Unterschiede. Das Vorliegen von Untertiteln hatte keinen signifikanten Einfluss auf die Markenerinnerung. Die Markenerinnerung blieb auch bei den Zuschauern von Sendungen in der Original-, der synchronisierten und der Untertitelten Fassung gleich.

In der Studie wurde die Markenerinnerung von Zuschauern, die angaben, dass sie während der Sendung anderen Tätigkeiten nachgingen, mit Zuschauern verglichen, die nach eigener Aussage kein Multitasking betrieben. Die Markenerinnerung unterschied sich nicht signifikant zwischen diesen beiden Gruppen.

Die Zeit, in der nicht auf den Bildschirm geschaut wurde, war der nächste Aspekt, der im Rahmen des Experiments untersucht wurde. Bei Sendungen von etwa 20 Minuten Länge wurde kein signifikanter Unterschied in der Markenerinnerung zwischen den Zuschauern festgestellt, die weniger als eine Minute lang nicht auf den Bildschirm gesehen hatten, und den Zuschauern, die zwischen einer und fünf Minuten lang nicht auf den Bildschirm gesehen hatten.

Die verschiedenen Versionen des Programms wurden hinsichtlich ihres Einflusses auf das Multitasking-Verhalten getestet. Durch das Vorhandensein von Untertiteln verringerte sich das Multitasking-Niveau der Zuschauer (d. h. die Dauer ihrer Nebenbeschäftigungen) im Vergleich zu den Zuschauern, die die Sendung in der Original- oder Synchronfassung ohne Untertitel sahen. Zwischen den Zuschauern der synchronisierten und der Originalfassung des Programms unterschied sich das Ausmaß des Multitaskings nicht.

Um die Reliabilität der Ergebnisse zu erhöhen, wurde auch eine Methode zur Beobachtung der Probanden eingesetzt. Insgesamt 274 Probanden wurden während des Sehens der Sendung mit Videos aufgezeichnet, die später manuell ausgewertet wurden. Diese Methode wurde eingeführt, um die Zeit, die die Befragten nicht auf den Bildschirm blickten, genauer zu ermitteln und um falsch-positive Antworten der Befragten zu erkennen.

Im Durchschnitt wurde während des Programms 2 Minuten und 3 Sekunden lang nicht auf den Bildschirm geschaut, was etwa 10 % der Gesamtdauer des Programms entspricht.

Die wichtigsten Erkenntnisse dieser Dissertation sind, dass die verschiedenen Versionen des Programms die Markenerinnerung an die platzierten Produkte nicht signifikant veränderten, ebenso wie ein angemessenes Maß an Multitasking während der Sendung. Was die Beziehung zwischen audiovisuellen Übersetzungsformaten und Multitasking betrifft, verringerte der Einsatz von Untertiteln das Multitasking-Niveau der Zuschauer.

Dissertation Overview

Introduction

Many movies and television or streaming programs feature branded products in scenes rather than generic products or products with fictional brands. This practice is most commonly termed product or brand placement, although it is also known as brand integration, tie-ups, tie-in advertising, or exploitations (Newell, Salmon, and Chang 2006). Moreover, in the 1960s and 1970s, the practice of featuring branded products was known as a “plug” (Lewis 1971, 154). Simply put, it involves the inclusion of branded products in audiovisual programs, where the brand will be either seen, heard, or both during the program, in exchange for financial compensation. This exchange might not only entail money to finance the production, as it can also involve materials and other resources to be used in the production, whether the branded product to be used or consumed during the production itself or other materials and services provided by the company that owns the featured brand.

The placement of branded products in movies and television programs is not new. In fact, it began when filmmaking became a large-scale business through the work of studios in both Europe and North America. Nevertheless, the evolution of the practice from just a couple of brands being featured per movie to a multibillion-dollar-a-year business occurred during the 1980s and 1990s (Karrh 1998). The industry continued to develop over the next decade, although it was during the 2010s and 2020s that product placement really reached new horizons.

Following the popularization of digital video recorders (DVRs), growing numbers of viewers were able to record television programs and movies, which allowed them to skip commercial breaks and avoid seeing advertisements (Balasubramanian, Karrh, and Patwardhan 2006). This shift in behavior increased the awareness of media planners regarding the importance of

featuring brands in programs so that audiences did not avoid brand exposure. High-speed internet was the next element added to the equation. This technology allowed video streaming platforms to become a major new media outlet for both movies and television content. In addition, as most prominent services, such as Netflix, Hulu, Amazon Prime Video, and Disney+, stream programs or exclusive content with few to no commercial breaks (Verhellen et al. 2016), marketers' focus on product placement possibilities became a matter of survival for some brands seeking to reach segments of their target markets.

The successful expansion of the product placement industry not only translated into brands spending multibillions of dollars each year on the placement of their products in the media (PQ Media 2022) but also into increased research attention in this area in recent decades. A significant body of research on product placement has been produced in the last 30 years, and the effectiveness of placements has been the main focus in this regard (Guo et al. 2019). This effectiveness can be interpreted in different ways, although most studies have focused on the effect of brand recall or product or placement recall (Van Reijmersdal, Neijens, and Smit 2009), which concern viewers recalling seeing a brand in a movie or show, viewers' attitude toward a brand, or whether exposure to product placement makes viewers like a brand more or less (Homer 2009). Other studies have examined effects such as brand memory, purchase intention, brand salience, and a handful of other effects related to exposure to product placement.

Other variables, moderators, or drivers of various effects have also been the subjects of experiments over the last few years. Focusing on them as characteristics of the content or medium, or as pertaining to the viewer or viewing situation, several studies have examined whether and how such variables modify the effectiveness of placements. For example, variables such as if the viewer likes the movie or not, or if the character exhibits a positive or negative attitude toward the brand, are among those featured in multiple studies. The form of the placement has also been examined in terms of multiple characteristics, including the

prominence of the placement; whether it is visual only, audio only, or a combination of the two; the length of the placement; and whether it is accompanied by disclosure or not.

To map the field of product placement research, a systematic review of published studies was conducted, and the results were divided into two categories: studies featuring the effects of product placement on viewers and studies featuring the moderators (or drivers) of product placement's effectiveness. This extensive literature review was intended to update the state of research in the field as well as to list, explain, and rank all the effects and variables that could be identified from previous studies to allow for easier reference in future research.

The results of the literature review revealed two research gaps, which formed the motivation for the present study. The first gap concerned whether different versions of a program—that is, different audiovisual translation (AVT) formats—would influence product placements' effectiveness in relation to viewers when compared with the version featuring only the original spoken dialogue with no subtitles or dubbing processes of any kind. The second gap concerned whether viewers not paying attention to a program throughout its entire duration—that is, multitasking—would result in different levels of brand recall of placements in that program. The third element of this study involved exploring the relationship between the version of the program selected by viewers and their levels of multitasking, whether multitasking occurred more or less according to the presence (or absence) of subtitles, and whether dubbing played a role in this situation when compared with the original version of the program.

These elements were tested by means of an experiment that involved respondents watching a full episode of a television program that featured product placements in its original version, dubbed or subtitled, and then answering a questionnaire that included questions on brand recall as well as questions on parallel activities during viewing.

Another method implemented in the experiment involved video-recording respondents while they watched the program. This method was included to allow for a comparison of the respondents' own perception of the time they spent not looking at the screen and the actual time they spent not looking at the screen through observation of the videos. It was also included to test for false positives with regard to brand recall (i.e., if a respondent was not looking at the screen at the moment a certain brand appeared but claimed to have seen the brand in the program, that would indicate a false positive).

The literature review, the experiment, and the results of this study were originally divided into four articles. In this dissertation, they are divided into chapters that detail the theoretical background, hypotheses, methodologies, and results individually.

Focus of this Dissertation

The main objective of this dissertation was to investigate whether both different versions of a program and multitasking influence product placement effectiveness on audiences. In addition, this dissertation sought to determine if there was any relation between the level of multitasking and the version of the program being watched.

To accomplish these objectives, a literature review was first necessary to identify whether the topics of interest had previously been studied or whether they were research gaps in the field.

Thus, a systematic search of the three most prominent research databases was conducted. A total of 1711 records of publications were found on Scopus, Web of Science, and EBSCO by using the same search terms as previous systematic and bibliometric reviews on the subject and keeping the search rules as similar as possible throughout all three databases. After removing any duplicate entries and manually analyzing the remaining results to remove any publications

not related to product or brand placement in the media, 517 publications were found to be eligible to further investigation.

Not all the publications were accessible, while there were insufficient resources available to analyze all 517 using the chosen methodology of analyzing and extracting the research items; hence, the hypotheses, research questions, and empirical generalizations from all the publications were manually analyzed for further compilations and rankings.

The priority was to ensure that the top 30 publications in terms of citations from each of the three databases were included in the analysis. This resulted in the identification of 51 unique publications that fit the criteria. A total of 56 additional publications were added to the selection via the snowball method (Beuckels et al. 2021), and all the publications from the last five years that were accessible to the author were included. In total, 107 publications were scrutinized, 80 of which featured studies related to effects or moderators and other effect-related variables associated with product placement.

The first two chapters of this dissertation address the literature review from different perspectives.

Chapter 1 focuses on extracting research items related to the effects of product placement on viewers. In this chapter, the concepts and operationalizations of the effects are explained. In addition, a ranking of the frequency with which they appear in the publications is analyzed, as is an indication of which publications they feature in. The findings of this chapter, as well as those of Chapter 2, can serve as a reference for future research on product placement.

Chapter 2 follows the same principle as Chapter 1. However, the focus shifts to the variables and moderators or drivers of the effects of product placement. These were divided into two categories: viewer- and content-originated drivers. The viewer-originated drivers are characteristics pertaining to the person watching the program, and different attributes were the

subject of investigation to determine whether they influence one or more effects and/or the overall effectiveness of product placement on viewers. For the content-originated attributes, a 180-degree turn was made, with the investigated characteristics belonging to the content or medium. As in Chapter 1, the related findings should provide guidance for researchers and professionals seeking an explanatory database on the subject.

With the landscape of prior research on the subject having been defined and the research gaps confirmed, the next two chapters of this dissertation detail experiments conducted to test variables associated with either the content or the viewer and the viewing situation and their influence on effects tested in previous studies.

Chapter 3 proposes AVT formats to influence the effectiveness of product placement. An investigation was performed to determine whether the version of the program seen affects viewers' recall of product placements in that program. In other words, the objective was to assess if viewers who watch the program in its original version (in terms of the spoken dialogue) present different levels of brand recall when compared with viewers who do not understand the language spoken in the original version and so watch the same program but with subtitles, as well as with viewers who watch a version of the program where the spoken dialogue has been dubbed with a language that they understand.

The investigation was performed via an experiment in which respondents could freely choose between four options concerning pre-defined episodes of two different sitcom series as well as between the original, dubbed, and subtitled versions, with the latter option only being available for those who could not understand the spoken dialogue. Some 2302 respondents were recruited by employing crowdsourcing sampling (Brühlmann et al. 2020) with the help of a network of students from a German university. The respondents completed the task of watching the episode and then answering a questionnaire containing questions about aided recall of the

brands placed in the episode. The results were then compared to determine whether any differences in the levels of recall could be observed among groups exposed to different versions of the same episode.

Chapter 4 focuses on multitasking as a variable that can affect viewers' recall of brands. It also tests different versions of the program as modifiers of viewers' levels of multitasking.

Performing other activities while watching television is a common behavior (Gunter, Furnham, and Lineton 1995), with the popularization of smartphones and tablets having created even more possibilities for switching attention from the primary screen to a secondary screen through a specific form of multitasking known as multiscreening (Segijn and Eisend 2019).

The relation between multitasking and the effectiveness of product placement was investigated via an experiment in which respondents had to watch a full episode from among four choices concerning two different sitcom series and then answer a survey about brand placement recall. The experiment also featured questions about engagement in other activities and the time spent on activities that drew viewers' attention away from the screen while they were watching the episode. A total of 2302 individuals participated in the experiment by completing the survey after watching the program.

The levels of brand recall were compared between respondents who stated that they had not engaged in other activities during the viewing time and respondents who declared that they had performed another activity while watching the program, which drew their attention away from the screen for any period of time. The levels of recall were also compared among the different lengths of time that respondents had spent not looking at the screen.

Another objective of this study was to determine whether there is any relation between the version of the program watched (i.e., original, dubbed, or subtitled) and engagement in

secondary activities. To accomplish this, the results concerning multitasking were compared between groups who watched different versions of the program.

To increase the reliability of the results, a method of observing the respondents was also implemented. A total of 274 respondents agreed to being recorded on video while watching the program. Action cameras and smartphones were employed for this task, and the videos of the respondents watching the program were analyzed to more precisely determine the time they spent not looking at the screen. This method also made it possible to spot possible false positives with regard to brand recall (i.e., when a respondent claimed to have seen a brand in the program despite not looking at the screen when the brand was shown).

Table 1 - Overview of the dissertation

	Category of Research	Main Focus	Methodology	Sample
Chapter 1	Literature review	- Previously studied effects of product placement	- Systematic search of publication databases - Manual filtering of publications - Extraction of effects included in the research items - Operationalization of the effects - Ranking of the effects by prominence - Reference to the effects by publication	- 1711 entries in 3 databases - 517 eligible sources - 107 analyzed publications
Chapter 2	Literature review	- Previously studied variables and moderators of the	- Systematic search of publication databases - Manual filtering of publications	- 1711 entries in 3 databases - 517 eligible sources - 107 analyzed publications

		effects of product placement	<ul style="list-style-type: none"> - Extraction of variables included in the research items - Operationalization of the variables divided into viewer- and content-originated drivers - Ranking of the variables by prominence - Reference to the variables by publication 	
Chapter 3	Experiment	<ul style="list-style-type: none"> - Effects of AVT on brand recall of placements 	<ul style="list-style-type: none"> - Stimuli in original and different AVT versions followed by a questionnaire featuring questions on brand recall 	<ul style="list-style-type: none"> - 2302 respondents
Chapter 4	Experiment	<ul style="list-style-type: none"> - Effects of multitasking on brand recall of placed products - Effects of AVT on levels of viewers' multitasking 	<ul style="list-style-type: none"> - Stimuli in original and different AVT versions followed by a questionnaire featuring questions on engagement in secondary activities and brand recall - Video recording of respondents and analysis of time spent not looking at the screen for comparison with answers to the questionnaire and test of false positives 	<ul style="list-style-type: none"> - 2302 respondents - 274 respondents recorded on video

References

- Balasubramanian, S. K., J. A. Karrh, and H. Patwardhan. 2006. Audience response to product placements: An integrative framework. *Journal of Advertising* 35, no. 3: 115–41. <https://doi.org/10.2753/JOA0091-3367350308>.
- Beuckels, E., G. Ye, L. Hudders, and V. Cauberghe. 2021. Media multitasking: A bibliometric approach and literature review. *Frontiers in Psychology* 12: 623643. <https://doi.org/10.3389/fpsyg.2021.623643>.
- Brühlmann, F., S. Petralito, L. F. Aeschbach, and K. Opwis. 2020. The quality of data collected online: An investigation of careless responding in a crowdsourced sample. *Methods in Psychology* 2: 100022. <https://doi.org/10.1016/j.metip.2020.100022>.
- Gunter, B., A. Furnham, and Z. Lineton. 1995. Watching people watching television: What goes on in front of the tv set? *Journal of Educational Television* 21, no. 3: 165–91. <https://doi.org/10.1080/0260741950210304>.
- Guo, F., G. Ye, L. Hudders, W. Lv, M. Li, and V. G. Duffy. 2019. Product placement in mass media: A review and bibliometric analysis. *Journal of Advertising* 48, no. 2: 215–31. <https://doi.org/10.1080/00913367.2019.1567409>.
- Homer, P. M. 2009. Product placements - the impact of placement type and repetition on attitude. *Journal of Advertising* 38, no. 3: 21–32. <https://doi.org/10.2753/JOA0091-3367380302>.
- Karrh, J. A. 1998. Brand placement: A review. *Journal of Current Issues & Research in Advertising* 20, no. 2: 31–49. <https://doi.org/10.1080/10641734.1998.10505081>.
- Lewis, J. 1971. *The total film maker*. United States: Random House.
- Newell, J., C. T. Salmon, and S. Chang. 2006. The hidden history of product placement. *Journal of Broadcasting & Electronic Media* 50, no. 4: 575–94. https://doi.org/10.1207/s15506878jobem5004_1.

- PQ Media. 2022. Global product placement forecast 2022-2026, PQ Media LLC, Stamford, CT. <https://www.pqmedia.com/product/global-product-placement-forecast-2022-2026/>. Accessed April 2023.
- Segijn, C. M., and M. Eisend. 2019. A meta-analysis into multiscreening and advertising effectiveness: Direct effects, moderators, and underlying mechanisms. *Journal of Advertising* 48, no. 3: 313–32. <https://doi.org/10.1080/00913367.2019.1604009>.
- Van Reijmersdal, E. A., P. Neijens, and E. G. Smit. 2009. A new branch of advertising. *Journal of Advertising Research* 49, no. 4: 429–49. <https://doi.org/10.2501/S0021849909091065>.
- Verhellen, Y., J. Eelen, N. Dens, and P. de Pelsmacker. 2016. The short- and long-term impact of brand placement in an advertiser-funded tv program on viewers' attitudes toward the sponsor brand and its main competitor. *International Journal of Advertising* 35, no. 6: 932–48. <https://doi.org/10.1080/02650487.2015.1087089>.

Chapter 1

Effects of Product and Brand Placements on Viewers: A Literature Review

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Status:

Working Paper

Effects of Product and Brand Placements on Viewers: A Literature Review

1.1 Abstract

As the industry of product placement continues to grow at a staggering pace, the research covering the subject has also seen a similar trend. A considerable body of publications focused on product and brand placement effects on viewers. This paper presents a literature review that was performed on the most prominent and the most recent publications on the subject to identify effects that have been studied, as well as to quantify the frequency that they appeared on publications. Based on this corpus we identified a set of eleven influential variables that have been repeatedly studied, with brand attitude, brand recall and purchase intention being the most frequently studied effects caused by product placement. All eleven effects are explained in this review, and the direction of the results found in the analyzed publications are also included. This paper therefore serves as a reference guide for further studies and research agendas.

1.2 Introduction

From smartphones to cars, from bottled water to coffee and beer, from cereal to crackers, from sunglasses to contact lenses, from refrigerators to couches, from banks to fitness studios. Just as in everyday life, we see these products being used in media content all the time. Typically, they are just part of the film or show set, part of the storyline, part of a reality or fiction that is just trying to tell a story, but often the choice of having that product or service, especially of that brand, is not just coincidence. Often, products are specifically placed in films or shows in exchange for a fee/payment or free products/services for the production. This is commonly referred to as product placement or brand placement. Subsequently, both terms will be used interchangeably.

Extending Balasubramanian's definition of product placement as a "paid product message aimed at influencing movie (or television) audiences via the planned and unobtrusive entry of a branded product into a movie (or television program)" (Balasubramanian 1994, p.31), which concentrated the definition in only two mediums—television and movies—the same definition can be also applied to other mediums and formats that now contain placement of products as well, such as: video games (Ansons, Wan, and Leboe 2011; Nelson 2002; Terlutter and Capella 2013), video logs (vlogs) (Müller and Christandl 2019), and videos of streaming services—which may or may not be considered in the same category as television programs by some authors and also professionals in the industry (Laban, Zeidler, and Brussee 2020). The fact is that no matter what medium being used, there is an ever-growing possibility that the content will feature product placement in it.

Product placement is not a new marketing strategy, and although there is evidence of the existence of the practice as early as the 1920s (Newell, Salmon, and Chang 2006), most authors agree on the moment when it showed its power, when the movie *E.T. the Extra-Terrestrial*, released in 1982, featured scenes where the candy Reese's Pieces was used to attract the alien,

and the brand—clearly seen in the movie multiple times—enjoyed an enormous growth in sales (Ming-tiem, Liang, and Liu 2007). The growth of the industry did not happen immediately after the famous E.T. case, but it has grown from a couple thousand dollars spent a year—or, as in most situations, just bartering, where the production received the product for free in exchange of the placement (Karrh 1998) —to a multibillion dollar industry in recent years, reaching around 20 billion dollars invested in product placement in 2020 (Guo et al. 2019) and a prognosis of growing to more than 30 billion dollars by 2024 (PQ Media 2020).

In parallel, and probably caused by this development in the industry, a growth in the research of this field of product placement is noticeable (Jusufovic-Karisik 2014; Karrh 1998; Van Reijmersdal, Neijens, and Smit 2009). We came from decades of having a handful of studies to a period beginning in 2005 where research on the subject was multiplied year after year and spread across different countries (Guo et al. 2019).

The goal of this paper is to map the field and review important studies on product placement research that focus on the effects on viewers. The importance of each publication in the field was evaluated based on the citation rank. The present study takes stock on the effects examined in each study, provides conceptual clarification of the effects of interest, and informs how often each effect has been investigated. This paper aims to be a source of reference for researchers and practitioners alike by providing insights to highly cited and thus important publications in the field of product and brand placement research.

1.3 Terminology

Product placement and brand placement have been used interchangeably for many years now; most marketers and researchers do not differentiate between them. Nevertheless, product placement and brand placement do have different meanings in the scientific literature

(Andriasova 2006; Karrh 1998). Product placement is the placement of a particular product or product, whereas brand placement refers to the placement of a specific brand, whether visibly (and/or audibly) attached to a product or not. For example, a lipstick is used in a scene of a movie. If we cannot see or recognize the brand, this is called product placement. If we can see or recognize the brand, it can be a product or brand placement (Karrh 1998). If, instead of the lipstick, we see a box or a poster of the brand, this is called brand placement (Andriasova 2006). Some marketers and researchers have also referred to this as “tie-ups,” “tie-in advertising,” or “exploitations”, but this was before the term product placement was coined (Andriasova 2006; Newell, Salmon, and Chang 2006). The literature from the 1960s and 1970s refer them as “plugs”—like when the well-known comedian and filmmaker Jerry Lewis wrote in 1971 about how he included brands on his movies in exchange for (or sometimes the attempt to obtain) commercial cooperation (Lewis 1971, p.154). Back then this practice was usually called “plug”, so products or brands would be “plugged” into a scene, story, or movie (Lewis 1971, p.155).

It is not always clear whether a product or brand that we see on a television program or movie is there because of product placement or not. In many cases, products are just part of the set and there was no exchange for that insertion (Hackley and Amy Hackley née Tiwsakul 2012). Most companies and media agencies do not publicize or even want to reveal many of their product placement strategies, even after the content has been distributed, making it even more difficult to know whether the presence of the product is indeed a placement or not (Maynard and Scala 2006). The reason why producers still include brands and products in the show or film, even with no commercial intent, is that these will bring a sense of realism to the scene (Homer 2009). However, the focus of product placement research is to find out the effects of placements in the content, it is not taken in consideration whether the products placed follow the criteria of the praxis or were just props., meaning, the existence of financial exchange is irrelevant for research on the effects caused by placements.

1.4 Past Research

The first experiments related to product placement research started more than 35 years ago; however, the practice was mentioned and explained many years earlier: the first published materials found were from 1958, which focused on the legal aspects of advertising in films, such as Eisenführ's 1958 book introducing the legal issues on the subject and Hartlieb's book from the same year about the limitations of the practice (Harbrücker and Wiedmann 1987).

It was not until the mid-1980s that researchers started writing about the effects of product placement on viewers, for example when the effectiveness of product and brand recall by placements in films was tested (Berndt and Hermanns 1993). At around the same time, Harbrücker and Wiedmann published their research on the subject in Germany (Harbrücker and Wiedmann 1987). In 1988, Auer et al. expanded the field of research by including other effects caused by exposure to brand placement in movies (Auer, Kalweit, and Nüssler 1988). A German magazine called *Telemarketing* also published a study conducted in 1985 to measure brand recall of products placed in a television series (Harbrücker and Wiedmann 1987), which might be the first research on the effects on viewers caused by exposure to product placement.

Few scientific studies about the subject were published between 1988 and 1993. In 1993, Nebenzahl and Secunda conducted research on consumers' attitudes toward product placement in movies (Nebenzahl and Secunda 1993). They were followed by Karrh in 1994 through his publication entitled "Effects of Brand Placements in Motion Pictures" (Karrh 1998); the same author published the first review that could be found about brand placement and laid out a framework for future research on the matter (Karrh 1998). This started a series of studies and publications on the subject, as well as the first reviews of these publications (Guo et al. 2019).

Among the bibliographic reviews identified, none of the reviews followed a quantitative approach that lists, quantifies, and ranks effects on viewers caused by the placement of products. Hence, this review may serve as a source of reference for researchers and practitioners

to gain insights of how often an effect has been investigated in studies considering audiovisual content as aired at the cinema or on television.

1.5 Methodology

The first step of this review was to explore, list and retrieve all available publications on the subject. Following the work by Guo et al. (2019), the most recent review on the subject, we chose the Web of Science and Scopus databases. Both databases are among the most popular search platforms for bibliometric and systematic reviews in the areas of social sciences (Beuckels et al. 2021; Gurzki and Woisetschläger 2017). After analyzing the results, it was clear that both databases did not include all relevant articles and studies about the subject. Therefore, a third database, EBSCO, was also included, which increased the number of findings significantly. The search queries containing keywords that were submitted to the databases also followed the work of Guo et al. (2019). The final search query contained the following keywords connected by Boolean OR operators: “product placement”, “brand placement”, “sponsored content”, “integrated advertis*”, “brand integration”, and “embedded advertis*”, with * being used to include both advertising and advertisement forms of the word in the search. After applying multiple filters¹, the searches resulted in 775 sources on EBSCO, 756 sources on Scopus, and 528 sources on Web of Science. As discussed earlier, product placement and its adjacent terms have multiple meanings. This made further manual analysis needed to exclude

¹ The filters used in the different databases were as consistent as possible. The first filter used was the type of document. On Scopus these types included articles, conference papers, reviews, book chapters, and books; on Web of Science the document types included articles, proceedings papers, book chapters, and books; and on EBSCO no filters were used. The next filter criterion was the language of publication: all languages the author could understand were included in the refine filter, which included English, Spanish, German, Portuguese, and French for the databases. The final filter used before the extraction of the results was the topic of the documentation. Only the areas of interest in this research were included as topics for the filter. These filters were added to the search on Scopus with the operator AND (LIMIT-TO (SUBJAREA X)) for the limitation of the results, and OR for each of the topics that translated on Scopus as: Business, Management and Accounting (BUSI); Social Sciences (SOCI); Economics, Econometrics and Finance (ECON); Arts and Humanities (ARTS); Psychology (PSYC); and Multidisciplinary (MULT). On Web of Science the following categories were featured and could be selected as inclusions in the results: Business, Business Finance, Communication, Management, Psychology Multidisciplinary, Economics, Telecommunications, Psychology Experimental, Film Radio Television, Psychology Applied, Social Sciences Interdisciplinary, Ethics, Psychology Clinical, Psychology Social, Humanities Multidisciplinary, Behavioral Sciences, Multidisciplinary Sciences, Sociology, Area Studies, Cultural Studies, Psychology Developmental, Statistics Probability, Social Issues. Year of publication was not included as a filter for the results.

incomplete or unrelated sources. First, any incomplete entries that could not be manually retrieved if title and DOI or any other type of identification to retrieve were missing were excluded. These exclusions resulted in a total of 702 entries on Scopus, 559 on EBSCO, and 450 on Web of Science (*see Figure 1*). Second, we excluded publications not related to the subject although have at least one query match in either the title, abstract, or the database keywords. The exclusions resulting from this selection step were quite substantial: the number of hits on Web of Science was reduced from 450 to 197, on Scopus from 702 to 404, and from EBSCO from 559 to 347. For example, we excluded publications covering product or brand placement in any form of videogames, music videos, or social media content, as well as publications about placement of tobacco and alcohol products.

From the 948 entries in all three databases, 178 were featured in both EBSCO and Scopus but not on Web of Science, 45 were featured on Web of Science and Scopus but not on EBSCO, no double entries were found between Web of Science and EBSCO that were not featured on Scopus, and 104 results were found in all 3 databases. A total of 48 publications were only available on Web of Science, 77 only on Scopus, and 65 appeared only on EBSCO. This resulted in 517 publications that appeared as records in at least one of the three databases included.

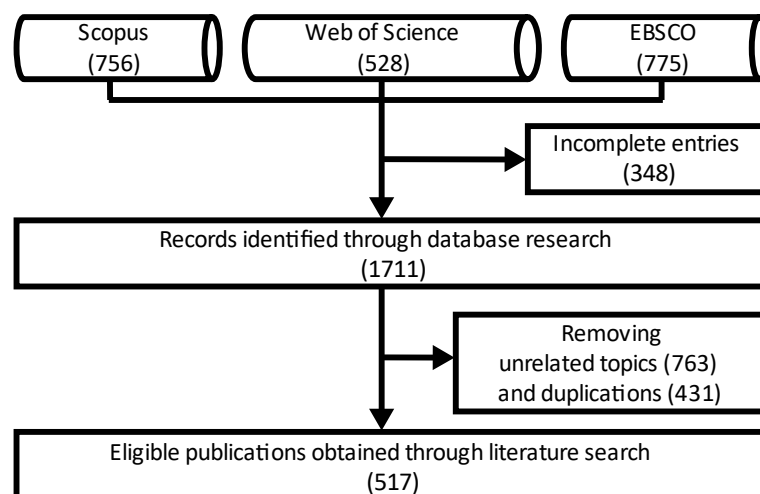


Figure 1 - Flowchart showing the steps of the literature search

Once the landscape of the previous publications on the subject was further delineated, the next step was to check for full-text availability through the databases. As the whole corpus of studies was far from being completely accessible, additional measures of selection had to be taken. These included the ranking of citations, which can be interpreted as an indicator of importance. Or put differently, publications with relatively more citations are seen as more influential in the field (Guo et al. 2019). Using a citations frequency analysis, we attempted to identify the Top 30 studies recorded in each database. Since EBSCO does not feature citation counts and to compensate for the lack of this feature, we used the Google Scholar citation count as a proxy.

Figure 2 shows that we could identify 51 unique studies that were at least listed in one of the three databases. During the extraction and analysis of the 51 publications, we double-checked all studies cited in the publications against the records of each database. As it turned out, some of the studies were cited multiple times in the Top 30 publications but were either not ranked among the Top 30 publications of each database or were not even listed in any of the databases. Using a snowball approach (Beuckels et al. 2021) and after a full-text accessibility check, we added studies that were cited multiple times in the 51 publications to the final sample. The final total of sources to be analyzed was 107.

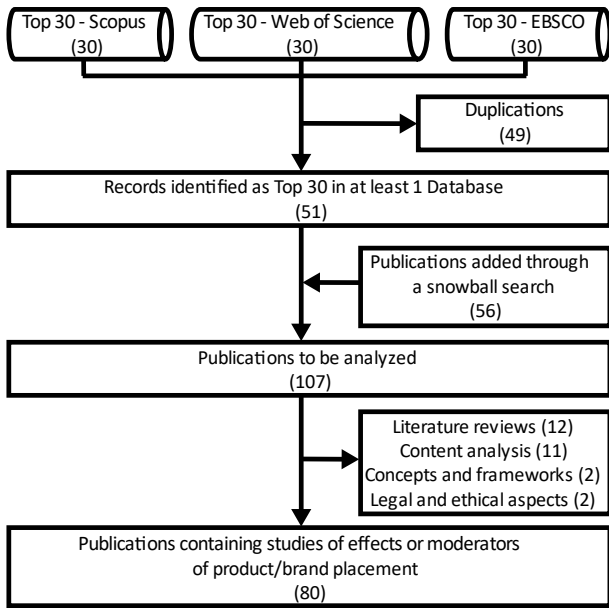


Figure 2 - Flowchart showing the methodology for choosing the publications to be analyzed.

The aim of this article is to research and tabulate effects caused by product placement and various moderators previously investigated in previous publications. The next step to achieve this is to subtract publications that did not contain studies that include this objective. From the 107 publications analyzed (Figure 2), 80 matched the criteria and were about effects caused by product placement and/or moderators, 2 publications covered ethical and legal aspects of the practice, 2 were conceptual and featured frameworks for studies, but did not present any studies, 11 were content analysis, where audiovisual content was analyzed for the presence of the practice, but no studies on effects or moderators of effects were featured, and 12 were literature reviews without new studies presented.

1.6 Results

The rationale for selecting effects from the 80 studies was based on the work by Balasubramanian et al. (2006) and Van Reijmersdal et al. (2009). For an effect to be selected, it had to be the focus of either a hypothesis, research question, or result of a study. Effects mentioned but not investigated empirically, were not included. Moreover, only direct effects of product or brand placement on viewers were considered, whereas the effects of moderators, mediators, and other variables were excluded from the analysis for the sake of simplification. Of course, one could have argued that certain moderators are also effects, but they were considered as such because they were explicitly presented as such by the authors.²

The 80 studies analyzed resulted in 438 hypotheses, research questions, or results related to either effects caused by placement of products and brands or moderators, mediators, and other variables. Nevertheless, not all 80 studies featured effects, which is the focus of this research;

² For example, the research questions of Nebenzahl and Secunda's article about attitudes toward product placement in movies cover the audience's opinions about the practice of product placement in movies, their preferences about it, opinions about its effectiveness, and whether they would consider a ban of the practice (Nebenzahl and Secunda 1993). The article does not point to these as effects and, since other studies such as Rathmann's (2014), where opinions and attitudes toward product placement were tested as moderators for the effects on attitudes toward the placed brand, these and other similar cases were interpreted as moderators on this research and, therefore, also not included as effects.

10 publications did not feature any effects. The 70 sources that included effects contained 393 hypotheses, research questions, or results, and 320 of them featured effects of product placement.

In the 320 hypotheses, research questions, or results, 11 single effects were identified. *Table 1* identifies the different effects found in the 70 publications, as well as the meaning of these effects, and *Table 2* lists the different types of effects encountered, as well as the frequency in different publications and how many times they appear in different hypotheses, results, or research questions.

Table 1 Effects identified for the purpose of the review

Effect	Concept
Brand attitude	Effect that causes a change of attitude in the viewer toward the placed brand or product (Homer 2009), that change being positive or negative (Van Reijmersdal 2015). This effect can also be interpreted as brand liking (Matthes et al. 2012) or attitude toward the product (Russell and Stern 2006). Some publications divided this effect into two subcategories, implicit brand attitudes and explicit brand attitudes, with the difference between them being the awareness of the change in attitude by the subject (Gibson, Redker, and Zimmerman 2013). Brand attitude was the most frequent effect found in this review, being present in 121 hypotheses, 8 research questions and 4

	empirical generalizations or results in 44 publications.
Brand memory	Also brand recall or product recall, the second most studied effect, appearing in 125 hypotheses, research questions and empirical generalizations in 42 different publications; this relates to whether viewers will remember a brand or product more or less after being exposed to the placed brand (Cholinski 2012).
Purchase intention	Whether the viewer would be more or less likely to purchase a product due to exposure to placed product (Mitchell and Nelson 2018).
Top of mind awareness/brand salience	Similar effects that concern the salience, or level of activation of a brand in memory of the placed brand in comparison with other brands in the same product category (Alba and Chattopadhyay 1986).
Attitude toward content	Present also in publications as a moderator for some effects of product placement (Gibson, Redker, and Zimmerman 2013); liking or not

	liking the content also appears as an effect caused by the placement of brands or products and its frequency (Homer 2009).
Attitude toward character	Appearing more often as a moderator or mediator for the effects of the placements (Schramm and Knoll 2015), the attitude or preferences toward characters or actors are also encountered as effects, meaning the liking or disliking of a product or brand could positively or negatively influence the attitudes of the audience toward the character (Su et al. 2011) or actor (Rathmann 2014).
Realism perception	Brand appearances leading to a higher or lower perception of realism of the content (Sung, Gregorio, and Jung 2009).
Perception of brand attributes	Whether the audience can recall information and characteristics of the placed products (Gupta and Lord 1998).
Willingness to pay	Whether the audience exposed to placed products would be motivated to pay more (Kamleitner and Khair Jyote 2013) and see a higher value of the placed brands (Srivastava 2018).
Product category recall	Effect of remembering seeing a specific type of product, but not necessarily the brand. (Drennan and McDonnell 2005).

Distraction	Repeated placement of brands can lead to distraction and interfere with the story line (Homer 2009).
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Table 2 Ranking of effects

Effect	Publications containing the effect (n_p = 107)	Results based on hypotheses containing the effect	Results without hypotheses	Total (n_i = 438)
Brand attitude	44	121	12	133
Brand memory / recall	42	110	16	126
Purchase intention	17	37	4	41
Top of mind awareness / brand salience	7	19	0	19
Attitude toward content	7	11	5	16
Attitude toward character	4	6	1	7
Realism perception	4	2	3	5
Perception of brand attributes	3	5	2	7
Willingness to pay	2	2	0	2
Product category recall	1	0	1	1
Distraction	1	1	0	1

Table 3 lists all 70 publications containing effects caused by placement of products or brands found in the analyzed sample (n = 80). This table also shows which effects were tested in the corresponding publications as well as the effect direction indicated by the results of the publications. A positive signal (+) indicates that the results of the publications point to placements activating or increasing the effect tested, a negative signal (-) indicates placement decreasing the levels of the effects, and a neutral signal (0) corresponds to the placements not causing the tested effect on viewers. Some publications indicated both positive and negative results of the same effect but in different experiment settings or as the results of different hypotheses.

Table 3 Analysis of publications

Publication	Effects present in the publication	Effect direction
Andriasova (2006)	brand attitude	+
	purchase intention	+
	brand memory	+
	brand salience	+
	attitude toward content	0
	attitude toward character	0
Auty and Lewis (2004)	brand attitude	+
	brand memory	0
	brand salience	+
Babin (1996)	brand attitude	0
	brand salience	+
Balakrishnan et al. (2012)	brand attitude	+
	purchase intention	+
	brand memory	+
Boerman (2014)	brand attitude	+

	brand memory	+
	attitude toward content	+
Boerman et al. (2012)	brand attitude	+
	brand memory	+
Boerman et al. (2015)	brand attitude	+
	brand memory	+
Brennan and Babin (2004)	brand memory	+
Brennan et al. (1999)	brand memory	+
Bressoud and Lehu (2008a)	brand memory	+
Bressoud and Lehu (2008b)	brand memory	+
Bressoud and Lehu (2015)	brand memory	+
Bressoud et al. (2010)	brand memory	+
Breves and Schramm (2016)	brand attitude	+
Chan et al. (2017)	brand memory	+
Cholinski (2012)	brand attitude	+
	brand memory	+
	brand salience	+
	perception of brand attributes	+
Cowley and Barron (2008)	brand attitude	+
	brand memory	+
D'Astous and Séguin (1999)	brand attitude	0
D'Astous and Chartier (2000)	brand memory	+
D'Hooge et al. (2017)	brand attitude	+
Delorme and Reid (1999)	brand attitude	+
	purchase intention	+
	attitude toward content	+
	realism perception	+

	attitude toward character	+
Dens et al. (2012)	brand attitude	+
	brand memory	+
Drennan and McDonnell (2005)	brand memory	+
	product category recall	+
Gibson et al. (2013)	brand attitude	+
	brand memory	+
Gould et al. (2000)	purchase intention	+
Grzyb et al. (2018)	brand memory	0
Gupta and Lord (1998)	brand memory	+
	perception of brand attributes	+
Homer (2009)	brand attitude	+ and -
	attitude toward content	-
	distraction	-
	realism perception	-
Hong et al. (2008)	brand salience	+
Jin and Villegas (2007)	brand attitude	+
	purchase intention	+
	attitude toward content	+
Johnstone and Dodd (2000)	brand salience	+
Kamleitner and Khair Jyote (2013)	brand attitude	+
	purchase intention	+
	brand memory	+
	willingness to pay	+
Knoll et al. (2015)	brand attitude	+
Law and Braun (2000)	brand memory	+
	perception of brand attributes	+

Lehu and Bressoud (2008)	brand memory	+
Lin and Chen (2013)	brand attitude	+
	purchase intention	+ and -
Lin, Lee, and Chen (2012)	brand attitude	+
	purchase intention	+
Matthes et al. (2007)	brand attitude	+
	brand memory	+
Matthes et al. (2012)	brand attitude	+
Mitchell and Nelson (2018)	brand attitude	+
	purchase intention	+
Morton and Friedman (2002)	brand attitude	+
	purchase intention	+
	brand memory	+
	realism perception	+
Nagar (2016)	brand attitude	+
Rathmann (2014)	brand attitude	+
	attitude toward content	-
	attitude toward character	0
Redker et al. (2013)	brand attitude	+
Redondo (2012)	purchase intention	+
Roehm and Roehm (2019)	purchase intention	+
Romaniuk (2009)	brand memory	+
Rössler and Bacher (2002)	brand attitude	+
	brand memory	+
	attitude toward content	0
Russell (2002)	brand attitude	+
	brand memory	+

Russell and Stern (2006)	brand attitude	+
Schramm and Knoll (2015)	brand attitude	+
	purchase intention	+
	brand memory	+
Schumacher (2007)	brand attitude	+
	brand memory	+
	brand salience	+
Shoenberger and Kim (2017)	brand attitude	+
Smink et al. (2017)	brand attitude	+
	brand memory	+
Srivastava (2018)	brand attitude	+
	purchase intention	+
	brand memory	+
	willingness to pay	+
Su et al. (2011)	brand attitude	+
	attitude toward character	+
Sung et al. (2009)	realism perception	+
Tessitore and Geuens (2013)	purchase intention	+
	brand memory	+
Valenzuela-Fernández et al. (2015)	purchase intention	+
	brand memory	+
Van Reijmersdal (2009)	brand attitude	+
	brand memory	+
Van Reijmersdal (2015)	brand attitude	0
Van Reijmersdal et al. (2007)	brand attitude	+
	brand memory	+
Van Reijmersdal et al. (2010)	brand attitude	+

	brand memory	+
Van Reijmersdal et al. (2013)	brand memory	+
Verhellen et al. (2016)	brand attitude	+
Wang et al. (2018)	brand memory	+
Wennekers et al. (2016)	brand attitude	+
Wilson and Till (2011)	brand memory	+
Yang and Roskos-Ewoldsen (2007)	purchase intention	+
	brand memory	+
Yoon et al. (2011)	brand attitude	+

Note: (+) results indicate positive effect caused by placements; (-) results indicate negative effect caused by placements; (0) results indicate placement caused no effect

1.7 Discussion

The objective of this review was to map the landscape of research related to the effects on audiences caused by product placement, showing not only the number of publications on the subject but also what the most prominent publications, according to citation rankings, and the latest publications on the subject were researching in terms of effects. The search process proved to be quite challenging, due to factors such as the broad meaning of the term product placement, the large number of incomplete entries in the research databases, the difficulty of access to publications, and multiple publications not related to the area of research. Nevertheless, this review could provide the quantities of publications truly related to product or brand placement research in audiovisual content when videogames and other audiovisual formats other than films, television, or streaming series and television programs, such as influencer videos are not included, as the viewing or playing behavior of those formats are not alike.

Once the selected publications were retrieved and inspected, a careful semantic analysis was performed on all hypotheses, research questions, results, and empirical generalizations to extract all effects featured. The effects were listed and coded, and their corresponding concepts based on selected publications were explained.

As can be seen in *Table 2*, from the 11 different effects found in the analyzed publications, brand attitude or attitude toward the brand is the most researched effect, followed closely by the recall or memory of the brands placed, with the first appearing in 44, and the second in 42 publications ($n = 107$) and both also featuring a similar total number of hypotheses, research questions, and results, with 133 for brand attitude and 126 for brand recall ($n = 438$), as well as both resulting in very similar averages of 3.02 and 3.00 items in publications when they are present. The next most frequent effect studied on the analyzed sources was purchase intention; however, this features in less than half of the publications (17) and less than one third of hypotheses and research questions in which it was present (42), in comparison with the two most researched effects.

After purchase intention, the effect on brand salience or top of mind awareness was the next most researched, but again, featured in less than half (19) of the examined items of the publications in comparison to purchase intention (42). The same pattern can be seen in the number of publications where the effect appears (7, compared to 17 of the former). Behind brand salience in the ranking is attitude toward the content, a very interesting effect found in 16 situations in 7 different publications that turns the focus of the preferences of the viewers examined from the brands or products to the content because of the presence of the placements. In this line of research, we can also consider distraction, attitude toward the character involved in the scene, or using the product and realism perception in the same group of attitudes and perceptions of the viewer toward the content instead of the brand. And, although the last two factors are present in only four publications each, distraction in only one, and attitude toward

content in seven, marketers could fear that, if the effects caused are negative to the content, the resistance from directors and the creative staff of audiovisual content to add products into scenes could grow and gain traction.

The remaining effects in *Table 2*—perception of brand attributes, willingness to pay, and product category recall—are again in a field of preference of most marketers involved with product placement (Ansons, Wan, and Leboe 2011). Of course, this is only true when the effects produced are in favor of the brand, because all of them could go either way: if the brand attributes are not perceived, or the willingness to pay is decreased or the value is also decreased, and if the product category recall is lower, or if a category recall ends up triggering higher recalls, preferences, or salience for a competitive brand than the one placed, these effects would not be desired by the advertisers. These effects, however, have not been widely researched yet. Concerning the directions indicated by the results in *Table 3 - Analysis of publications*, the vast majority of publications indicate that the effects tested could be identified on viewers exposed to placements. The body of research clearly identifies that placements do cause effects on audiences, mostly positive towards the practice of product placement.

1.8 Future Research

With the growth of the practice of product placement expected to continue in the coming years (Guo et al. 2019), as well as movements toward more regulation over the practice in many countries (Boerman and Van Reijmersdal 2016), there is a need for further research on the effects caused by the placement of brands and products, not only to give advertisers an updated view of how audiences are affected by placements and how product placement can be used with new technologies, but also for regulators and law makers to be better informed about how audiences are influenced via new and updated studies performed with larger samples and in realistic environments.

Not only the effects need to be studied further, but also the great variety of moderators and variables that might influence the effects on consumers. A lot of research has been conducted in this field already (Van Reijmersdal, Neijens, and Smit 2009).

What we can also expect for the coming years in this field of research is many studies about placement in audiovisual content in social media, whether they are about videos of digital influencers presenting brands or products, or just content especially made for social media platforms containing placements. The expectation is that researchers emphasize possible differences on the effects and moderators and some address the comparison with other formats of audiovisual content.

1.9 References

- Alba, J. W., and A. Chattopadhyay. 1986. Salience effects in brand recall. *Journal of Marketing Research* 23, no. 4: 363. <https://doi.org/10.2307/3151812>.
- Andriasova, A. 2006. They placed, i saw, i was conquered: Evaluating the effects of persuasion knowledge and prominence of brand placement on viewers' attitudes and behavior. Doctoral Dissertation -, University of Texas. <http://hdl.handle.net/2152/13123>
- Ansons, T. L., F. Wan, and J. P. Leboe. 2011. The influence of immersion on product placement effectiveness. In *Handbook of research on digital media and advertising*, ed. M. S. Eastin, T. Daugherty and N. M. Burns, 109–24. IGI Global.
- Auer, M., U. Kalweit, and P. Nüssler. 1988. *Product placement: Die neue kunst der geheimen verführung*. Düsseldorf: Econ-Verlag.
- Auty, S., and C. Lewis. 2004. Exploring children's choice: The reminder effect of product placement. *Psychology and Marketing* 21, no. 9: 697–713. <https://doi.org/10.1002/mar.20025>.

- Babin, L. A. 1996. Advertising via the box office. *Journal of Promotion Management* 3, no. 1-2: 31–52. https://doi.org/10.1300/J057v03n01_03.
- Balakrishnan, B. K., A. S. M. Shuaib, O. Dousin, and P. Permarupan. 2012. The impact of brand placement and brand recall in movies: Empirical evidence from malaysia. *International Journal of Management and Marketing Research* 5, no. 2: 39–52.
- Balasubramanian, S. K. 1994. Beyond advertising and publicity: Hybrid messages and public policy issues. *Journal of Advertising* 23, no. 4: 29–46.
- Balasubramanian, S. K., J. A. Karrh, and H. Patwardhan. 2006. Audience response to product placements: An integrative framework. *Journal of Advertising* 35, no. 3: 115–41. <https://doi.org/10.2753/JOA0091-3367350308>.
- Berndt, R., and A. Hermanns. 1993. *Handbuch marketing-kommunikation: Strategien - instrumente - perspektiven - werbung - public relations - corporate identity - sponsoring - product placement - messen - persönlicher verkauf*. Gabler.
- Beuckels, E., G. Ye, L. Hudders, and V. Cauberghe. 2021. Media multitasking: A bibliometric approach and literature review. *Frontiers in Psychology* 12: 623643. <https://doi.org/10.3389/fpsyg.2021.623643>.
- Boerman, S. C. 2014. This program contains product placement: Effects of sponsorship disclosure on television viewers' responses. Doctoral Dissertation, University of Amsterdam.
- Boerman, S. C., and E. A. Van Reijmersdal. 2016. Informing consumers about "hidden" advertising: A literature review of the effects of disclosing sponsored content.
- Boerman, S. C., E. A. Van Reijmersdal, and P. C. Neijens. 2015. Using eye tracking to understand the effects of brand placement disclosure types in television programs. *Journal of Advertising* 44, no. 3: 196–207. <https://doi.org/10.1080/00913367.2014.967423>.
- Boerman, S. C., E. A. Van Reijmersdal, and P. C. Neijens. 2012. Sponsorship disclosure: Effects of duration on persuasion knowledge and brand responses. *Journal of Communication* 62, no. 6: 1047–64. <https://doi.org/10.1111/j.1460-2466.2012.01677.x>.

- Brennan, I., and L. A. Babin. 2004. Brand placement recognition. *Journal of Promotion Management* 10, no. 1-2: 185–202. https://doi.org/10.1300/J057v10n01_13.
- Brennan, I., K. M. Dubas, and L. A. Babin. 1999. The influence of product-placement type & exposure time on product-placement recognition. *International Journal of Advertising* 18, no. 3: 323–37. <https://doi.org/10.1080/02650487.1999.11104764>.
- Bressoud, E., and J.-M. Lehu. 2015. The product placement efficiency as a result of a relationship between a spectator and a movie. Paper, Institut de recherche de l'EBS Paris and Centre de Recherche et d'Études en Marketing, Paris.
- Bressoud, E., and J.-M. Lehu. 2008a. Le placement de marques dans les films. Panorama, modalités d'exécution et efficacité. *La Revue des Sciences de Gestion, Direction et Gestion* 233: 101–14. <https://doi.org/10.1051/larsg:2008036>.
- Bressoud, E., and J.-M. Lehu. 2008b. Product placement in movies: Questioning the effectiveness according to the spectator's viewing conditions. In *New trends in advertising research*, ed. F. C. Pereira, J. Veríssimo and P. C. Neijens, 145–63. Lisboa: Edições Sílabo.
- Bressoud, E., J.-M. Lehu, and C. A. Russell. 2010. The product well placed: The relative impact of placement and audience characteristics on placement recall. *Journal of Advertising Research* 50, no. 4: 374–85. <https://doi.org/10.2501/S0021849910091622>.
- Breves, P., and H. Schramm. 2016. Matches Made in Hell - Kann die soziale Akzeptanz eines moralisch bedenklichen Product Placements in Verbindung mit einem moralisch bedenklichen Mediencharakter die Markenbewertung. In *Sozialität und werbung*, ed. G. Zurstiege and D. Schlütz, 44–61. Köln: Herbert von Halem Verlag.
- Chan, F. F. Y., B. Lowe, and D. Petrovici. 2017. Young adults' perceptions of product placement in films: An exploratory comparison between the united kingdom and hong kong. *Journal of Marketing Communications* 23, no. 3: 311–28. <https://doi.org/10.1080/13527266.2015.1061036>.

- Cholinski, A. 2012. The effectiveness of product placement: A field quasi-experiment. *International Journal of Marketing Studies* 4, no. 5: 14–28. <https://doi.org/10.5539/ijms.v4n5p14>.
- Cowley, E., and C. Barron. 2008. When product placement goes wrong: The effects of program liking and placement prominence. *Journal of Advertising* 37, no. 1: 89–98. <https://doi.org/10.2753/JOA0091-3367370107>.
- D'Astous, A., and F. Chartier. 2000. A study of factors affecting consumer evaluations and memory of product placements in movies. *Journal of Current Issues & Research in Advertising* 22, no. 2: 31–40. <https://doi.org/10.1080/10641734.2000.10505106>.
- D'Astous, A., and N. Séguin. 1999. Consumer reactions to product placement strategies in television sponsorship. *European Journal of Marketing* 33, no. 9/10: 896–910. <https://doi.org/10.1108/03090569910285832>.
- D'Hooge, S. C., L. Hudders, and V. Cauberghe. 2017. Direct evaluative conditioning in brand placement: The impact of scene valence and prominence on brand placement repetition effects. *Journal of Consumer Behaviour* 16, no. 5: 452–62. <https://doi.org/10.1002/cb.1647>.
- Delorme, D. E., and L. N. Reid. 1999. Moviegoers' experiences and interpretations of brands in films revisited. *Journal of Advertising* 28, no. 2: 71–95. <https://doi.org/10.1080/00913367.1999.10673584>.
- Dens, N., P. de Pelsmacker, M. Wouters, and N. Purnawirawan. 2012. Do you like what you recognize? *Journal of Advertising* 41, no. 3: 35–54. <https://doi.org/10.2753/JOA0091-3367410303>.
- Drennan, J., and J. McDonnell, eds. 2005. *Exploring the effectiveness of virtual product placement on recall and recognition of new brands*. Vol. 16.
- Gibson, B., C. Redker, and I. Zimmerman. 2013. Conscious and nonconscious effects of product placement: Brand recall and active persuasion knowledge affect brand attitudes and

- brand self-identification differently. *Psychology of Popular Media Culture* 3, no. 1: 19–37.
<https://doi.org/10.1037/a0032594>.
- Gould, S. J., P. B. Gupta, and S. Grabner-Kräuter. 2000. Product placements in movies: A cross-cultural analysis of austrian, french and American consumers' attitudes toward this emerging, international promotional medium. *Journal of Advertising* 29, no. 4: 41–58.
<https://doi.org/10.1080/00913367.2000.10673623>.
- Grzyb, T., D. Dolinski, and A. Kozłowska. 2018. Is product placement really worse than traditional commercials? Cognitive load and recalling of advertised brands. *Frontiers in Psychology* 9: 1519. <https://doi.org/10.3389/fpsyg.2018.01519>.
- Guo, F., G. Ye, L. Hudders, W. Lv, M. Li, and V. G. Duffy. 2019. Product placement in mass media: A review and bibliometric analysis. *Journal of Advertising* 48, no. 2: 215–31.
<https://doi.org/10.1080/00913367.2019.1567409>.
- Gupta, P. B., and K. R. Lord. 1998. Product placement in movies: The effect of prominence and mode on audience recall. *Journal of Current Issues & Research in Advertising* 20, no. 1: 47–59. <https://doi.org/10.1080/10641734.1998.10505076>.
- Gurzki, H., and D. M. Woisetschläger. 2017. Mapping the luxury research landscape: A bibliometric citation analysis. *Journal of Business Research* 77: 147–66.
<https://doi.org/10.1016/j.jbusres.2016.11.009>.
- Hackley, C., and R. Amy Hackley née Tiwsakul. 2012. Observations: Unpaid product placement. *International Journal of Advertising* 31, no. 4: 703–18.
<https://doi.org/10.2501/IJA-31-4-703-718>.
- Harbrücker, U., and K.-P. Wiedmann. 1987. *Product-Placement: Rahmenbedingungen und Gestaltungsperspektiven*. Vol. 58 of *Arbeitspapier / Institut für Marketing, Universität Mannheim*. Mannheim: Institut für Marktorientierte Unternehmensführung.

- Homer, P. M. 2009. Product placements - the impact of placement type and repetition on attitude. *Journal of Advertising* 38, no. 3: 21–32. <https://doi.org/10.2753/JOA0091-3367380302>.
- Hong, S., Y. J. Wang, and G. de Los Santos. 2008. The effective product placement: Finding appropriate methods and contexts for higher brand salience. *Journal of Promotion Management* 14, no. 1-2: 103–20. <https://doi.org/10.1080/10496490802492457>.
- Jin, C., and J. Villegas. 2007. The effect of the placement of the product in film: Consumers' emotional responses to humorous stimuli and prior brand evaluation. *Journal of Targeting, Measurement and Analysis for Marketing* 15, no. 4: 244–55. <https://doi.org/10.1057/palgrave.jt.5750049>.
- Johnstone, E., and C. A. Dodd. 2000. Placements as mediators of brand salience within a UK cinema audience. *Journal of Marketing Communications* 6, no. 3: 141–58. <https://doi.org/10.1080/13527260050118649>.
- Jusufovic-Karisik, V. 2014. 20 years of research on product placement in movie, television and video game media. *Journal of Economic and Social Studies* 4, no. 2: 98–108. <https://doi.org/10.14706/JECOSS114210>.
- Kamleitner, B., and A. Khair Jyote. 2013. How using versus showing interaction between characters and products boosts product placement effectiveness. *International Journal of Advertising* 32, no. 4: 633–53. <https://doi.org/10.2501/IJA-32-4-633-653>.
- Karrh, J. A. 1998. Brand placement: A review. *Journal of Current Issues & Research in Advertising* 20, no. 2: 31–49. <https://doi.org/10.1080/10641734.1998.10505081>.
- Knoll, J., H. Schramm, C. Schallhorn, and S. Wynistorf. 2015. Good guy vs. Bad guy: The influence of parasocial interactions with media characters on brand placement effects. *International Journal of Advertising* 34, no. 5: 720–43. <https://doi.org/10.1080/02650487.2015.1009350>.

- Laban, G., C. Zeidler, and E. Brussee. 2020. *Binge-watching (netflix) product placement: A content analysis on different product placements in netflix originals vs. Non-netflix originals, and drama vs. Comedy shows.*
- Law, S., and K. A. Braun. 2000. I'll have what she's having: Gauging the impact of product placements on viewers. *Psychology and Marketing* 17, no. 12: 1059–75. [https://doi.org/10.1002/1520-6793\(200012\)17:12<1059:AID-MAR3>3.0.CO;2-V](https://doi.org/10.1002/1520-6793(200012)17:12<1059:AID-MAR3>3.0.CO;2-V).
- Lehu, J.-M., and E. Bressoud. 2008. Effectiveness of brand placement: New insights about viewers. *Journal of Business Research* 61, no. 10: 1083–90. <https://doi.org/10.1016/j.jbusres.2007.09.015>.
- Lewis, J. 1971. *The total film maker*. United States: Random House.
- Lin, H.-F., and C.-H. Chen. 2013. An intelligent embedded marketing service system based on tv apps: Design and implementation through product placement in idol dramas. *Expert Systems with Applications* 40, no. 10: 4127–36. <https://doi.org/10.1016/j.eswa.2013.01.034>.
- Lin, Y.-C., Y.-C. Lee, and K.-C. Chen. 2012. The influence of brand image and product knowledge in the advertising effect—take placement marketing movie as an example. *Journal of Statistics and Management Systems* 15, no. 4-5: 581–600. <https://doi.org/10.1080/09720510.2012.10701643>.
- Matthes, J., W. Wirth, C. Schemer, and N. Pachoud. 2012. Tiptoe or tackle? The role of product placement prominence and program involvement for the mere exposure effect. *Journal of Current Issues & Research in Advertising* 33, no. 2: 129–45. <https://doi.org/10.1080/10641734.2012.700625>.
- Matthes, J., C. Schemer, and W. Wirth. 2007. More than meets the eye: Investigating the hidden impact of brand placements in television magazines. *International Journal of Advertising* 26, no. 4: 477–503. <https://doi.org/10.1080/02650487.2007.11073029>.

- Maynard, M. L., and M. Scala. 2006. Unpaid advertising: A case of Wilson the volleyball in cast away. *The Journal of Popular Culture* 39, no. 4: 622–38. <https://doi.org/10.1111/j.1540-5931.2006.00282.x>.
- Ming-tiem, T., W. Liang, and M.-L. Liu. 2007. The effects of subliminal advertising on consumer attitudes and buying intentions. *The International Journal of Management* 24, no. 1: 3–14.
- Mitchell, T. A., and M. R. Nelson. 2018. Brand placement in emotional scenes: Excitation transfer or direct affect transfer? *Journal of Current Issues & Research in Advertising* 39, no. 2: 206–19. <https://doi.org/10.1080/10641734.2018.1428252>.
- Morton, C. R., and M. Friedman. 2002. “I saw it in the movies”: Exploring the link between product placement beliefs and reported usage behavior. *Journal of Current Issues & Research in Advertising* 24, no. 2: 33–40. <https://doi.org/10.1080/10641734.2002.10505133>.
- Müller, J., and F. Christandl. 2019. Content is king – but who is the king of kings? The effect of content marketing, sponsored content & user-generated content on brand responses. *Computers in Human Behavior* 96: 46–55. <https://doi.org/10.1016/j.chb.2019.02.006>.
- Nagar, K. 2016. Consumer response to brand placement in movies: Investigating the brand-event fit. *Vikalpa* 41, no. 2: 149–67. <https://doi.org/10.1177/0256090916642678>.
- Nebenzahl, I. D., and E. Secunda. 1993. Consumers' attitudes toward product placement in movies. *International Journal of Advertising* 12, no. 1: 1–11. <https://doi.org/10.1080/02650487.1993.11104518>.
- Nelson, M. R. 2002. Recall of brand placements in computer/video games. *Journal of Advertising Research* 42, no. 2: 80–92. <https://doi.org/10.2501/JAR-42-2-80-92>.
- Newell, J., C. T. Salmon, and S. Chang. 2006. The hidden history of product placement. *Journal of Broadcasting & Electronic Media* 50, no. 4: 575–94. https://doi.org/10.1207/s15506878jobem5004_1.

- PQ Media. 2020. Global branded entertainment marketing forecast 2014–24, PQ Media LLC, Stamford, CT. <https://www.pqmedia.com/product/global-product-placement-forecast-2020/>. Accessed April 2023.
- Rathmann, P. 2014. *Medienbezogene effekte von product placement: Theoretische konzeption und empirische analyse*. Doctoral dissertation. Wiesbaden: Springer Gabler.
- Redker, C., B. Gibson, and I. Zimmerman. 2013. Liking of movie genre alters the effectiveness of background product placements. *Basic and Applied Social Psychology* 35, no. 3: 249–55. <https://doi.org/10.1080/01973533.2013.785400>.
- Redondo, I. 2012. The behavioral effects of negative product placements in movies. *Psychology and Marketing* 29, no. 8: 622–35. <https://doi.org/10.1002/mar.20548>.
- Roehm, H. A., and M. L. Roehm. 2019. Using advertising alignment to improve product placement effects on product choice: The power of facilitating analogies. *Journal of Consumer Behaviour* 18, no. 4: 283–90. <https://doi.org/10.1002/cb.1763>.
- Romaniuk, J. 2009. The efficacy of brand-execution tactics in tv advertising, brand placements, and internet advertising. *Journal of Advertising Research* 49, no. 2: 143–50. <https://doi.org/10.2501/S0021849909090187>.
- Rössler, P., and J. Bacher. 2002. Transcultural effects of product placement in movies: A comparison of placement impact in Germany and the USA. *Zeitschrift für Medienpsychologie* 14, no. 3: 98–108. <https://doi.org/10.1026//1617-6383.14.3.98>.
- Russell, C. A. 2002. Investigating the effectiveness of product placements in television shows: The role of modality and plot connection congruence on brand memory and attitude. *Journal of Consumer Research* 29, no. 3: 306–18. <https://doi.org/10.1086/344432>.
- Russell, C. A., and B. B. Stern. 2006. Consumers, characters, and products: A balance model of sitcom product placement effects. *Journal of Advertising* 35, no. 1: 7–21. <https://doi.org/10.2753/JOA0091-3367350101>.

- Schramm, H., and J. Knoll. 2015. Modeling the impact of parasocial interactions with media characters on brand placement effects. *Journal of Promotion Management* 21, no. 5: 548–65. <https://doi.org/10.1080/10496491.2015.1055038>.
- Schumacher, P. 2007. *Effektivität von ausgestaltungsformen des product placement*. Gabler Edition Wissenschaft. Wiesbaden: Deutscher Universitäts-Verlag.
- Shoenberger, H., and E. Kim. 2017. Product placement as leveraged marketing communications: The role of wishful identification, brand trust, and brand buying behaviours. *International Journal of Advertising* 2, no. 1: 1–17. <https://doi.org/10.1080/02650487.2017.1391678>.
- Smink, A. R., E. A. Van Reijmersdal, and S. C. Boerman. 2017. Effects of brand placement disclosures: An eye tracking study into the effects of disclosures and the moderating role of brand familiarity. In *Advances in advertising research viii*, ed. V. Zabkar and M. Eisend, 85–96. Wiesbaden: Springer Fachmedien Wiesbaden.
- Srivastava, R. K. 2018. Do low involved brands have better consumer perception due to product placement in emerging markets? *Journal of Marketing Communications* 24, no. 4: 360–74. <https://doi.org/10.1080/13527266.2017.1414705>.
- Su, H. J., Y.-A. Huang, G. Brodowsky, and H. J. Kim. 2011. The impact of product placement on tv-induced tourism: Korean tv dramas and taiwanese viewers. *Tourism Management* 32, no. 4: 805–14. <https://doi.org/10.1016/j.tourman.2010.06.020>.
- Sung, Y., F. de Gregorio, and J.-H. Jung. 2009. Non-student consumer attitudes towards product placement. *International Journal of Advertising* 28, no. 2: 257–85. <https://doi.org/10.2501/S0265048709200564>.
- Terlutter, R., and M. L. Capella. 2013. The gamification of advertising: Analysis and research directions of in-game advertising, advergames, and advertising in social network games. *Journal of Advertising* 42, no. 2-3: 95–112. <https://doi.org/10.1080/00913367.2013.774610>.

- Tessitore, T., and M. Geuens. 2013. Pp for 'product placement' or 'puzzled public'? *International Journal of Advertising* 32, no. 3: 419–42. <https://doi.org/10.2501/IJA-32-3-419-442>.
- Valenzuela-Fernández, L., C. Martínez-Troncoso, and F. Yáñez-Wieland. 2015. Influence of placement on explicit and implicit memory of college students. *Comunicar* 22, no. 44: 169–76. <https://doi.org/10.3916/C44-2015-18>.
- Van Reijmersdal, E. A. 2015. Disclosing brand placements in movies: Effects of disclosure type and movie involvement on attitudes. *Journal of Media Psychology* 28, no. 2: 78–87. <https://doi.org/10.1027/1864-1105/a000158>.
- Van Reijmersdal, E. A. 2009. Brand placement prominence: Good for memory! Bad for attitudes? *Journal of Advertising Research* 49, no. 2: 151–53. <https://doi.org/10.2501/S0021849909090199>.
- Van Reijmersdal, E. A., K. Tutaj, and S. C. Boerman. 2013. The effects of brand placement disclosures on skepticism and brand memory. *Communications - The European Journal of Communication Research* 38, no. 2: 127–46. <https://doi.org/10.1515/commun-2013-0008>.
- Van Reijmersdal, E. A., E. Smit, and P. Neijens. 2010. How media factors affect audience responses to brand placement. *International Journal of Advertising* 29, no. 2: 279–301. <https://doi.org/10.2501/S0265048710201154>.
- Van Reijmersdal, E. A., P. Neijens, and E. G. Smit. 2009. A new branch of advertising. *Journal of Advertising Research* 49, no. 4: 429–49. <https://doi.org/10.2501/S0021849909091065>.
- Van Reijmersdal, E. A., P. C. Neijens, and E. G. Smit. 2007. Effects of television brand placement on brand image. *Psychology and Marketing* 24, no. 5: 403–20. <https://doi.org/10.1002/mar.20166>.
- Verhellen, Y., J. Eelen, N. Dens, and P. de Pelsmacker. 2016. The short- and long-term impact of brand placement in an advertiser-funded tv program on viewers' attitudes toward the

- sponsor brand and its main competitor. *International Journal of Advertising* 35, no. 6: 932–48. <https://doi.org/10.1080/02650487.2015.1087089>.
- Wang, R. W. Y., Y.-C. Chen, I.-N. Liu, and S.-W. Chuang. 2018. Temporal and spectral eeg dynamics can be indicators of stealth placement. *Scientific reports* 8, no. 1: 1–17. <https://doi.org/10.1038/s41598-018-27294-4>.
- Wennekers, A. M., L. Vandeberg, K. Zoon, and E. A. Van Reijmersdal. 2016. Distinguishing implicit from explicit brand attitudes in brand placement research. In *Advances in advertising research (vol. VI)*, ed. P. Verlegh, H. Voorveld and M. Eisend, 253–67. Wiesbaden: Springer Fachmedien Wiesbaden.
- Wilson, R. T., and B. D. Till. 2011. Product placements in movies and on Broadway. *International Journal of Advertising* 30, no. 3: 373–98. <https://doi.org/10.2501/IJA-30-3-373-398>.
- Yang, M., and D. R. Roskos-Ewoldsen. 2007. The effectiveness of brand placements in the movies: Levels of placements, explicit and implicit memory, and brand-choice behavior. *Journal of Communication* 57, no. 3: 469–89. <https://doi.org/10.1111/j.1460-2466.2007.00353.x>.
- Yoon, S., Y. K. Choi, and S. Song. 2011. When intrusive can be likable - product placement effects on multitasking consumers. *Journal of Advertising* 40, no. 2: 63–75. <https://doi.org/10.2307/23048705>.

Chapter 2

Drivers of Product/Brand Placement Effectiveness: A Literature Review to Map the Field

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Drivers of Product/Brand Placement Effectiveness:

A Literature Review to Map the Field

2.1 Abstract

As the practice of placing products and brands in films and television shows expands and gains more importance with streaming services, research on product placement effectiveness has gained more interest from scholars and marketers. This paper presents a literature review that mapped the factors that could influence the effects of placements as investigated in the research. Through a systematic selection process, the most prominent studies in the field were analyzed, and multiple drivers of placement effectiveness contained in the publications were identified. These variables were classified as viewer- or content-originated drivers and ranked according to the frequency of their appearance in the articles reviewed. A description of each variable is also included in this paper, so the results of this review can serve as a guide for anyone interested in product/brand placement effectiveness research, and an initiator of future research.

2.2 Introduction

Product or brand placement in movies has been around for almost as long as cinema itself (Hudson & Hudson, 2006), before the film industry became the multibillion-dollar-a-year industry that it is today (Guo et al., 2019). The practice of placing brand products in films began when professionals in the movie-making business, which was still in the early stages of development then, started using the exposure that films could provide to subtly show or advertise products in movie scenes. Sometimes, in exchange for featuring a product as a prop on the set (e.g., a kitchen appliance or a car), the manufacturer did not demand payment or rental fee, as in a barter-style arrangement (Hudson & Hudson, 2006). However, as a regular practice starting in the 1930s, movie producers demanded that manufacturers pay a fee for their products to be featured in some scenes of the producers' movies (Newell, Salmon, & Chang, 2006).

The aforementioned ancillary source of income of movie producers not only helped them produce more movies but also paved the way for the rapid growth of content production for television (TV), which, in the 1940s, already featured entire programs sponsored by corporate brands (Medoff & Kaye, 2017). This form of sponsorship, where the brands covered most of or all the costs of the program and were thus frequently presented to the audience as sponsors of the program, was not exactly the same as product or brand placements in scenes (Hudson & Hudson, 2006), but it showed how important brands' presence on TV was for their sales. The next decades saw a steady but slow growth of the practice on both TV shows and cinema, but still most placements happened as an exchange of using the products, so that the producers could save money on set dressing and props. In the 1970s, product agents emerged in the industry and started charging fees for the placement of products and brands in movies and TV shows (Harmetz, 1983).

After the placement of the candy Reese's Pieces in the movie *E.T. the Extra-Terrestrial* released in 1982, which boosted sales of the product (Ming-tiem, Liang, & Liu, 2007), the business of paying a fee in exchange for placements went from a couple thousand dollars a movie in mostly unorganized operations to a much more structured business, with the creation of agencies specialized in making deals with studios and TV channels (Hudson & Hudson, 2006). The studios themselves (e.g., 20th Century Fox) began to price tag placements in their movies, charging between USD10,000 and USD40,000 for placements in their films (Harmetz, 1983). During the 1980s and 1990s, the brand placement industry kept growing on both TV and cinema, and the 2000s and 2010s brought new perspectives for brand placement and, at the same time, gave rise to new issues related to regular advertisement. The emergence of digital video recorders (DVRs) allowed viewers to avoid commercials by recording prime shows on DVRs and skipping the commercial breaks while watching the recorded shows (Balasubramanian, Karrh, & Patwardhan, 2006). The spread of high-speed internet also allowed streaming platforms, such as Netflix, Hulu, and Amazon Prime Video, to reach larger audiences that could watch content with little to no commercial breaks (Verhellen, Eelen, Dens, & Pelsmacker, 2016).

When advertisers resort to commercials on TV, they are looking to reach as many viewers as possible. The more people stop watching TV, the fewer eyeballs advertisers will reach. Some platforms, such as Hulu, YouTube, CBS All Access, Sling, Vue, and Rakuten TV, feature commercials, which offer new advertising opportunities. Nevertheless, video-streaming services generally show much fewer commercials than regular TV programming does (Sanson & Steirer, 2019). The fact that some platforms do not contain any commercials makes it much more difficult to have a product or service advertised on videos on demand via regular commercials.

Product placement attracts marketers because if the brand is part of the content, it is not isolated as an announcement during a commercial break, which has a high possibility of being skipped by the viewers. Thus, the possibility of the brand reaching the viewers is much higher. The growing importance of product placement for marketers has been translated into a visible increase in investments in this advertisement format, reaching USD20 billion worldwide in 2019 (Guo et al., 2019) and expected to reach more than USD30 billion by 2024 (PQ Media, 2020).

A similar development has been observed in the field of product or brand placement research. Before the 1980s, there was not much research on the subject, although studies showing the existence of placements and discussing their legal aspects could be traced back to 1958 (Harbrücker & Wiedmann, 1987). In addition, cinema industry were writing about the practice in the 1970s (Lewis, 1971). Studies on the impact of product placement on audiences have been published since the 1980s (Harbrücker & Wiedmann, 1987). The next four decades saw an increasing number of such studies, including those that sought to determine if viewers remembered brands placed in movies and TV shows, also called brand recall (Auer, Kalweit, & Nüssler, 1988). Reviews of studies on the effects of placements have also been published (Guo et al., 2019), along with some that more specifically aimed to determine the variables and moderators influencing the effects of placements (Van Reijmersdal, Neijens, & Smit, 2009), which the present review focused on.

The present review took stock of newer empirical studies on the effectiveness of product or brand placements. In particular, it mapped and quantified the independent and dependent variables affecting product or brand placements that were determined in previous studies, and determined the operationalization of each variable in the selected publications. To achieve this, first, the publications about product and brand placement were mapped; this was necessary to determine how many publications could be found and retrieved, and whether any particular

method of selecting sources had to be used if the results were too extensive for the timeframe and resources of this review. Then, all dimensions of interest (hypothesis, research questions, results, and empirical generalizations) were analyzed. Finally, the identified variables were ranked by the frequency of their appearance in the analyzed publications, their operationalization was explained, and the studies containing each variable were compiled.

2.3 Terminology

The International Chamber of Commerce (2018) defines the term *product placement* as “the inclusion of a product or brand so that it is featured within the content of a program, film or publication, including online material, normally in return for payment or other valuable consideration to the program or film producer, publisher or licensee” (International Chamber of Commerce, 2018, p.26). According to some authors, product placement and brand placement have different meanings, although they are used interchangeably in most academic and trade publications (Karrh, 1998) and are also both used in this article. However, both terms have different notions. Product placement refers to the practice of including a particular product category or type in a scene in a movie or TV show, while brand placement refers to the practice of including not just the product itself but a brand in the same (Karrh, 1998).

Many studies have focused on different placement formats, which affect viewers differently (Brennan & Babin, 2004). The present review covered studies about placements in fictional content that had been aired on TV, cinema, or streaming platforms. Using Gupta and Lord’s (1998) categorization system, placements can be divided into audiovisual (the product or brand is seen and heard during the scene), visual-only (the insertion is only visual; that is, the brand or product can be seen but is not mentioned verbally), and audio-only placements (the product or brand is mentioned verbally but is not seen on the screen).

Apart from independent and dependent variables, mediators and moderators were also considered in the present review. Moderators are qualitative or quantitative variables that affect the directions and/or strength of two variables (Baron & Kenny, 1986), whereas mediators are variables that link a cause and an effect to each other (Wu & Zumbo, 2008), being the main or partial reasons why the effects unfold.

2.4 Methodology

The database selection for the present review was based on the most recent bibliometric review of the subject (Guo et al., 2019). The review included studies found in the Web of Science and Scopus databases, both covering studies in the field of social sciences (Beuckels, Ye, Hudders, & Cauberghe, 2021; Gurzki & Woisetschläger, 2017). However, for the present review, it was also necessary to include the EBSCOhost database because many publications on product or brand placement effectiveness were not available in Web of Science or Scopus.

The keywords chosen for the database query were also adopted from Guo et al. (2019), but other keywords used in previous reviews (Jusufovic-Karisik, 2014; Karrh, 1998; Van Reijmersdal et al., 2009) were also adopted. However, keywords such as “advertainment,” “advergame(s),” and “adgame(s)” (Van Reijmersdal et al., 2009) were excluded because studies related to product and brand placement effectiveness in video games were not within the scope of the present review. The keywords “product placement,” “brand placement,” “sponsored content,” “integrated advertis*,” “brand integration,” and “embedded advertis*” were used in the database query, and “with *” was used to include both the advertising and advertisement forms of the word in the search. To include publications on the subject whose titles did not contain the searched words, the search rules were made to include abstracts and keywords. This is presented differently in the different databases: TITLE-ABS-KEY on

Scopus, TOPIC on Web of Science, and as the default option for the search field on EBSCOhost, which also contains subject headings with this option.

Each of the three databases had different filter options. For document type, the categories selected on Scopus were articles, conference papers, reviews, books, and book chapters. On Web of Science, the available choices that were suited for the present review were articles, proceedings papers, books, and book chapters, and on EBSCOhost, no filters were applied. English, Spanish, German, Portuguese, and French, all of which the author could understand and thus required no translations, were selected as possible languages for the publications. The topic of the document would then filter out publications not related to the subject of interest.¹ Year of publication was not included as a filter for the search results.

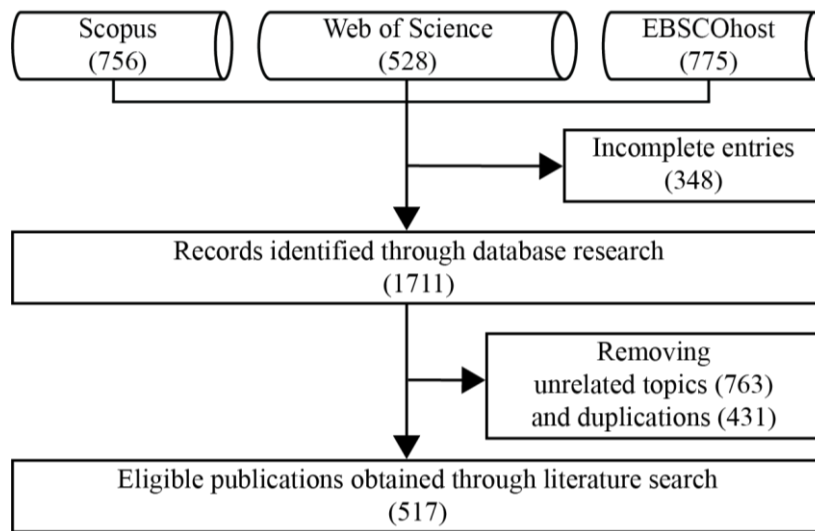
There were 756 search hits on the Scopus database, 528 on Web of Science, and 775 on EBSCOhost. The list of search results was further analyzed to exclude incomplete entries that could not be completed manually; for example, if neither title nor the DOI were documented, the entry was excluded. After the exclusion of incomplete entries, the list contained 1,711 entries (Scopus: 702; EBSCOhost: 559; Web of Science: 450).

It was expected that even after the aforementioned procedures, some entries would still not be about the subject of the research (false positives). The term *product placement* can also be found in areas other than the media, with a completely different meaning. For example, it can also mean the location in a store or on a shelf where products go (Sigurdsson, Larsen, & Gunnarsson, 2014). The keyword “integrated advertis*” also prompted results not related to the subject of interest, yielding publications about racial integration in advertisement (J. W. Gould, Sigband, & Zoerner, 1970) and multiple results about online marketing and media planning also not pertaining to the concept previously defined. This made a two-phase manual selection process necessary (see Figure 1). For the first phase, the titles of the publications were examined; if the title already unveiled the source as being outside the scope of the present

review, the publication was discarded, and if the title did not make the topic of the publication clear, the abstracts were retrieved and examined in the second phase. This two-phase process resulted in the exclusion of a substantial number of publications from further analysis. The final number of eligible publications was 517.

Figure 1

Flowchart showing the steps of the literature search



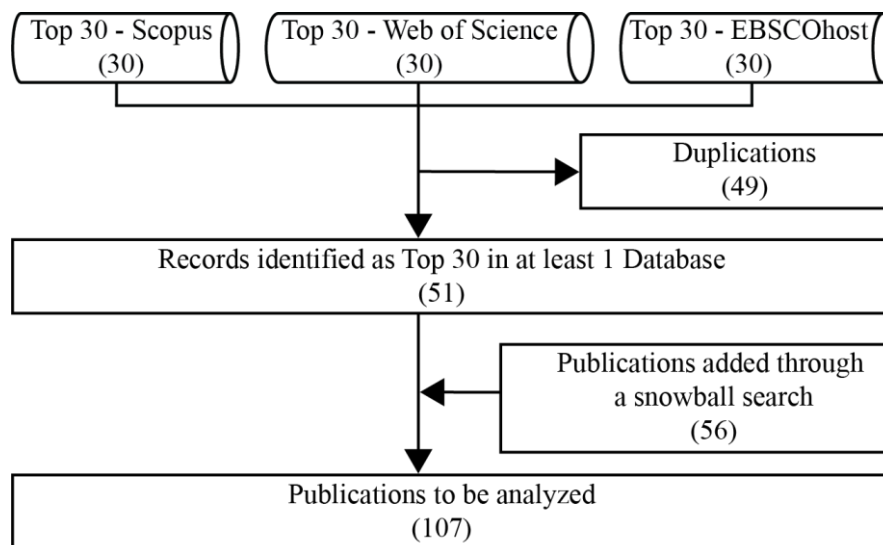
The criterion chosen for prioritizing publications to be further analyzed was the publication’s rank in terms of citations as publications with more citations were considered more influential (Guo et al., 2019). Thus, an analysis of citations was performed. However, this was possible only with the Scopus and Web of Science platforms. As EBSCOhost did not present such a possibility, the results from this database were entered into the Google Scholar database, and the numbers of citations shown on Google Scholar were used to rank and find the top 30 cited publications among the results of the EBSCOhost search.

Of the 30 most cited publications in all three databases (see Figure 2), 12 were included in the top 30 in all three databases, 11 were in the top 30 in Scopus and EBSCOhost but not in Web of Science, 3 were in the top 30 in Web of Science and Scopus but not in EBSCOhost,

and 1 was in the top 30 in Web of Science and EBSCOhost but not in Scopus. All three databases had publications among the 30 most cited that were not on the same list in the other databases: 14 for Web of Science, 4 for Scopus, and 6 for EBSCOhost.

Figure 2

Flowchart showing the method used for choosing the publications to be analyzed



During the analysis and extraction of information and results from the 51 publications included in the top 30 in at least one database, additional works cited in the publications were also included mainly because they were sources of the 30 most cited studies, although they themselves were either not included in the top 30 in the rankings or not even available in any of the searched databases. These studies were also added to the sample after their accessibility and that of their contents were proven through a snowball method (Beuckels et al., 2021). The last additions to the research were works accessible by the author that were published in the last five years, which did not have the same prospects of being featured as the most cited publications or did not indicate the latest research trends in the field. The final total number of studies to be analyzed was 107 (see Figure 2).

As mentioned earlier, the present review focused on the drivers of placement effectiveness identified in previous studies reported in past publications. Thus, publications reporting studies that did not contain experiments covering this topic were excluded from further analysis. A total of 27 publications did not match this criterion for further investigation: 12 were literature reviews on the subject, 11 analyzed programs but did not identify the effects of product or brand placements on the audiences or the moderators of such effects, 2 covered the legal and ethical aspects of the practice, and 2 featured concepts and frameworks for future research but did not present the results of any experiment performed. The remaining 80 publications were retained for further examination.

The integrative framework of Balasubramanian, Karrh, and Patwardhan (2006), in addition to the methods and criteria used by Van Reijmersdal, Neijens and Smit (2009), served as a basis for recognizing, selecting, and extracting the variables identified in the analyzed publications. To be selected and extracted, a variable had to be the focus of a hypothesis, research question, or result of a study. Variables named in a publication but not related to any of the study dimensions reported in that publication were not included as variables for further examination. The selection also ignored the effects of product placements on the viewers; the attention was focused only on the variables that would have an impact on the effects or other variables.

2.5 Results

A total of 438 hypotheses, research questions, and results were analyzed from 80 studies. Six publications did not contain any factors, apart from the direct effects of product or brand placements on the viewers, and 414 hypotheses, research questions, and results were obtained from the remaining 74 publications. A total of 57 factors were identified in these 414 research items.

Based on previous reviews and publications on the subject, two categories were created to organize the factors: (i) audience, placement, and exposure characteristics (Van Reijmersdal et al., 2009) as well as context characteristics (Russell & Belch, 2005); and (ii) product/brand-, respective medium-, and execution-related factors (Jusufovic-Karisik, 2014). The 57 factors in the present review fell under two main categories: viewer-originated factors (see Table 1), which are similar to audience characteristics, and content-originated factors (see Table 2), which are factors purely inherent in the placement, content, or medium. Product placement modality is presented as a subcategory of content-originated factors (see Table 2).

From demographic information to visual attention, social interaction, attitudes toward genre, directors, content, and product placement as a practice, 33 variables that originated from the viewers were identified and featured in Table 1, followed by explanations of them. The 24 moderators, mediators, and other variables that are characteristics of the content, medium, or placement are listed and explained in Table 2. The variables are presented in both tables in the order of their ranks based on the number of dimensions of interest (DI) in which they appeared.

Table 1
Viewer-originated variables

Variable	Operationalization	DI	P	Sources
Attitude toward product placement	The viewers' attitudes toward, opinions on, and resistance to the practice of product placement	64	19	Balakrishnan, Shuaib, Dousin, and Permarupan (2012); Breves and Schramm (2016); Chan, Lowe, and Petrovici (2017); D'Astous and Séguin (1999); D'Astous and Chartier (2000); Gupta and Gould (1997);

Variable	Operationalization	DI	P	Sources
				S. J. Gould, Gupta, and Grabner-Kräuter (2000); Gregorio and Sung (2010); Jin and Villegas (2007); Karrh, Frith, and Callison (2001); Morton and Friedman (2002); Nebenzahl and Secunda (1993); Rathmann (2014); Rössler and Bacher (2002); Sabour, Pillai, Gistri, and Balasubramanian (2016); Schmoll, Hafer, Hilt, and Reilly (2006); Sung, Gregorio, and Jung (2009); Van Reijmersdal (2015); Van Reijmersdal, Tutaj, and Boerman (2013)
Persuasion knowledge	Whether the viewers perceive the attempt of the placement to change their beliefs, attitudes, decisions, or actions (Friestad & Wright, 1994)	41	10	Andriasova (2006); Boerman (2014); Boerman, Van Reijmersdal, and Neijens (2012); Gibson, Redker, and Zimmerman (2013); Johnstone and Dodd (2000); Matthes, Schemer, and Wirth (2007); Romaniuk (2009); Rössler and Bacher (2002); Smink,

Variable	Operationalization	DI	P	Sources
				Van Reijmersdal, and Boerman (2017); Tessitore and Geuens (2013)
Cultural background/nationality	Nationalities or cultural backgrounds of the viewers or research participants	36	6	Chan et al. (2017); S. J. Gould et al. (2000); Karrh et al. (2001); Rössler and Bacher (2002); Sabour et al. (2016); Su, Huang, Brodowsky, and Kim (2011)
Attitude toward content	Viewers' attitudes toward a movie or a television (TV) program, including high program liking and low program liking. It can also refer to a movie's or TV show's appeal	27	14	Andriasova (2006); Bressoud and Lehu (2008b); Bressoud and Lehu (2015); Bressoud, Lehu, and Russell (2010); Cowley and Barron (2008); Gibson et al. (2013); Johnstone and Dodd (2000); Lehu and Bressoud (2008); Redondo (2012); Van Reijmersdal (2009); Van Reijmersdal, Neijens, and Smit (2007); Van Reijmersdal, Smit, and Neijens (2010); Verhellen et al. (2016); Wennekers, Vandeberg, Zoon, and Van Reijmersdal (2016)

Variable	Operationalization	DI	P	Sources
Recognition of advertising	Viewers' assumption or recognition that a brand appearing in a movie or TV show is the result of paid advertising efforts; also, whether the viewers are informed about the placement via disclosure announcements	25	12	Boerman (2014); Boerman, Van Reijmersdal, and Neijens (2015); D'Astous and Chartier (2000); Drennan and McDonnell (2005); Gibson et al. (2013); Karrh et al. (2001); Morton and Friedman (2002); Simmers and Damron-Martinez (2009); Smink et al. (2017); Tessitore and Geuens (2013); Van Reijmersdal (2009); Van Reijmersdal et al. (2013)
Gender, ethnicity, education level, age, and income	The viewers' demographic factors (e.g., gender, age, education level, ethnicity, income level) that can influence their attitudes toward placements	32	8	Auty and Lewis (2004); Breves and Schramm (2016); Delorme and Reid (1999); S. J. Gould et al. (2000); Gregorio and Sung (2010); Gupta and Gould (1997); Schmoll et al. (2006); Sung et al. (2009)
Attitude toward a character or actor	Liking or disliking a character in the movie or TV show; or the actor or actress playing the role.	24	7	Andriasova (2006); Gibson et al. (2013); Knoll, Schramm, Schallhorn, and Wynistorf (2015); Morton and Friedman

Variable	Operationalization	DI	P	Sources
				(2002); Rathmann (2014); Schramm and Knoll (2015); Shoenberger and Kim (2017)
Brand familiarity	Viewers' previous knowledge or familiarity with the placed brand	21	8	Andriasova (2006); Brennan and Babin (2004); Delorme and Reid (1999); Johnstone and Dodd (2000); Y.-C. Lin, Lee, and Chen (2012); Redker, Gibson, and Zimmerman (2013); Schumacher (2007); Smink et al. (2017)
Spillover effect	The viewers' feelings while viewing content, such as arousal caused by scenes or transfer of the characters' attributes the brand, or the viewers' negative attitudes toward the placed brand followed by exposure to negative placements. The spillover effect is transferring the attitude to the placed brand.	14	9	Delorme and Reid (1999); D'Hooge, Hudders, and Cauberghe (2017); Gibson et al. (2013); Jin and Villegas (2007); Law and Braun (2000); Mitchell and Nelson (2018); Redondo (2012); Shoenberger and Kim (2017); Van Reijmersdal et al. (2007)
Attitude toward advertising	Audiences' views about and opinions on advertising in general	14	5	H.-F. Lin and Chen (2013); Y.-C. Lin et al. (2012); Redondo (2012);

Variable	Operationalization	DI	P	Sources
				Rössler and Bacher (2002); Sabour et al. (2016)
Content involvement	The degree to which viewers are involved with the content or media vehicle	13	6	Andriasova (2006); Boerman (2014); Matthes et al. (2007); Matthes, Wirth, Schemer, and Pachoud (2012); Van Reijmersdal (2009); Van Reijmersdal (2015)
Attitude toward the product	Similar to past brand experience, the viewers' attitudes toward placed brands and products	12	5	Andriasova (2006); D'Astous and Séguin (1999); Russell and Stern (2006); Su et al. (2011); Sung et al. (2009)
Visual attention	The viewers' levels of attention to the content and placement	11	5	Boerman (2014); Boerman et al. (2015); Karrh et al. (2001); Schramm and Knoll (2015); Smink et al. (2017)
Product or brand placement recall	Different from brand or product recall; refers to whether the viewers remember or notice seeing the placement	10	6	Andriasova (2006); Balakrishnan et al. (2012); Gibson et al. (2013); Morton and Friedman (2002);

Variable	Operationalization	DI	P	Sources
				Tessitore and Geuens (2013); Van Reijmersdal (2009)
Parasocial attachment with the character	Different from attitude toward the characters; happens when the viewers have preferences or dislikes among the characters as real individuals	9	2	Russell and Stern (2006); Su et al. (2011)
Product involvement	The level at which the viewers are looking for information about a product during their purchase process, or product involvement (Zaichkowsky, 1985)	9	1	Y.-C. Lin et al. (2012)
Attitude toward regulation of product placement	Whether the viewers see regulation of product placement as positive or negative	8	6	Chan et al. (2017); Karrh et al. (2001); Morton and Friedman (2002); Nebenzahl and Secunda (1993); Sabour et al. (2016); Sung et al. (2009)
Previous exposure to content	Whether the viewers have seen the content before their participation in the study	7	5	Auty and Lewis (2004); Boerman (2014); Bressoud et al. (2010); Johnstone and Dodd (2000); Lehu and Bressoud (2008)

Variable	Operationalization	DI	P	Sources
Parasocial interaction	The extent to which the viewers will interact with and mimic the characters' gestures and behaviors as they were participating in the scene or interacting with them in reality	6	2	Knoll et al. (2015); Schramm and Knoll (2015)
Mere exposure	The opposite of placement recall; when the viewers do not remember seeing a brand's placements or stimuli but recognize or even like the brand, which they were exposed to only through its placements	6	2	Matthes et al. (2007); Matthes et al. (2012)
Resistance to persuasion	The viewers' manifestation of resistance to advertisements' and placements' persuasion; also referred to as skepticism toward advertisements	5	2	Simmers and Damron-Martinez (2009); Van Reijmersdal et al. (2013)
Mood (induced by the movie or TV show)	A positive or negative mood induced by the movie or TV show in the audience	5	2	Delorme and Reid (1999); Rathmann (2014)
Multitasking and cognitive load	Multitasking while viewing and cognitive	5	2	Grzyb, Dolinski, and Kozłowska (2018);

Variable	Operationalization	DI	P	Sources
	load of parallel activities of viewers being exposed to content with a placement			Yoon, Choi, and Song (2011)
Past brand experience	Viewers' having previous experiences with the brand or evaluation of the brand before their exposure to the placement	4	2	Jin and Villegas (2007); Y.-C. Lin et al. (2012)
Frequency of movie or TV watching	How frequently the viewers watch movies or TV shows	4	3	Gregorio and Sung (2010); S. J. Gould et al. (2000); Gupta and Gould (1997)
Media consumption	How the viewers consume media: frequencies and choices of media and formats	4	1	Schmoll et al. (2006)
Attitude toward the director	Choosing to watch a movie because of the director or because one likes the director	3	3	Bressoud and Lehu (2008b); Bressoud and Lehu (2015); Lehu and Bressoud (2008)
Attitude toward the genre	Preference for the genre of the content	3	3	Bressoud and Lehu (2008b); Bressoud and Lehu (2015); Redker et al. (2013)
Social interaction	Speaking with someone while watching the movie or TV show	3	3	Bressoud and Lehu (2008b); Bressoud and Lehu (2015); Delorme and Reid (1999)

Variable	Operationalization	DI	P	Sources
Information-processing method	Whether the viewers process the information shared by the movie or TV show more cognitively or more affectively	3	1	Simmers and Damron-Martinez (2009)
Peer communication about consumption	Viewers talking about consumption of products and brands in general	2	1	Gregorio and Sung (2010)
Expectancy of placement	Viewers' expectancy for placements in the content	1	1	Nagar (2016)
Perceived reality of the movie's or TV show's content	The viewers' perception of the movie's or TV show's content as real	1	1	Redondo (2012)

DI – dimensions of interest: hypotheses, research questions, results containing the variable (n = 414); P – number of publications featuring the variable (n = 74)

Table 2
Content-originated variables

Variable	Operationalization	DI	P	Sources
Product placement modality	Different variables related to how placements are presented may produce different effects or change the strength of some effects and other variables. Most publications define the differences, so the specific modalities were analyzed individually on the following six modalities.			

Variable	Operationalization	DI	P	Sources
Modality 1: Prominence of placement	How prominent (subtle or in the background) the placement is in the content or scene	50	17	Andriasova (2006); Brennan and Babin (2004); Cholinski (2012); Cowley and Barron (2008); D’Astous and Chartier (2000); Dens, Pelsmacker, Wouters, and Purnawirawan (2012); D’Hooge et al. (2017); Gupta and Lord (1998); Homer (2009); Kamleitner and Khair Jyote (2013); Matthes et al. (2012); Redker et al. (2013); Valenzuela-Fernández, Martínez-Troncoso, and Yáñez-Wieland (2015); Van Reijmersdal (2009); Wennekers et al. (2016); Wilson and Till (2011); Yang and Roskos-Ewoldsen (2007)
Modality 2: Placement format (“audiovisual,” “audio only,” or “visual only”)	The format of how the placement is featured has been presented multiple times as a variable: visual only, in which the brand can be seen but not verbally mentioned; audio only, in	25	13	Brennan and Babin (2004); Bressoud and Lehu (2008a); Bressoud et al. (2010); Cholinski (2012); Gupta and Lord (1998); Law and Braun (2000);

Variable	Operationalization	DI	P	Sources
	which the brand is presented verbally but is not visually present; or audiovisual, in which the brand can be both seen and heard in the scene where it is featured.			Romaniuk (2009); Russell (2002); Valenzuela-Fernández et al. (2015); Wang, Chen, Liu, and Chuang (2018); Wilson and Till (2011); Yang and Roskos-Ewoldsen (2007)
Modality 3: Length of placement	Duration of visibility and/or audibility of a placement; how long a placement can be seen and/or heard in the content	6	5	Bressoud and Lehu (2008a); Bressoud et al. (2010); Drennan and McDonnell (2005); Romaniuk (2009); Wilson and Till (2011)
Modality 4: Demonstrativeness	Whether the attributes and qualities of the product are expressed during the placement	4	2	Hong, Wang, and Los Santos (2008); H.-F. Lin and Chen (2013)
Modality 5: Centrality of placement	The centrality of the brand or product on the screen during the placement in the scene	2	2	Bressoud and Lehu (2008a); Bressoud et al. (2010)
Modality 6: Size of portion of screen occupied	The size of the portion of the screen occupied by the product, or how prominently the product can be seen in the scene	1	1	Bressoud et al. (2010)
Placement disclosure	In many countries, it is obligatory to inform the viewers that the content features product placement;	41	6	Boerman (2014); Boerman et al. (2012); Bressoud and Lehu (2015); Smink et al.

Variable	Operationalization	DI	P	Sources
	the presence of a disclosure of the placements may affect their outcomes and other variables.			(2017); Tessitore and Geuens (2013); Van Reijmersdal et al. (2013)
Plot integration (plot or script product placement)	How integrated into the plot or script a placement is; also known as creative placement	31	13	Brennan, Dubas, and Babin (1999); Yang and Roskos-Ewoldsen (2007); Bressoud et al. (2010); Cholinski (2012); D'Astous and Séguin (1999); D'Astous and Chartier (2000); Dens et al. (2012); Hong et al. (2008); Russell (2002); Schumacher (2007); Valenzuela-Fernández et al. (2015); Verhellen et al. (2016); Yoon et al. (2011)
Placement disclosure format	Different aspects of the disclosure or information about the presence of placements, such as the type and format of the disclosure (only a logo representing the presence of a placement, only a text, or both a text and a logo); timing, or when the disclosure is presented; and duration of the disclosure	25	6	Boerman (2014); Boerman et al. (2012); Boerman et al. (2015); Tessitore and Geuens (2013); Van Reijmersdal (2015); Van Reijmersdal et al. (2013)

Variable	Operationalization	DI	P	Sources
Repeated exposure	Content exposing the viewers to a placement multiple times compared to a single placement; can also be considered visual brand frequency	18	6	D’Hooge et al. (2017); Homer (2009); Matthes et al. (2007); Matthes et al. (2012); Romaniuk (2009); Van Reijmersdal et al. (2007)
Usage by a character	A character in the program is shown using the product	11	7	Bressoud and Lehu (2008a); Kamleitner and Khair Jyote (2013); Law and Braun (2000); Morton and Friedman (2002); Valenzuela-Fernández et al. (2015); Wilson and Till (2011); Yang and Roskos-Ewoldsen (2007)
Negative placement or context	Presentation of a brand with a focus on its negative rather than positive aspects or on the negative context of the placement	11	5	D’Hooge et al. (2017); Hong et al. (2008); Mitchell and Nelson (2018); Redondo (2012); Wilson and Till (2011)
Mood induction	The mood of the scene in which a product is placed (e.g., arousing, humorous, or positive or negative), which influences the effects of the placement	8	2	Jin and Villegas (2007); Mitchell and Nelson (2018)

Variable	Operationalization	DI	P	Sources
Genre	The genre of the movie or television (TV) show containing placements	7	3	D'Astous and Séguin (1999); Jin and Villegas (2007); Van Reijmersdal et al. (2010)
Characters' attitudes toward the product or brand	Positive or negative attitudes of the movie's or TV show's characters toward the product placed in it	7	2	Russell and Stern (2006); Su et al. (2011)
Time of placement	When the placement appears in the content, whether in the beginning, middle, or toward the end of the program	6	4	Brennan et al. (1999); Bressoud et al. (2010); Romaniuk (2009); Wilson and Till (2011)
Multiple brands	The presence of multiple brands within a scene or content rather than unique placements	4	2	Bressoud et al. (2010); Bressoud and Lehu (2008a)
Usage in the action	Similar to usage by a movie or TV show character, the brand being used in the action and how the product is used therein	4	3	Bressoud and Lehu (2008a); Morton and Friedman (2002); Valenzuela-Fernández et al. (2015)
Digitally inserted/virtual placement	The product's digital insertion into the movie or TV show scene instead of physical presence during filming	3	1	Drennan and McDonnell (2005)
Information value	The information value of the movie or TV show being a determinant of the strength and activation of some	3	1	Van Reijmersdal et al. (2010)

Variable	Operationalization	DI	P	Sources
	effects of the placements therein			
Screen size	The size of the screen where the viewers watch the movie or TV show	3	2	Bressoud et al. (2010); Lehu and Bressoud (2008)
Presence of main actor/character	The presence of the main actor or character in the scene in which the product is placed	1	1	D'Astous and Chartier (2000)
National/international	Whether the content is national or international in terms of the nationalities of the viewers	1	1	Nagar (2016)
Character association with the product	In the same direction as the plot integration and prominence of the placement, how important the placed product is to the personality and attributes of the character, whether the product is just in the background of the character's house or plays an important role in the character's identity and in the strength of the character-product association	1	1	Russell and Stern (2006)

DI – dimensions of interest: hypotheses, research questions, results containing the variable

(n = 414); P – number of publications featuring the variable (n = 74)

2.6 Discussion

For the 33 variables related to viewer characteristics or originated by the viewers, the viewers' opinions on and attitudes toward the practice of product placement were found to constitute the most researched factor among the publications included in the review ($n = 74$), featuring its effects on brand or product placement or other related variables. It was found in 19 different sources that included 64 research items ($n = 414$) associated with the variable. Another factor was strongly related to persuasion knowledge or viewers' recognition of advertising practices when they are exposed to content featuring a brand or product placement (recognition of advertising), which may activate persuasion knowledge (Gibson et al., 2013). It was also among the most frequent factors studied, appearing in 12 different publications showing the variable in 25 research items. Whether and how much viewers like or dislike the content (attitude toward the content) was also a preferred factor among researchers in this field, appearing in 27 research items spread among 14 publications.

A variable that was surprisingly not found in more studies was multitasking, when the viewers are performing another activity while being exposed to the content (Yoon et al., 2011). This factor appeared in only two of the publications containing variables ($n = 74$) that provided two results and three hypotheses from the 414 research items analyzed. A third study that included the relationship between multitasking and placement effectiveness was retrieved and analyzed, but the research items were not included because the study did not cover movies or TV shows (Segijn, Voorveld, & Smit, 2017), which the present review focused on. A surprising discovery calling for future research was the increasing number of viewers performing other activities while watching audiovisual content (Sun, Wojdyski, Binford, & Ramachandran, 2022), and perhaps not only during commercial breaks but also during the show itself. This can change many of the effects of placement on viewers. In addition, with the popularization of smartphones and tablets, many people are looking at more than one screen at the same time, an

action called multiscreening, in which people use more than one screen with different visual contents simultaneously (Segijn & Eisend, 2019, p.313).

In Table 2, 24 factors dependent on audiovisual content are presented, explained, and quantified in terms of the numbers of publications in which they appeared. Prominence of placement, or whether the placement is only in the background or in the front of a scene, was the most researched factor in the sources analyzed, with appearances in 50 research items (n = 414) in 17 different publications (n = 74). Such a factor is an important point of negotiation between brand managers and content producers (Homer, 2009); thus, it is not surprising that it was the focus of many researchers.

A similar factor, plot integration, or how integrated the brand or product placement is into the story (D'Astous & Chartier, 2000), which could also be included in the category of prominence but in relation to the plot and not to the audiovisual aspects of the scenes, also received much attention, being the focus of 31 research items (n = 414) in 13 different sources (n = 74). The difference in how the placement is delivered in the content, whether only verbally, only visually, or audiovisually, was found to be the focus of 25 research items (n = 414) in 13 sources (n = 74).

There are many other factors that can be studied to determine if they moderate or mediate the effects of brand or product placement, either originating from or based on the viewers and their viewing characteristics or the content, placement, and medium characteristics. The popularization of technological achievements (e.g., streaming platforms, access to high-speed internet, and gadgets such as smartphones and tablets) has brought challenges for media planners accustomed to linear TV, cinema, and a more controlled delivery of content, but has now also brought opportunities to reach more viewers. This is due to product placements in multiple contents and platforms, or even the much higher possibility of faster conversion. That is, viewers can check information about a placed or advertised product on their smartphones

while they are still watching the content. Researchers can conduct new research on some of these factors.

Footnotes

¹ These filters were added to the search on Scopus with the operator AND (LIMIT-TO (SUBJAREA X)) to limit the results, and OR for each of the topics that translated on Scopus as Business, Management, and Accounting (BUSI); Social Sciences (SOCI); Economics, Econometrics, and Finance (ECON); Arts and Humanities (ARTS); Psychology (PSYC); and Multidisciplinary (MULT). As for Web of Science, the following categories were featured and could be selected as inclusions in the results: Business, Business Finance, Communication, Management, Psychology Multidisciplinary, Economics, Telecommunications, Psychology Experimental, Film Radio Television, Psychology Applied, Social Sciences Interdisciplinary, Ethics, Psychology Clinical, Psychology Social, Humanities Multidisciplinary, Behavioral Sciences, Multidisciplinary Sciences, Sociology, Area Studies, Cultural Studies, Psychology Developmental, Statistics Probability, and Social Issues.

2.7 References

Andriasova, A. (2006). *They Placed, I Saw, I Was Conquered.: Evaluating the Effects of Persuasion Knowledge and Prominence of Brand Placement on Viewers' Attitudes and Behavior* (Doctoral Dissertation - University of Texas). University of Texas.

Auer, M., Kalweit, U., & Nüssler, P. (1988). *Product Placement: Die neue Kunst der geheimen Verführung*. Düsseldorf: Econ-Verlag.

Auty, S., & Lewis, C. (2004). Exploring Children's Choice: The Reminder Effect of Product Placement. *Psychology and Marketing*, 21(9), 697–713. <https://doi.org/10.1002/mar.20025>

Balakrishnan, B. K., Shuaib, A. S. M., Dousin, O., & Permarupan, P. (2012). The Impact of Brand Placement and Brand Recall in Movies: Empirical Evidence from Malaysia. *International Journal of Management and Marketing Research*, 5(2), 39–52.

Balasubramanian, S. K., Karrh, J. A., & Patwardhan, H. (2006). Audience Response to Product Placements: An Integrative Framework. *Journal of Advertising*, 35(3), 115–141. <https://doi.org/10.2753/JOA0091-3367350308>

- Baron, R. M., & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173–1182. <https://doi.org/10.1037//0022-3514.51.6.1173>
- Beuckels, E., Ye, G., Hudders, L., & Cauberghe, V. (2021). Media Multitasking: A Bibliometric Approach and Literature Review. *Frontiers in Psychology*, *12*, 623643. <https://doi.org/10.3389/fpsyg.2021.623643>
- Boerman, S. C. (2014). *This program contains product placement: Effects of sponsorship disclosure on television viewers' responses* (Doctoral Dissertation). University of Amsterdam, The Netherlands.
- Boerman, S. C., Van Reijmersdal, E. A., & Neijens, P. C. (2012). Sponsorship Disclosure: Effects of Duration on Persuasion Knowledge and Brand Responses. *Journal of Communication*, *62*(6), 1047–1064. <https://doi.org/10.1111/j.1460-2466.2012.01677.x>
- Boerman, S. C., Van Reijmersdal, E. A., & Neijens, P. C. (2015). Using Eye Tracking to Understand the Effects of Brand Placement Disclosure Types in Television Programs. *Journal of Advertising*, *44*(3), 196–207. <https://doi.org/10.1080/00913367.2014.967423>
- Brennan, I., & Babin, L. A. (2004). Brand Placement Recognition. *Journal of Promotion Management*, *10*(1-2), 185–202. https://doi.org/10.1300/J057v10n01_13
- Brennan, I., Dubas, K. M., & Babin, L. A. (1999). The influence of product-placement type & exposure time on product-placement recognition. *International Journal of Advertising*, *18*(3), 323–337. <https://doi.org/10.1080/02650487.1999.11104764>
- Bressoud, E., & Lehu, J.-M. (2008a). Le placement de marques dans les films. Panorama, modalités d'exécution et efficacité. *La Revue Des Sciences De Gestion, Direction Et Gestion*. (233), 101–114. <https://doi.org/10.1051/larsg:2008036>

- Bressoud, E., & Lehu, J.-M. (2008b). Product placement in movies: questioning the effectiveness according to the spectator's viewing conditions. In F. C. Pereira, J. Veríssimo, & P. C. Neijens (Eds.), *New trends in advertising research* (pp. 145–163). Lisboa: Edições Sílabo. Retrieved from <https://www.researchgate.net/publication/32225614>
- Bressoud, E., & Lehu, J.-M. (2015). *The product placement efficiency as a result of a relationship between a spectator and a movie*. Paper. Paris.
- Bressoud, E., Lehu, J.-M., & Russell, C. A. (2010). The Product Well Placed: The Relative Impact of Placement and Audience Characteristics on Placement Recall. *Journal of Advertising Research*, 50(4), 374–385. <https://doi.org/10.2501/S0021849910091622>
- Breves, P., & Schramm, H. (2016). Matches Made in Hell - Kann die soziale Akzeptanz eines moralisch bedenklichen Product Placements in Verbindung mit einem moralisch bedenklichen Mediencharakter die Markenbewertung. In G. Zurstiege & D. Schlütz (Eds.), *Sozialität und Werbung* (pp. 44–61). Köln: Herbert von Halem Verlag.
- Chan, F. F. Y., Lowe, B., & Petrovici, D. (2017). Young adults' perceptions of product placement in films: An exploratory comparison between the United Kingdom and Hong Kong. *Journal of Marketing Communications*, 23(3), 311–328. <https://doi.org/10.1080/13527266.2015.1061036>
- Cholinski, A. (2012). The Effectiveness of Product Placement: A Field Quasi-experiment. *International Journal of Marketing Studies*, 4(5), 14–28. <https://doi.org/10.5539/ijms.v4n5p14>
- Cowley, E., & Barron, C. (2008). When Product Placement Goes Wrong: The Effects of Program Liking and Placement Prominence. *Journal of Advertising*, 37(1), 89–98. <https://doi.org/10.2753/JOA0091-3367370107>

- D'Astous, A., & Chartier, F. (2000). A Study of Factors Affecting Consumer Evaluations and Memory of Product Placements in Movies. *Journal of Current Issues & Research in Advertising*, 22(2), 31–40. <https://doi.org/10.1080/10641734.2000.10505106>
- D'Astous, A., & Séguin, N. (1999). Consumer reactions to product placement strategies in television sponsorship. *European Journal of Marketing*, 33(9/10), 896–910. <https://doi.org/10.1108/03090569910285832>
- D'Hooge, S. C., Hudders, L., & Cauberghe, V. (2017). Direct evaluative conditioning in brand placement: The impact of scene valence and prominence on brand placement repetition effects. *Journal of Consumer Behaviour*, 16(5), 452–462. <https://doi.org/10.1002/cb.1647>
- Delorme, D. E., & Reid, L. N. (1999). Moviegoers' Experiences and Interpretations of Brands in Films Revisited. *Journal of Advertising*, 28(2), 71–95. <https://doi.org/10.1080/00913367.1999.10673584>
- Dens, N., Pelsmacker, P. de, Wouters, M., & Purnawirawan, N. (2012). Do you like What you Recognize? *Journal of Advertising*, 41(3), 35–54. <https://doi.org/10.2753/JOA0091-3367410303>
- Drennan, J., & McDonnell, J. (Eds.) (2005). *Exploring the Effectiveness of Virtual Product Placement on Recall and Recognition of New Brands*. : Vol. 16.
- Friestad, M., & Wright, P. (1994). The Persuasion Knowledge Model: How People Cope with Persuasion Attempts. *Journal of Consumer Research*, 1(21), 1–31. <https://doi.org/10.1086/209380>
- Gibson, B., Redker, C., & Zimmerman, I. (2013). Conscious and Nonconscious Effects of Product Placement: Brand Recall and Active Persuasion Knowledge Affect Brand Attitudes and Brand Self-Identification Differently. *Psychology of Popular Media Culture*, 3(1), 19–37. <https://doi.org/10.1037/a0032594>

- Gould, J. W., Sigband, N. B., & Zoerner, C. E. (1970). Black Consumer Reactions to “Integrated” Advertising: An Exploratory Study. *Journal of Marketing*, 84 (July, 1970), 20–26.
- Gould, S. J., Gupta, P. B., & Grabner-Kräuter, S. (2000). Product Placements in Movies: A Cross-Cultural Analysis of Austrian, French and American Consumers' Attitudes toward This Emerging, International Promotional Medium. *Journal of Advertising*, 29(4), 41–58. <https://doi.org/10.1080/00913367.2000.10673623>
- Gregorio, F. de, & Sung, Y. (2010). Understanding Attitudes Toward and Behaviors in Response to Product Placement. *Journal of Advertising*, 39(1), 83–96. <https://doi.org/10.2753/JOA0091-3367390106>
- Grzyb, T., Dolinski, D., & Kozłowska, A. (2018). Is Product Placement Really Worse Than Traditional Commercials? Cognitive Load and Recalling of Advertised Brands. *Frontiers in Psychology*, 9, 1519. <https://doi.org/10.3389/fpsyg.2018.01519>
- Guo, F., Ye, G., Hudders, L., Lv, W., Li, M., & Duffy, V. G. (2019). Product Placement in Mass Media: A Review and Bibliometric Analysis. *Journal of Advertising*, 48(2), 215–231. <https://doi.org/10.1080/00913367.2019.1567409>
- Gupta, P. B., & Gould, S. J. (1997). Consumers' Perceptions of the Ethics and Acceptability of Product Placements in Movies: Product Category and Individual Differences. *Journal of Current Issues & Research in Advertising*, 19(1), 37–50. <https://doi.org/10.1080/10641734.1997.10505056>
- Gupta, P. B., & Lord, K. R. (1998). Product Placement in Movies: The Effect of Prominence and Mode on Audience Recall. *Journal of Current Issues & Research in Advertising*, 20(1), 47–59. <https://doi.org/10.1080/10641734.1998.10505076>

- Gurzki, H., & Woisetschläger, D. M. (2017). Mapping the luxury research landscape: A bibliometric citation analysis. *Journal of Business Research*, 77, 147–166. <https://doi.org/10.1016/j.jbusres.2016.11.009>
- Harbrücker, U., & Wiedmann, K.-P. (1987). *Product-Placement: Rahmenbedingungen und Gestaltungsperspektiven. Arbeitspapier / Institut für Marketing, Universität Mannheim: Vol. 58.* Mannheim: Institut für Marktorientierte Unternehmensführung.
- Harmetz, A. (1983, December 21). Fox to Sell Rights to Plug Goods in Films. *The New York Times*, 21.12.1983 - Section C, Page 19. Retrieved from <https://www.nytimes.com/1983/12/21/arts/fox-to-sell-rights-to-plug-goods-in-films.html>
- Homer, P. M. (2009). Product Placements - The Impact of Placement Type and Repetition on Attitude. *Journal of Advertising*, 38(3), 21–32. <https://doi.org/10.2753/JOA0091-3367380302>
- Hong, S., Wang, Y. J., & Los Santos, G. de (2008). The Effective Product Placement: Finding Appropriate Methods and Contexts for Higher Brand Salience. *Journal of Promotion Management*, 14(1-2), 103–120. <https://doi.org/10.1080/10496490802492457>
- Hudson, S., & Hudson, D. (2006). Branded Entertainment: A New Advertising Technique or Product Placement in Disguise? *Journal of Marketing Management*, 22(5-6), 489–504. <https://doi.org/10.1362/026725706777978703>
- International Chamber of Commerce (2018). *ICC Advertising and Marketing Communications Code*. Paris. Retrieved from <https://iccwbo.org/publication/icc-advertising-and-marketing-communications-code/>
- Jin, C., & Villegas, J. (2007). The effect of the placement of the product in film: Consumers' emotional responses to humorous stimuli and prior brand evaluation. *Journal of Targeting, Measurement and Analysis for Marketing*, 15(4), 244–255. <https://doi.org/10.1057/palgrave.jt.5750049>

- Johnstone, E., & Dodd, C. A. (2000). Placements as mediators of brand salience within a UK cinema audience. *Journal of Marketing Communications*, 6(3), 141–158. <https://doi.org/10.1080/13527260050118649>
- Jusufovic-Karisik, V. (2014). 20 Years of Research on Product Placement in Movie, Television and Video Game Media. *Journal of Economic and Social Studies*, 4(2), 98–108. <https://doi.org/10.14706/JECOSS114210>
- Kamleitner, B., & Khair Jyote, A. (2013). How using versus showing interaction between characters and products boosts product placement effectiveness. *International Journal of Advertising*, 32(4), 633–653. <https://doi.org/10.2501/IJA-32-4-633-653>
- Karrh, J. A. (1998). Brand Placement: A Review. *Journal of Current Issues & Research in Advertising*, 20(2), 31–49. <https://doi.org/10.1080/10641734.1998.10505081>
- Karrh, J. A., Frith, K. T., & Callison, C. (2001). Audience attitudes towards brand (product) placement: Singapore and the United States. *International Journal of Advertising*, 20(1), 3–24. <https://doi.org/10.1080/02650487.2001.11104874>
- Knoll, J., Schramm, H., Schallhorn, C., & Wynistorf, S. (2015). Good guy vs. bad guy: the influence of parasocial interactions with media characters on brand placement effects. *International Journal of Advertising*, 34(5), 720–743. <https://doi.org/10.1080/02650487.2015.1009350>
- Law, S., & Braun, K. A. (2000). I'll Have What She's Having: Gauging the Impact of Product Placements on Viewers. *Psychology and Marketing*, 17(12), 1059–1075. [https://doi.org/10.1002/1520-6793\(200012\)17:12<1059::AID-MAR3>3.0.CO;2-V](https://doi.org/10.1002/1520-6793(200012)17:12<1059::AID-MAR3>3.0.CO;2-V)
- Lehu, J.-M., & Bressoud, E. (2008). Effectiveness of brand placement: New insights about viewers. *Journal of Business Research*, 61(10), 1083–1090. <https://doi.org/10.1016/j.jbusres.2007.09.015>

- Lewis, J. (1971). *The Total Film Maker*. United States: Random House.
- Lin, H.-F., & Chen, C.-H. (2013). An Intelligent Embedded Marketing Service System based on TV apps: Design and implementation through product placement in idol dramas. *Expert Systems with Applications*, *40*(10), 4127–4136. <https://doi.org/10.1016/j.eswa.2013.01.034>
- Lin, Y.-C., Lee, Y.-C., & Chen, K.-C. (2012). The influence of brand image and product knowledge in the advertising effect—take placement marketing movie as an example. *Journal of Statistics and Management Systems*, *15*(4-5), 581–600. <https://doi.org/10.1080/09720510.2012.10701643>
- Matthes, J., Schemer, C., & Wirth, W. (2007). More than meets the eye: Investigating the hidden impact of brand placements in television magazines. *International Journal of Advertising*, *26*(4), 477–503. <https://doi.org/10.1080/02650487.2007.11073029>
- Matthes, J., Wirth, W., Schemer, C., & Pachoud, N. (2012). Tiptoe or Tackle? The Role of Product Placement Prominence and Program Involvement for the Mere Exposure Effect. *Journal of Current Issues & Research in Advertising*, *33*(2), 129–145. <https://doi.org/10.1080/10641734.2012.700625>
- Medoff, N. J., & Kaye, B. K. (2017). *Electronic media: Then, now and later* (Third edition). New York and London: Routledge/Taylor & Francis Group.
- Ming-tiem, T., Liang, W., & Liu, M.-L. (2007). The Effects of Subliminal Advertising on Consumer Attitudes and Buying Intentions. *The International Journal of Management*, *24*(1), 3–14.
- Mitchell, T. A., & Nelson, M. R. (2018). Brand Placement in Emotional Scenes: Excitation Transfer or Direct Affect Transfer? *Journal of Current Issues & Research in Advertising*, *39*(2), 206–219. <https://doi.org/10.1080/10641734.2018.1428252>

- Morton, C. R., & Friedman, M. (2002). "I Saw It In The Movies": Exploring the Link Between Product Placement Beliefs and Reported Usage Behavior. *Journal of Current Issues & Research in Advertising*, 24(2), 33–40. <https://doi.org/10.1080/10641734.2002.10505133>
- Nagar, K. (2016). Consumer Response to Brand Placement in Movies: Investigating the Brand-Event Fit. *Vikalpa*, 41(2), 149–167. <https://doi.org/10.1177/0256090916642678>
- Nebenzahl, I. D., & Secunda, E. (1993). Consumers' Attitudes toward Product Placement in Movies. *International Journal of Advertising*, 12(1), 1–11. <https://doi.org/10.1080/02650487.1993.11104518>
- Newell, J., Salmon, C. T., & Chang, S. (2006). The Hidden History of Product Placement. *Journal of Broadcasting & Electronic Media*, 50(4), 575–594. https://doi.org/10.1207/s15506878jobem5004_1
- PQ Media (2020). *Global Branded Entertainment Marketing Forecast 2014–24*. Stamford, CT. Retrieved from PQ Media LLC website: <https://www.pqmedia.com/product/global-product-placement-forecast-2020/>
- Rathmann, P. (2014). *Medienbezogene Effekte von Product Placement: Theoretische Konzeption und empirische Analyse*. Doctoral dissertation. Wiesbaden: Springer Gabler. <https://doi.org/10.1007/978-3-658-06848-6>
- Redker, C., Gibson, B., & Zimmerman, I. (2013). Liking of Movie Genre Alters the Effectiveness of Background Product Placements. *Basic and Applied Social Psychology*, 35(3), 249–255. <https://doi.org/10.1080/01973533.2013.785400>
- Redondo, I. (2012). The Behavioral Effects of Negative Product Placements in Movies. *Psychology and Marketing*, 29(8), 622–635. <https://doi.org/10.1002/mar.20548>

- Romaniuk, J. (2009). The Efficacy of Brand-Execution Tactics in TV Advertising, Brand Placements, and Internet Advertising. *Journal of Advertising Research*, 49(2), 143–150. <https://doi.org/10.2501/S0021849909090187>
- Rössler, P., & Bacher, J. (2002). Transcultural Effects of Product Placement in Movies: A comparison of Placement Impact in Germany and the USA. *Zeitschrift Für Medienpsychologie*, 14(3), 98–108. <https://doi.org/10.1026//1617-6383.14.3.98>
- Russell, C. A. (2002). Investigating the Effectiveness of Product Placements in Television Shows: The Role of Modality and Plot Connection Congruence on Brand Memory and Attitude. *Journal of Consumer Research*, 29(3), 306–318. <https://doi.org/10.1086/344432>
- Russell, C. A., & Belch, M. (2005). A Managerial Investigation into the Product Placement Industry. *Journal of Advertising Research*, 45(01), 73. <https://doi.org/10.1017/S0021849905050038>
- Russell, C. A., & Stern, B. B. (2006). Consumers, Characters, and Products: A Balance Model of Sitcom Product Placement Effects. *Journal of Advertising*, 35(1), 7–21. <https://doi.org/10.2753/JOA0091-3367350101>
- Sabour, N. I., Pillai, D., Gistri, G., & Balasubramanian, S. K. (2016). Attitudes and related perceptions about product placement: a comparison of Finland, Italy and the United States. *International Journal of Advertising*, 35(2), 362–387. <https://doi.org/10.1080/02650487.2015.1031205>
- Sanson, K., & Steirer, G. (2019). Hulu, streaming, and the contemporary television ecosystem. *Media, Culture & Society*, 41(8), 1210–1227. <https://doi.org/10.1177/0163443718823144>
- Schmoll, N. M., Hafer, J., Hilt, M., & Reilly, H. (2006). Baby Boomers' Attitudes towards Product Placements. *Journal of Current Issues & Research in Advertising*, 28(2), 33–53. <https://doi.org/10.1080/10641734.2006.10505197>

- Schramm, H., & Knoll, J. (2015). Modeling the Impact of Parasocial Interactions with Media Characters on Brand Placement Effects. *Journal of Promotion Management*, 21(5), 548–565. <https://doi.org/10.1080/10496491.2015.1055038>
- Schumacher, P. (2007). *Effektivität von Ausgestaltungsformen des Product Placement*. Gabler Edition Wissenschaft. Wiesbaden: Deutscher Universitäts-Verlag.
- Segijn, C. M., & Eisend, M. (2019). A Meta-Analysis into Multiscreening and Advertising Effectiveness: Direct Effects, Moderators, and Underlying Mechanisms. *Journal of Advertising*, 48(3), 313–332. <https://doi.org/10.1080/00913367.2019.1604009>
- Segijn, C. M., Voorveld, H. A., & Smit, E. G. (2017). How Related Multiscreening Could Positively Affect Advertising Outcomes. *Journal of Advertising*, 46(4), 455–472. <https://doi.org/10.1080/00913367.2017.1372233>
- Shoenberger, H., & Kim, E. (2017). Product placement as leveraged marketing communications: the role of wishful identification, brand trust, and brand buying behaviours. *International Journal of Advertising*, 2(1), 1–17. <https://doi.org/10.1080/02650487.2017.1391678>
- Sigurdsson, V., Larsen, N. M., & Gunnarsson, D. (2014). Healthy Food Products at the Point of Purchase: An In-Store Experimental Analysis. *Journal of Applied Behavior Analysis*, 47(1), 151–154. <https://doi.org/10.1002/jaba.91>
- Simmers, C., & Damron-Martinez, D. (2009). The Effect of Product Placement on Consumer Information Processing. *International Journal of Integrated Marketing Communications*, 1(1), 57–74.
- Smink, A. R., Van Reijmersdal, E. A., & Boerman, S. C. (2017). Effects of Brand Placement Disclosures: An Eye Tracking Study Into the Effects Of Disclosures and the Moderating Role of Brand Familiarity. In V. Zabkar & M. Eisend (Eds.), *Advances in Advertising*

- Research VIII* (pp. 85–96). Wiesbaden: Springer Fachmedien Wiesbaden.
https://doi.org/10.1007/978-3-658-18731-6_7
- Su, H. J., Huang, Y.-A., Brodowsky, G., & Kim, H. J. (2011). The impact of product placement on TV-induced tourism: Korean TV dramas and Taiwanese viewers. *Tourism Management*, 32(4), 805–814. <https://doi.org/10.1016/j.tourman.2010.06.020>
- Sun, S., Wojdyski, B., Binford, M. T., & Ramachandran, C. (2022). How Multitasking during Video Content Decreases Ad Effectiveness: The Roles of Task Relevance, Video Involvement, and Visual Attention. *Journal of Promotion Management*, 28(1), 91–109. <https://doi.org/10.1080/10496491.2021.1955081>
- Sung, Y., Gregorio, F. de, & Jung, J.-H. (2009). Non-student consumer attitudes towards product placement. *International Journal of Advertising*, 28(2), 257–285. <https://doi.org/10.2501/S0265048709200564>
- Tessitore, T., & Geuens, M. (2013). PP for ‘product placement’ or ‘puzzled public’? *International Journal of Advertising*, 32(3), 419–442. <https://doi.org/10.2501/IJA-32-3-419-442>
- Valenzuela-Fernández, L., Martínez-Troncoso, C., & Yáñez-Wieland, F. (2015). Influence of Placement on Explicit and Implicit Memory of College Students. *Comunicar*, 22(44), 169–176. <https://doi.org/10.3916/C44-2015-18>
- Van Reijmersdal, E. A. (2009). Brand Placement Prominence: Good for Memory! Bad for Attitudes? *Journal of Advertising Research*, 49(2), 151–153. <https://doi.org/10.2501/S0021849909090199>
- Van Reijmersdal, E. A. (2015). Disclosing Brand Placements in Movies: Effects of Disclosure Type and Movie Involvement on Attitudes. *Journal of Media Psychology*, 28(2), 78–87. <https://doi.org/10.1027/1864-1105/a000158>

- Van Reijmersdal, E. A., Neijens, P. C., & Smit, E. G. (2007). Effects of television brand placement on brand image. *Psychology and Marketing*, 24(5), 403–420. <https://doi.org/10.1002/mar.20166>
- Van Reijmersdal, E. A., Neijens, P., & Smit, E. G. (2009). A New Branch of Advertising. *Journal of Advertising Research*, 49(4), 429–449. <https://doi.org/10.2501/S0021849909091065>
- Van Reijmersdal, E. A., Smit, E., & Neijens, P. (2010). How media factors affect audience responses to brand placement. *International Journal of Advertising*, 29(2), 279–301. <https://doi.org/10.2501/S0265048710201154>
- Van Reijmersdal, E. A., Tutaj, K., & Boerman, S. C. (2013). The effects of brand placement disclosures on skepticism and brand memory. *Communications - the European Journal of Communication Research*, 38(2), 127–146. <https://doi.org/10.1515/commun-2013-0008>
- Verhellen, Y., Eelen, J., Dens, N., & Pelsmacker, P. de (2016). The short- and long-term impact of brand placement in an advertiser-funded TV program on viewers' attitudes toward the sponsor brand and its main competitor. *International Journal of Advertising*, 35(6), 932–948. <https://doi.org/10.1080/02650487.2015.1087089>
- Wang, R. W. Y., Chen, Y.-C., Liu, I.-N., & Chuang, S.-W. (2018). Temporal and spectral EEG dynamics can be indicators of stealth placement. *Scientific Reports*, 8(1), 1–17. <https://doi.org/10.1038/s41598-018-27294-4>
- Wennekers, A. M., Vandeberg, L., Zoon, K., & Van Reijmersdal, E. A. (2016). Distinguishing Implicit from Explicit Brand Attitudes in Brand Placement Research. In P. Verlegh, H. Voorveld, & M. Eisend (Eds.), *Advances in Advertising Research (Vol. VI)* (pp. 253–267). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-10558-7_20

- Wilson, R. T., & Till, B. D. (2011). Product placements in movies and on Broadway. *International Journal of Advertising*, 30(3), 373–398. <https://doi.org/10.2501/IJA-30-3-373-398>
- Wu, A. D., & Zumbo, B. D. (2008). Understanding and Using Mediators and Moderators. *Social Indicators Research*, 87(3), 367–392. <https://doi.org/10.1007/s11205-007-9143-1>
- Yang, M., & Roskos-Ewoldsen, D. R. (2007). The Effectiveness of Brand Placements in the Movies: Levels of Placements, Explicit and Implicit Memory, and Brand-Choice Behavior. *Journal of Communication*, 57(3), 469–489. <https://doi.org/10.1111/j.1460-2466.2007.00353.x>
- Yoon, S., Choi, Y. K., & Song, S. (2011). When Intrusive Can Be Likable - Product Placement Effects on Multitasking Consumers. *Journal of Advertising*, 40(2), 63–75. <https://doi.org/10.2307/23048705>
- Zaichkowsky, J. L. (1985). Measuring the Involvement Construct. *Journal of Consumer Research*, 12(3), 341. <https://doi.org/10.1086/208520>

Chapter 3

How Translation Formats Influence Product Placement Effectiveness: A Comparison of the Original, Dubbed, and Subtitled Versions of Programs

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How Translation Formats Influence Product Placement Effectiveness: A Comparison of the Original, Dubbed, and Subtitled Versions of Programs

3.1 Abstract

Product or brand placement effectiveness has been tested in many different ways. Audiences recalling seeing the brand on the television show or movie where it was placed is one way to test whether placing the brand on that show or movie was effective. What this research field has not yet addressed is whether the audiovisual translation format or version has any influence on placement effectiveness. This paper proposes and tests whether and how audiovisual translation formats alter brand recall of placements in viewers. The audiovisual translation formats investigated in this study were original spoken dialogues, subtitles in different languages, and dubbing. An experiment involving 2,302 participants watching different episodes of 2 real television series containing placements showed that there were no significant differences in brand recall between the viewers of the program versions using the three aforementioned audiovisual translation formats.

3.2 Introduction

The effectiveness of product placement has been the subject of extensive research in recent years, and its significance has increased dramatically. This growth coincides with and may be due to the rapid development of video streaming services seen in recent years (Palomba 2020). The shifting of many viewers from linear television to video streaming platforms with few to no ads (Sanson and Steirer 2019) has made it more difficult to reach them through traditional television (TV) commercials, and this has led more marketers to resort to product placement within the content.

Most of the relevant previous studies have concentrated on outcomes such as brand or product recall, purchase intention, attitudes toward the placed brands, and factors influencing effectiveness, whether originating from the viewers' characteristics, such as attitude toward the practice of placements (Schmoll et al. 2006; Sung, Gregorio, and Jung 2009), persuasion knowledge (Gibson, Redker, and Zimmerman 2013; Smink, Van Reijmersdal, and Boerman 2017), cultural background (Gould, Gupta, and Grabner-Kräuter 2000; Karrh, Frith, and Callison 2001), and attitude toward the program (Redondo 2012; Van Reijmersdal *et al.* 2010), or from the program or medium's characteristics, such as placement characteristics or modality (Brennan and Babin 2004; Bressoud, Lehu, and Russell 2010), presence and particularities of disclosure of placements (Smink, Van Reijmersdal, and Boerman 2017; Van Reijmersdal, Tutaj, and Boerman 2013), and integration of the product into the plot (Cholinski 2012; Yang and Roskos-Ewoldsen 2007). However, research on the effects of translation forms on audiences is scarce. To the best of the author's knowledge, it is not yet known whether the effectiveness of a placement is affected when the viewer watches the movie or TV show that contains it in the original version (assuming that the viewer understands the original spoken language of the show or movie), in a dubbed version with a language that the viewer understands, or in a spoken

language that the viewer does not comprehend but with subtitles in a language that the viewer understands.

For decades, it was clear that the population of many countries had a massive preference for dubbed versions of content produced in foreign languages. For example, Germany, Italy, France, and Spain used to be referred to as dubbing countries (Bisson et al. 2014). By contrast, people in countries such as Norway, Belgium, Finland, and the Netherlands used to prefer subtitled versions of movies and TV shows (Koolstra, Peeters, and Spinhof 2002). Today, country differences in program reception are no longer clear-cut (Perego et al. 2016). In the era of video-on-demand (VoD) services, producing local programs and movies in languages other than English, with the potential of reaching huge global audiences have come to the center of interest (Bolaños-García-Escribano, Díaz-Cintas, and Massidda 2021). Moreover, people are increasingly preferring to watch TV shows or movies in the original language, but with subtitles in their own language, even in countries previously labeled as dubbing countries (Mikos 2016). Therefore, more research on the impacts of different audiovisual translation (AVT) methods is needed to better understand how they affect audiences. In particular, with the growth of product placement in series and movies (Guo et al. 2019; PQ Media 2020), it would be interesting to determine whether AVT formats could influence the effectiveness of placements.

The remainder of this paper is structured as follows. First, the operationalization of product placement and AVT formats is explained along with a discussion of previous research. Second, the variables linking translation methods and placement effectiveness to be tested are defined and expressed in the study hypotheses. Third, the conduct of a field experiment is explained to test whether the AVT formats altered the effects of product placements in audiences. Fourth, the results are analyzed and discussed. Finally, the practical implications of the study's findings are presented.

3.3 Theoretical Framework

Product or Brand Placement

Product or brand placement is defined as “the paid inclusion of branded products or brand identifiers, through audio and/or visual means, within mass media programming” (Karrh 1998, 33). Hence, placements can occur in three different forms: visual only, where the brand can be seen in the picture, but no verbal mention of it is made; audio only, where the brand is mentioned verbally but does not appear visually; and audiovisual combination, where the product is both seen and heard. Visual placements are by far the most frequent placements in movies and TV shows (La Ferle and Edwards 2006).

The practice of placing brands and products in mass media programs has grown significantly in recent years, with the 10 billion dollars invested in it worldwide in 2014 (PQ Media 2020) doubling to 20 billion dollars in less than 5 years, in 2019 (Guo et al. 2019). It has been predicted that more than 30 billion dollars will be spent on product placement worldwide in 2024 (PQ Media 2020).

Early studies on product placement were published more than 35 years ago (Auer, Kalweit, and Nüssler 1988, 183). Although product placement had been addressed in the literature many years earlier—the first texts published on this topic, focusing on the legal aspects of advertising in films, date back to 1958 (Harbrücker and Wiedmann 1987, 3)—and even the 1950s actor Jerry Lewis wrote about how he included brands in his movies (or attempted to) in exchange for commercial cooperation, back then, product placements were usually called “plugs” as products or brands were to be “plugged” into a scene, story or movie (Lewis 1971, 154).

Hundreds of studies on product placement have been published over the last three decades, mainly focusing on the effects of placements on viewers (Babin et al. 2021; Guo et al. 2019; Van Reijmersdal, Neijens, and Smit 2009). Multiple studies have also covered the factors that

influence viewers' reactions to placements (D'Astous and Chartier 2000; Van Reijmersdal, Neijens, and Smit 2009).

Much attention has been given to the effects of brand/product or placement recall (Van Reijmersdal, Neijens, and Smit 2009). However, recall may not be the ultimate objective of marketers when choosing product placement or any other form of advertisement. What brand managers usually want is an increase in purchase intention and brand preference among viewers (Chan 2012), but such effects are almost impossible to measure without controlling other variables (Hong, Wang, and Los Santos 2008; Spears and Singh 2004). Thus, as in most previous studies on the subject, the effect of product placement measured in the current study was also the recall of brands placed in the program. With the worldwide growth in the consumption of foreign language content (Bolaños-García-Escribano, Díaz-Cintas, and Massidda 2021; Lång, Vrzakova, and Mehtätalo 2021; Matamala, Perego, and Bottiroli 2017), it might be interesting for marketers to know whether and how this could affect their goals when resorting to placements locally as an advertising tool in programs for consumption not only locally but elsewhere.

Original Version and Audiovisual Translation

When a movie or program is delivered with no additional captions of any kind, and the soundtrack is the same as that which the studio had produced, it is considered as the original version (Lee, Roskos, and Ewoldsen 2013). However, to reach international audiences that cannot comprehend the language spoken in the dialogues, the programs are adapted to different versions. The distribution of movies or TV programs in different AVT formats, other than the original version, via distributors and streaming platforms is called versioning (Gambier 2003). Versioning consists of the following:

- *Dubbing* means that the original spoken dialogues of the program have been replaced with a track with dialogues spoken in the target language. This process usually includes an attempt to synchronize the new spoken dialogues with the lip movements of the characters on the screen (Kilborn 1993).
- The *subtitled* version usually carries the original spoken dialogues, and adaptation to the target language is made through the insertion of a written version of the dialogues in the form of titles or captions (Kilborn 1993). In this version, viewers could read the subtitles if they could not understand the language of the spoken dialogues. Most subtitled programs feature the original audio version, but dubbed versions with a third language as the language of the subtitles are also possible.
- There are other forms of AVT, such as voiceover, where the original spoken dialogues are kept and can be heard, but a narrator speaks out the dialogues' translated versions (Kilborn 1993). However, dubbing and subtitling are the two most commonly used forms of interlingual translation for audiovisual content (Koolstra, Peeters, and Spinhof 2002).

Research on Audiovisual Translation

One of the research disciplines of AVT is the effects of subtitles on viewers. Studies have indicated improvements in the foreign language learning of viewers exposed to subtitled programs (van Lommel, Laenen, and d'Ydewalle 2006). Other studies have focused on faster reading speed and learning as a result of exposure to movies and TV programs with subtitles (Caruana 2021; Hefer 2013). In addition, attention, cognitive load, and time spent reading subtitles (Lång, Vrzakova, and Mehtätalo 2021; Szarkowska and Gerber-Morón 2018) and whether this task influences the enjoyment and comprehension of scenes and movies (Perego et al. 2010; Szarkowska and Gerber-Morón 2018) have been subjects of investigation.

In the field of advertisement research, AVT has also been the subject of studies that have shown whether viewers' attitudes toward commercials and the featured brands/products would be different if the commercials were presented in the original versions or in dubbed or subtitled versions using the language understood by the viewer (Gerritsen et al. 2010; Pagani, Goldsmith, and Perracchio 2015). Despite the valuable insights provided by these studies, their findings allow no inferences regarding the effects of brand/product placements in the original, dubbed, or subtitled versions of programs on audiences.

For product placement effectiveness, it is important to determine whether AVT could also influence viewers' recognition and comprehension of scenes. Especially in interlingual subtitling, marketers must strive to ensure that the effects of the placements will not be negatively influenced by the extra tasks that viewers need to perform, such as reading the subtitles to understand the program.

A possible disadvantage of subtitles is that the viewer might need time to read them and might consequently miss some visual information in the scene (Koolstra, Peeters, and Spinhof 2002). However, empirical research has shown that viewers read subtitles extremely fast; thus, reading subtitles can be considered an automated task (Bisson et al. 2014) and does not seem to affect viewers' comprehension of the program (Lee, Roskos, and Ewoldsen 2013).

With regard to visual aspects, the levels of visual scene recognition and image processing are not different between viewers watching subtitled and dubbed versions of the same program (Perego et al. 2010). Studies that tested face–name associations of viewers who watched dubbed versus subtitled versions of the same program showed that the subtitling group performed better than their dubbing counterpart (Perego, Del Missier, and Bottiroli 2014). Nevertheless, other studies have indicated that different populations or countries might show differences in subtitle reading levels in terms of speed and comprehension. Both phenomena could

have affected the outcomes of some studies presented in previous publications (Perego et al. 2016).

Although face–name association tests have been performed, and viewers of subtitled content did not perform worse than viewers of dubbed or original content, studies on less prominent visual elements of scene testing, as to whether these would be differently recognized or remembered, have not yet been published. Product placement is one of these less prominent visual elements. As the focus of many previous studies in the field of product placement effectiveness has been the viewers' recall of brands that appear on TV shows or movies, the first research question in the current study was *whether brand recall would be different for viewers who watch a program with subtitles in comparison with viewers who watch the same program without subtitles*. For this question, the following hypothesis was postulated:

H1: Brand recall of placements is lower in viewers of programs with subtitles than in viewers of programs without subtitles.

The current study's experimental design took the three most popular AVT versions of programs into account: the original version (OV), the original version with subtitles (ST), and the dubbed version (DB). The second research question focused on the effects of these different AVT formats. The following hypotheses were developed:

H2a: Viewers who watch the original versions of programs have higher levels of brand recall of placements than viewers who watch the same programs with subtitles.

H2b: Viewers who watch the original versions of programs have higher levels of brand recall of placements than viewers who watch the dubbed versions of the same programs.

H2c: Viewers who watch the dubbed versions of programs have higher levels of brand recall of placements than viewers who watch the same programs with subtitles.

3.4 Study Design

Stimuli

To test the hypotheses, a between-subject field experiment was conducted, in which the participants were exposed to one of four stimuli. To create a situation as close as possible to a routine or natural situation, real TV programs were chosen for this field experiment instead of edited or shortened clips of the entire content (Bressoud, Lehu, and Russell 2010). The stimuli chosen were four episodes of two different comedy series, all of which are available on multiple streaming platforms in all the AVT formats covered by this study. They were as follows:

- Three episodes of “The Big Bang Theory”: Season 7/Episode 21 (TBBT S7E21), Season 8/Episode 8 (TBBT S8E8), and Season 8/Episode 12 (TBBT S8E12)
- One episode of “Friends”: Season 10/Episode 10 (F S10E10)

Sitcoms were chosen due to their short length per episode (18–22 minutes) compared to most drama TV shows (40–42 minutes) or movies, and because they usually contain a bigger number of product placements per episode than other fictional formats (La Ferle and Edwards 2006). The choice of episodes was made based on the results of a screening analysis of 10 episodes of each series to identify episodes featuring at least one visual placement that was easily recognizable. Only visual placements were selected so that the experiment would cover the most popular form of placement (La Ferle and Edwards 2006). For a placement to be included in the experiment, it had to (a) be visual only, with no verbal mention of the brand in the script (Homer 2009), (b) be displayed for more than two seconds on the screen (Avery and Ferraro 2000), and (c) have no relation to the program plot (Cowley and Barron 2008).

The screening analysis showed that the same brand was found in three different episodes of two different series. Another brand was found in three episodes of the same series, but not in the other series. This opened the possibility of comparing the results of the placements of the same brand amid different stimuli and leaving the participants exposed to the fourth stimulus

as possible control groups for those placements (Babin 1996). Other brands were identified, and a total of six brands in three different product categories were selected (*Table 1*). Then, three coders watched the episodes and were able to recognize the same placements at the same time in the plot.

Table 1 – Placements identified in the program stimuli

Product category	Brand	Stimuli present in
Bottled water	Fiji Water	TBBT S7E21, TBBT S8E12, F S10E10
	Icelandic Water	TBBT S7E21, TBBT S8E8, TBBT S8E12
	Smart Water	TBBT S8E12
Snacks	Nut Thins	TBBT S7E21
	Rice Thins	TBBT S8E12
Beer	Petre Devos	TBBT S8E12

Note: TBBT = The Big Bang Theory; F = Friends; S = season; E = episode

The participants were allowed to choose which of the four programs they wanted to watch and which AVT format they were most comfortable with. Allowing the participants to choose the program and AVT format strongly contributed to the study's validity.

Questionnaire

Immediately after watching the programs they had chosen to watch, the participants were asked to fill out an online questionnaire that included questions about whether they had seen the brand of interest in the program they had just watched among other brands in the same product category. This is called aided recall (Matthes et al. 2012). All the groups answered the same questionnaire, which had been translated into a language they could understand.

The questions related to brand recall came with photos of the products so that visual recognition would be facilitated with the logos, colors, or formats of the brand or packaging (Balasubramanian, Karrh, and Patwardhan 2006). The participants were asked if they recalled seeing any of the brands in the product categories presented. Other known or unknown brands were added to the brand of interest.

Participants

The study participants were recruited from marketing and business students at a German university, where the recruiters received course credits according to the number of participants they were able to recruit. To maximize the sample despite time and research resource restrictions, a crowdsourced sampling approach was employed (Brühlmann et al. 2020).

A total of 2,483 participants started filling out the online questionnaire, which included attention checks (Brühlmann et al. 2020) in the form of inserting a code manually and questions that demanded the input of numbers to improve the quality of data collection. However, 181 participants did not complete the questionnaire and were excluded from the study. Thus, the final sample consisted of 2,302 participants. Their age range was 11–83 years (mean = 29.44; standard deviation = 14.471), and 37.1% identified themselves as male, 49.1% as female, and 0.3% as diverse. Thirteen percent made no statement about gender.

As the participants could freely choose to watch any of the four episodes of two different series, the distribution of participants exposed to the four stimuli were not equal (*Table 2*). The participants were also allowed to choose the program version based on the AVT format so that they could watch the program in as natural a setting as possible. However, this resulted in unequal numbers of participants who were exposed to the different program versions based on the AVT format (*Table 2*).

Table 2 – Distribution of participants

Stimulus	Version/AVT						Grand total
	Without subtitles			With subtitles			
	OV	DB	Total	OV+ ST	DB+ ST	Total	
TBBT S7E21	100	485	585	127	8	135	720
TBBT S8E08	61	418	479	79	15	94	573
TBBT S8E12	65	384	449	75	7	82	531
F S10E10	106	228	334	132	12	144	478
Total	332	1,515	1,847	413	42	455	2,302

Note: AVT = audiovisual translation; OV = original version; DB = dubbed version; ST = with subtitles; TBBT = The Big Bang Theory; F = Friends; S = season; E = episode

3.5 Results

Instead of testing each hypothesis once with the complete sample, each hypothesis was tested multiple times with a smaller number of participants. This was possible due to the multitude of conditions and products tested.

First, brand recall of the placements was tested to determine the differences between the respondents who watched the episodes with subtitles and those who watched the same episodes without subtitles (*Table 3*).

Table 3 – Correct brand recall of participants (condition: with or without subtitles)

Stimulus	Subtitles	n	Bottled water			Beer	Snacks	
			Fiji	Ice-landic	Smart	Petre Devos	Nut Thins	Rice Thins
TBBT S7E21	NO	585	33%	16%	-	-	24%	-
	YES	135	23%	13%	-	-	30%	-
TBBT S8E08	NO	449	-	16%	-	7%	-	35%
	YES	82	-	13%	-	6%	-	28%
TBBT S8E12	NO	479	47%	8%	20%	-	-	-
	YES	94	34%	5%	13%	-	-	-
F S10E10	NO	334	30%	-	-	-	-	-
	YES	144	33%	-	-	-	-	-

Note: TBBT = The Big Bang Theory; F = Friends; S = season; E = episode

Chi-square tests were performed to determine the statistical significance of the obtained differences (*Table 4*). They tested H1 (Brand recall of placements is lower in viewers of programs with subtitles than in viewers of programs without subtitles).

Table 4 – Results of chi-square tests for hypothesis 1

Stimulus	n		Bottled water			Beer	Snacks	
			Fiji*	Icelandic	Smart	Petre Devos	Nut Thins	Rice Thins
TBBT S7E21	720	Chi ²	3.362	0.485	-	-	2.281	-
		df	2	1	-	-	1	-
		p-value	.186	.486	-	-	.131	-
TBBT S8E08	573	Chi ²	-	0.581	-	0.011	-	2.141
		df	-	1	-	1	-	1
		p-value	-	.446	-	.916	-	.143
TBBT S8E12	531	Chi ²	4.144	0.758	2.098	-	-	-
		df	2	1	1	-	-	-
		p-value	.126	.384	.147	-	-	-
F S10E10	478	Chi ²	2.504	-	-	-	-	-
		df	2	-	-	-	-	-
		p-value	.286	-	-	-	-	-

*Fiji was presented with two choices of logos, the old one and a newer version; correct recalls of one or both were counted as one correct recall. TBBT = The Big Bang Theory; F = Friends; S = season; E = episode; df = degree of freedom

None of the experiment settings resulted in significant variations between the conditions (all p-values > .05). The presence or absence of subtitles did not significantly alter the participants' brand recall. Thus, H1 was rejected.

The same procedure was applied to test the second set of hypotheses. The comparison of the rate of correct brand recall was based on three conditions: participants exposed to the program's OV and ST and DB versions (Table 5).

Table 5 – Correct brand recall of participants (conditions: original version, with subtitles, and dubbed version)

Stimulus	AVT	n	Bottled water			Beer	Snacks	
			Fiji	Icelandic	Smart	Petre Devos	Nut Thins	Rice Thins
TBBT S7E21	OV	100	33%	13%	-	-	29%	-
	ST	135	23%	13%	-	-	30%	-
	DB	485	33%	16%	-	-	23%	-
TBBT S8E08	OV	61	-	10%	-	8%	-	33%
	ST	94	-	13%	-	6%	-	28%
	DB	418	-	17%	-	6%	-	36%
TBBT S8E12	OV	65	51%	8%	23%	-	-	-
	ST	82	34%	5%	13%	-	-	-
	DB	384	47%	8%	20%	-	-	-
F S10E10	OV	106	33%	-	-	-	-	-
	ST	144	33%	-	-	-	-	-
	DB	228	29%	-	-	-	-	-

Note: TBBT = The Big Bang Theory; F = Friends; S = season; E = episode; AVT = audiovisual translation; OV = original version; ST = with subtitles; DB = dubbed version

Some larger differences were obtained, such as for Fiji in TBBT S7E21 and S8E12, which resulted in higher recall in both the OVs and the DB versions compared to the ST versions (Table 5). However, the overall results were mostly similar between the different conditions.

Chi-square tests were also performed to test H2a, H2b, and H2c and to determine statistical significance (Table 6). A significant result would indicate that the different AVT versions affect brand recall levels.

Table 6 – Results of chi-square tests for hypotheses 2a–c

Stimulus	n		Bottled water			Beer	Snacks	
			Fiji	Icelandic	Smart	Petre Devos	Nut Thins	Rice Thins
TBBT S7E21	720	Chi ²	5.313	1.178	-	-	3.813	-
		df	2	2	-	-	2	-
		p-value	.070	.555	-	-	.149	-
TBBT S8E08	573	Chi ²	-	2.537	-	0.271	-	2.368
		df	-	2	-	2	-	2
		p-value	-	.281	-	.873	-	.306
TBBT S8E12	531	Chi ²	5.169	0.759	2.485	-	-	-
		df	2	2	2	-	-	-
		p-value	.075	.684	.289	-	-	-
F S10E10	478	Chi ²	1.035	-	-	-	-	-
		df	2	-	-	-	-	-
		p-value	.596	-	-	-	-	-

Note: TBBT = The Big Bang Theory; F = Friends; S = season; E = episode; df = degree of freedom

All the conditions indicated that the observed differences were not statistically significant. Thus, H2a, H2b, and H2c were rejected.

3.6 Discussion

The experiment conducted in the current study was not able to prove that subtitle reading has any distracting effect on brand recall of placements. Some programs, such as TBBT S7E21, resulted in different levels of recall; the participants who watched the subtitled version of the program showed higher correct brand recall for Fiji Water than those who watched the same program without subtitles (33% vs. 23%; *Table 3*). However, this difference was not statistically significant. Surprisingly, reversed differences were found for another brand placement in the same program (24% vs. 30%). Most of the other settings resulted in even smaller differences, and the chi-square tests revealed that all of them were not statistically significant (*Table 4*). One possible explanation for the non-significant findings is that the unequal group sizes reduced the statistical power, making it more difficult to detect true differences in the population of interest. Future study designs should find a better balance between providing natural

conditions in the field experiment and having statistically optimal sample sizes (equal group sizes).

As with H1, testing H2a, H2b, and H2c also led to non-statistically significantly different results. In other words, no statistically significant differences in brand recall were found not only between the presence or absence of subtitles but also between OVs and the two other AVT formats (*Table 6*). Testing H2a–c showed more similar patterns of recall among the participants exposed to the OVs and the DB versions compared to the ST versions (*Table 5*). In addition, some conditions showed results that did not follow the expected pattern, such as TBBT S8E08, where the correct recall of the Petre Devos brand was more similar among the viewers of the ST versions (6%) and DB versions (6%) than among the viewers of the OVs (8%). This was also true for TBBT S7E21 and the product Icelandic Water. The participants who watched the OV and those who watched the ST version presented more similar brand recall (13% in both cases) than the participants who watched the DB version (16%).

In conclusion, AVT does not influence the recall of brands placed in a TV show. Further investigations and similar experiments should be conducted to see if these results would be replicated in other situations, in different program or movie formats, or in different countries.

3.7 Practical Implications

The flux of content exchange between nations that speak different languages sometimes does not allow for the utilization of different translation formats. Often, there is insufficient time or budget for international series to be dubbed in many languages (Micola, Bris, and Banal-Estañol 2012). Consequently, content in the target language can largely be understood only through subtitles. In addition, a number of viewers prefer to watch subtitled versions rather than dubbed versions of programs delivered with spoken dialogues in languages that they do not understand (Matamala, Perego, and Bottiroli 2017).

The rapid growth of video streaming services in most countries has allowed non-English language content to reach a broader international audience. Whereas before, people in many countries could watch only the few programs selected by the local TV channels of other countries for international viewing, now, people have a multitude of available content from different countries on VoD providers. However, programs produced in other languages have a much higher chance of being watched by international audiences.

Advertisers might fear that reading the subtitles of programs could have a negative impact on the effectiveness of product placement in such programs. However, the current study showed that such fears are unjustified and that placing brands/products in programs with subtitles does not carry a risk. Advertisers should consider putting product placements not only in English language programs for worldwide distribution but also in programs in languages other than English, which offer an opportunity for placement of brands that are local for the audience but not necessarily for the country where the program is produced. The current study also showed that the version or AVT format that is available or that is chosen by viewers will not make a difference in the outcomes of the placements.

3.8 References

Auer, M., U. Kalweit, and P. Nüssler. 1988. *Product placement: Die neue kunst der geheimen verführung*. Düsseldorf: Econ-Verlag.

Avery, R. J., and R. Ferraro. 2000. Verisimilitude or advertising? Brand appearances on prime-time television. *Journal of Consumer Affairs* 34, no. 2: 217–44.

<https://doi.org/10.1111/j.1745-6606.2000.tb00092.x>.

Babin, B. J., J.-L. Herrmann, M. Kacha, and L. A. Babin. 2021. The effectiveness of brand placements: A meta-analytic synthesis. *International Journal of Research in Marketing* 38, no. 4: 1017–33. <https://doi.org/10.1016/j.ijresmar.2021.01.003>.

Babin, L. A. 1996. Advertising via the box office. *Journal of Promotion Management* 3, no. 1-2: 31–52. https://doi.org/10.1300/J057v03n01_03.

Balasubramanian, S. K., J. A. Karrh, and H. Patwardhan. 2006. Audience response to product placements: An integrative framework. *Journal of Advertising* 35, no. 3: 115–41.

<https://doi.org/10.2753/JOA0091-3367350308>.

Bisson, M.-J., W. J. B. van Heuven, K. Conklin, and R. J. Tunney. 2014. Processing of native and foreign language subtitles in films: An eye tracking study. *Applied Psycholinguistics* 35, no. 02: 399–418. <https://doi.org/10.1017/S0142716412000434>.

Bolaños-García-Escribano, A., J. Díaz-Cintas, and S. Massidda. 2021. Latest advancements in audiovisual translation education. *The Interpreter and Translator Trainer* 15, no. 1: 1–12. <https://doi.org/10.1080/1750399X.2021.1880308>.

Brennan, I., and L. A. Babin. 2004. Brand placement recognition. *Journal of Promotion Management* 10, no. 1-2: 185–202. https://doi.org/10.1300/J057v10n01_13.

Bressoud, E., J.-M. Lehu, and C. A. Russell. 2010. The product well placed: The relative impact of placement and audience characteristics on placement recall. *Journal of Advertising Research* 50, no. 4: 374–85. <https://doi.org/10.2501/S0021849910091622>.

Brühlmann, F., S. Petralito, L. F. Aeschbach, and K. Opwis. 2020. The quality of data collected online: An investigation of careless responding in a crowdsourced sample. *Methods in Psychology* 2: 100022. <https://doi.org/10.1016/j.metip.2020.100022>.

Caruana, S. 2021. An overview of audiovisual input as a means for foreign language acquisition in different contexts. *Language and Speech* 64, no. 4: 1018–36. <https://doi.org/10.1177/0023830920985897>.

Chan, F. F. Y. 2012. Product placement and its effectiveness: A systematic review and propositions for future research. *The Marketing Review* 12, no. 1: 39–60. <https://doi.org/10.1362/146934712X13286274424271>.

Cholinski, A. 2012. The effectiveness of product placement: A field quasi-experiment. *International Journal of Marketing Studies* 4, no. 5: 14–28. <https://doi.org/10.5539/ijms.v4n5p14>.

Cowley, E., and C. Barron. 2008. When product placement goes wrong: The effects of program liking and placement prominence. *Journal of Advertising* 37, no. 1: 89–98. <https://doi.org/10.2753/JOA0091-3367370107>.

D'Astous, A., and F. Chartier. 2000. A study of factors affecting consumer evaluations and memory of product placements in movies. *Journal of Current Issues & Research in Advertising* 22, no. 2: 31–40. <https://doi.org/10.1080/10641734.2000.10505106>.

Gambier, Y. 2003. Introduction. *The Translator* 9, no. 2: 171–89. <https://doi.org/10.1080/13556509.2003.10799152>.

Gerritsen, M., C. Nickerson, A. van Hooft, F. van Meurs, H. Korzilius, U. Nederstigt, M. Starren, and R. Crijns. 2010. English in product advertisements in non-english-speaking countries in Western Europe: Product image and comprehension of the text. *Journal of Global Marketing* 23, no. 4: 349–65. <https://doi.org/10.1080/08911762.2010.504523>.

Gibson, B., C. Redker, and I. Zimmerman. 2013. Conscious and nonconscious effects of product placement: Brand recall and active persuasion knowledge affect brand attitudes and brand self-identification differently. *Psychology of Popular Media Culture* 3, no. 1: 19–37. <https://doi.org/10.1037/a0032594>.

Gould, S. J., P. B. Gupta, and S. Grabner-Kräuter. 2000. Product placements in movies: A cross-cultural analysis of austrian, french and American consumers' attitudes toward this emerging, international promotional medium. *Journal of Advertising* 29, no. 4: 41–58. <https://doi.org/10.1080/00913367.2000.10673623>.

Guo, F., G. Ye, L. Hudders, W. Lv, M. Li, and V. G. Duffy. 2019. Product placement in mass media: A review and bibliometric analysis. *Journal of Advertising* 48, no. 2: 215–31. <https://doi.org/10.1080/00913367.2019.1567409>.

Harbrücker, U., and K.-P. Wiedmann. 1987. *Product-Placement: Rahmenbedingungen und Gestaltungsperspektiven*. Vol. 58 of *Arbeitspapier / Institut für Marketing, Universität Mannheim*. Mannheim: Institut für Marktorientierte Unternehmenführung.

Hefer, E. 2013. Television subtitles and literacy: Where do we go from here? *Journal of Multilingual and Multicultural Development* 34, no. 7: 636–52. <https://doi.org/10.1080/01434632.2013.797986>.

Homer, P. M. 2009. Product placements - the impact of placement type and repetition on attitude. *Journal of Advertising* 38, no. 3: 21–32. <https://doi.org/10.2753/JOA0091-3367380302>.

Hong, S., Y. J. Wang, and G. de Los Santos. 2008. The effective product placement: Finding appropriate methods and contexts for higher brand salience. *Journal of Promotion Management* 14, no. 1-2: 103–20. <https://doi.org/10.1080/10496490802492457>.

Karrh, J. A. 1998. Brand placement: A review. *Journal of Current Issues & Research in Advertising* 20, no. 2: 31–49. <https://doi.org/10.1080/10641734.1998.10505081>.

Karrh, J. A., K. T. Frith, and C. Callison. 2001. Audience attitudes towards brand (product) placement: Singapore and the united states. *International Journal of Advertising* 20, no. 1: 3–24. <https://doi.org/10.1080/02650487.2001.11104874>.

Kilborn, R. 1993. 'speak my language': Current attitudes to television subtitling and dubbing. *Media, Culture & Society* 15, no. 4: 641–60. <https://doi.org/10.1177/016344393015004007>.

Koolstra, C. M., A. L. Peeters, and H. Spinhof. 2002. The pros and cons of dubbing and subtitling. *European Journal of Communication* 17, no. 3: 325–54. <https://doi.org/10.1177/0267323102017003694>.

La Ferle, C., and S. Edwards. 2006. Product placement: How brands appear on television. *Journal of Advertising* 35, no. 4: 65–86. <https://doi.org/10.2753/JOA0091-3367350405>.

Lång, J., H. Vrzakova, and L. Mehtätalo. 2021. Modelling gaze behaviour in subtitle processing. *Journal of Audiovisual Translation* 4, no. 1: 71–95. <https://doi.org/10.47476/jat.v4i1.2021.104>.

Lee, M., B. Roskos, and D. R. Ewoldsen. 2013. The impact of subtitles on comprehension of narrative film. *Media Psychology* 16, no. 4: 412–40. <https://doi.org/10.1080/15213269.2013.826119>.

Lewis, J. 1971. *The total film maker*. United States: Random House.

- Matamala, A., E. Perego, and S. Bottiroli. 2017. Dubbing versus subtitling yet again? *Babel. Revue internationale de la traduction / International Journal of Translation* 63, no. 3: 423–41. <https://doi.org/10.1075/babel.63.3.07mat>.
- Matthes, J., W. Wirth, C. Schemer, and N. Pachoud. 2012. Tiptoe or tackle? The role of product placement prominence and program involvement for the mere exposure effect. *Journal of Current Issues & Research in Advertising* 33, no. 2: 129–45. <https://doi.org/10.1080/10641734.2012.700625>.
- Micola, A., A. Bris, and A. Banal-Estañol. 2012. Tv or not tv? The economic impact of subtitling and english skills. Paper.
- Mikos, L. 2016. Digital media platforms and the use of tv content: Binge watching and video-on-demand in Germany. *Media and Communication* 4, no. 3: 154–61. <https://doi.org/10.17645/mac.v4i3.542>.
- Pagani, M., R. Goldsmith, and A. Perracchio. 2015. Standardization vs. Adaptation: Consumer reaction to tv ads containing subtitled or english dubbed ads. *International Journal of Advertising* 34, no. 4: 702–14. <https://doi.org/10.1080/02650487.2015.1009349>.
- Palomba, A. 2020. Do svod product attribute trade-offs predict svod subscriptions and svod account access? Using utility constant sums to predict svod subscriptions and svod account access. *International Journal on Media Management* 22, no. 3-4: 168–90. <https://doi.org/10.1080/14241277.2021.1920023>.
- Perego, E., M. Laskowska, A. Matamala, A. Remael, I. S. Robert, A. Szarkowska, A. Vilaró, and S. Bottiroli. 2016. Is subtitling equally effective everywhere? A first cross-national study on the reception of interlingually subtitled messages. *Across Languages and Cultures* 17, no. 2: 205–29. <https://doi.org/10.1556/084.2016.17.2.4>.

Perego, E., F. Del Missier, and S. Bottiroli. 2014. Dubbing versus subtitling in young and older adults: Cognitive and evaluative aspects. *Perspectives: Studies in Translatology* 23, no. 1: 1–21. <https://doi.org/10.1080/0907676X.2014.912343>.

Perego, E., F. Del Missier, M. Porta, and M. Mosconi. 2010. The cognitive effectiveness of subtitle processing. *Media Psychology* 13, no. 3: 243–72. <https://doi.org/10.1080/15213269.2010.502873>.

PQ Media. 2020. Global branded entertainment marketing forecast 2014–24, PQ Media LLC, Stamford, CT. <https://www.pqmedia.com/product/global-product-placement-forecast-2020/>. Accessed April 2023.

Sanson, K., and G. Steirer. 2019. Hulu, streaming, and the contemporary television ecosystem. *Media, Culture & Society* 41, no. 8: 1210–27. <https://doi.org/10.1177/0163443718823144>.

Schmoll, N. M., J. Hafer, M. Hilt, and H. Reilly. 2006. Baby boomers' attitudes towards product placements. *Journal of Current Issues & Research in Advertising* 28, no. 2: 33–53. <https://doi.org/10.1080/10641734.2006.10505197>.

Smink, A. R., E. A. Van Reijmersdal, and S. C. Boerman. 2017. Effects of brand placement disclosures: An eye tracking study into the effects of disclosures and the moderating role of brand familiarity. In *Advances in advertising research viii*, ed. V. Zabkar and M. Eisend, 85–96. Wiesbaden: Springer Fachmedien Wiesbaden.

Spears, N., and S. N. Singh. 2004. Measuring attitude toward the brand and purchase intentions. *Journal of Current Issues & Research in Advertising* 26, no. 2: 53–66. <https://doi.org/10.1080/10641734.2004.10505164>.

Sung, Y., F. de Gregorio, and J.-H. Jung. 2009. Non-student consumer attitudes towards product placement. *International Journal of Advertising* 28, no. 2: 257–85.

<https://doi.org/10.2501/S0265048709200564>.

Szarkowska, A., and O. Gerber-Morón. 2018. Viewers can keep up with fast subtitles: Evidence from eye movements. *PloS One* 13, no. 6: e0199331. <https://doi.org/10.1371/journal.pone.0199331>.

van Lommel, S., A. Laenen, and G. d'Ydewalle. 2006. Foreign-grammar acquisition while watching subtitled television programmes. *The British journal of educational psychology* 76, no. Pt 2: 243–58. <https://doi.org/10.1348/000709905X38946>.

Van Reijmersdal, E. A., K. Tutaj, and S. C. Boerman. 2013. The effects of brand placement disclosures on skepticism and brand memory. *Communications - The European Journal of Communication Research* 38, no. 2: 127–46. <https://doi.org/10.1515/commun-2013-0008>.

Van Reijmersdal, E. A., P. Neijens, and E. G. Smit. 2009. A new branch of advertising. *Journal of Advertising Research* 49, no. 4: 429–49. <https://doi.org/10.2501/S0021849909091065>.

Yang, M., and D. R. Roskos-Ewoldsen. 2007. The effectiveness of brand placements in the movies: Levels of placements, explicit and implicit memory, and brand-choice behavior.

Journal of Communication 57, no. 3: 469–89. <https://doi.org/10.1111/j.1460-2466.2007.00353.x>.

Chapter 4

Multitasking, Subtitles, and Product Placement Effectiveness: An Analysis of Multitasking Influencing the Effectiveness of Product Placement and Audiovisual Translation Formats

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Multitasking, Subtitles, and Product Placement Effectiveness: An Analysis of Multitasking Influencing the Effectiveness of Product Placement and Being Influenced by Audiovisual Translation Formats

4.1 Abstract

Placing brands and products in movies and series has significantly increased in recent years, leading to more research on the subject being undertaken. Little of this research has so far focused on the relationship between multitasking by audiences and the effectiveness of product placement. This study tests the correlation between levels of multitasking and brand recall of placements in programs. The second objective of the study is to investigate if there is any link between the version of a program watched (i.e., original, dubbed, or subtitled), and levels of multitasking. The experimental online survey showed no difference in brand recall among viewers engaging in secondary activities while watching a program for up to 5 minutes in a 20-minute episode. The addition of subtitles increased screen attention, and viewers did not multitask as much. An innovative out-of-lab method consisting of in-home video observation produced high-precision time data on viewers' multi-tasking behavior and enabled cross-checking with the survey answers for false-positives. The main outcome of this study is that multitasking while watching shows or movies should not be a concern for advertisers investing in product placement.

4.2 Introduction

The shift of viewership in recent years from linear television to non-linear streaming content has led media planners to opt for more alternatives to the traditional TV ads (Burroughs 2018). When advertisers resort to commercials on linear television, they are looking to reach as many eyeballs and ears as possible, but the more that people stop watching linear television, the fewer viewers that the advertisers will reach.

The fact that some platforms feature commercials, such as Hulu, YouTube, CBS All Access, Vue, RakutenTV, Netflix (Peters 2022), and Amazon Prime Video most recently, with its new ad-supported, free streaming service Freevee (Burroughs 2018), somewhat compensates for the decreasing revenues of content providers on the one hand and the loss of audience reach on the other. Nevertheless, video streaming services show much fewer ads than linear television programming (Burroughs 2018). Moreover, since some platforms do not show commercials at all, it is more challenging to have a product or service advertised in video-on-demand than in traditional television commercials.

With smaller numbers of viewers watching linear television, marketers have needed to look for alternatives so that they can reach potential customers. One of their solutions to this problem has been to insert their products, services, and brands into programs more often, thereby boosting their investment in product or brand placement (Guo et al. 2019).

Advertisers not only want to reach as many potential customers as possible through audiovisual media, but they also want the viewers to be attentive to advertisements or placements. The total number of viewers of a certain program does not equal the number watching and listening to it attentively (Sun et al. 2022). The number of attentive viewers is supposedly smaller once commercials are shown (Anderson 2017), either due to physical and/or cognitive advertisement avoidance (Ho 2021).

Since television viewing became one of the most popular leisure activities, there have always been other activities that viewers are engaged in while watching it, such as performing domestic chores; reading newspapers, magazines, or books; talking to others; or eating. Multitasking while watching television was never as powerful as it has been since tablets and smartphones became popular, and so, many viewers have started looking at these gadgets at the same time as they are watching TV. The phenomenon of “multiscreening” is defined as using more than one screen with different visual content simultaneously (Segijn and Eisend 2019). If viewers do not look at the screen during a program, brands’ placements in it might lose their effectiveness, since there will sometimes be no exposure.

This study investigates whether multitasking plays a role in placement effectiveness, such as in terms of recall of the brands placed—an effect researched extensively (Babin et al. 2021) but not yet in relation to viewers’ multi-tasking. Another goal of the study presented here is to investigate how the version of the content (i.e., original; subtitled; dubbed; or audiovisual translation, AVT) influences viewer multitasking.

The original version (OV) of a movie or show is the term used when no adaptations have been made, the audiovisual information is delivered without the addition of subtitles, and the dialog channels have not been replaced (Lee, Roskos, and Ewoldsen 2013). Since the language used in spoken dialog may not be understood by international audiences in countries where the content will be distributed, the solution may be to have different versions for the language adaptations. In a process known in the industry as *versioning* (Gambier 2003), the spoken dialogs are translated into different languages, and the form in which these adaptations are delivered is known as the audiovisual translation (AVT) mode (Lång, Vrzakova, and Mehtätalo 2021).

Dubbing is the term used when the spoken dialogs of a movie or show are extracted from the audio channels and replaced with a track in which the dialogs are spoken in the target language (Díaz-Cintas 1999). This usually includes a process to synchronize the translated dialogs with the facial and lip movements of the characters (Kilborn 1993).

If the translated dialogs are not delivered in audio, and what is being said is adapted to the target language and delivered only in written form via captions on the screen while the original audio stays untouched, this is *subtitling* (Kilborn 1993).

In this study, we aim to test if viewers watching a subtitled program engage less in multitasking than do audiences viewing a dubbed or original version of the same program with no subtitles. In addition, we wish to investigate the degree to which multitasking affects the brand recall of products placed in the show.

4.3 Product placement

The inclusion of branded products in movies and television programs in exchange for monetary compensation is a practice that has been given many names over the decades. What has been known as *plugs* (Lewis 1971, 155), *tie-ups*, *tie-in advertising*, and *exploitations* (Andriasova 2006; Newell, Salmon, and Chang 2006) has lately come to be called *brand integration* (Naderer, Matthes, and Spielvogel 2017), or most commonly, *product* or *brand placement* (Babin et al. 2021).

Product placement, which has become a multibillion dollar industry that will reach 32 billion dollars in investment per year by 2024 (PQ Media 2022), has received much attention from researchers in recent years (Guo et al. 2019). Over the last 30 years, the effectiveness of product placement has been measured in a multitude of forms, including brand or placement recall (Bressoud, Lehu, and Russell 2010), changes in attitudes or preferences toward placed brands

(Russell 2002), purchase intention of products seen in movies and TV programs (Mitchell and Nelson 2018), and even perception of brand attributes (Gupta and Lord 1998).

Many studies have also tested third variables and moderators that could influence the effectiveness of placements (Babin et al. 2021; Van Reijmersdal, Neijens, and Smit 2009). These variables can be conceptually divided into viewer-related and program-related measurements. The most prominent viewer-related measurements are attitudes toward the practice of product placement (D'Astous and Chartier 2000; Gregorio and Sung 2010; Nebenzahl and Secunda 1993); persuasion knowledge, or whether the viewer perceives a placement as being an attempt to change their beliefs, attitudes, decisions, or actions toward brands (Boerman 2014; Johnstone and Dodd 2000; Smink, Van Reijmersdal, and Boerman 2017); audience characteristics, including age, cultural background, ethnicity, and education level (Auty and Lewis 2004; Chan, Lowe, and Petrovici 2017; Delorme and Reid 1999; Gupta and Gould 1997); and, among others, viewers' attitudes toward and preferences for the content (Cowley and Barron 2008) or characters and actors (Andriasova 2006).

With respect to program- or medium-related measurements, a significant amount of interest has been spent on placement characteristics, such as whether the placement is visual only, verbal, or audio only or delivered in both audio and visual form (Brennan, Dubas, and Babin 1999; Van Reijmersdal, Neijens, and Smit 2009); the prominence of the product in the scene (Homer 2009) or plot (Yang and Roskos-Ewoldsen 2007); and whether and how disclosures of the placements are present (Ronft, Friedrich, and Sofiullah 2023; Van Reijmersdal 2015). The characteristics of the content or medium that have been the subject of analysis include genre (Jin and Villegas 2007), a character's attitude toward the product (Russell and Stern 2006), and even the size of the screen on which the viewer watches the program (Lehu and Bressoud 2008).

Surprisingly, only four studies could be found that include the viewing situation in terms of viewers multitasking or multiscreening and their relation to television commercials or placement effectiveness (Grzyb, Dolinski, and Kozłowska 2018; Gunawardena and Waiguny 2014; Segijn, Voorveld, and Smit 2017; Yoon, Choi, and Song 2011). To this day, no published studies have investigated how the program version (i.e., original version, dubbed, or subtitled) influences the multitasking behavior of audiences during viewing and how this interrelationship may affect the impact of placement effectiveness in any form.

4.4 Multitasking and multiscreening

Although watching television content may be the primary activity of a person in a particular timeframe, this does not imply that it will be the one and only activity that viewer will perform while watching. Performing other tasks while watching TV is a common activity (Anderson 2017). With the popularization of smartphones or other mobile devices, media multitasking (Kazakova et al. 2016) or multiscreening (Segijn, Voorveld, and Smit 2016) has become a crucial parallel activity to watching television content because of the inevitable attention swap (van Cauwenberge, Schaap, and van Roy 2014) that comes with it. This secondary activity or screen usage can influence viewers' cognitive performance, such as neglecting irrelevant information (Beuckels et al. 2021), usually due to limited capacity or limited cognitive resources (Fox, Park, and Lang 2007).

The motivations for engaging in multitasking or multiscreening behavior can originate from many sources. Personality attributes, sociodemographic factors, and multitasking gratification are just some of the factors that can influence the amount and time spent multitasking (Beuckels et al. 2021).

In relation to product placement effectiveness, previous studies have pointed out that the cognitive load of a secondary task performed while watching TV negatively affects the

effectiveness of both traditional commercials and placements (Grzyb, Dolinski, and Kozłowska 2018; Gunawardena and Waiguny 2014; Smink, Van Reijmersdal, and Boerman 2017; Yoon, Choi, and Song 2011). Because the experimental design of the studies included a forced exposure condition, the external validity of the results is rather limited. Also, none of the three studies focused on the recall or recognition of product placement.

The first research question of this study concerns the effect of multitasking on the brand recall of placements. This translates into the following hypothesis:

H1: Viewers engaging in multitasking while watching a program have lower brand recall of placements than viewers who are not performing a secondary task.

We also investigate the relationship between the time spent on multitasking and its influence on the brand recall of placed products.

H2: The longer viewers engage in multitasking while watching a program, the lower their brand placement recall is.

4.5 Versioning and audiovisual translation (AVT)

The second research question of this study concerns the effect of the program format chosen by the viewer (i.e., original version, dubbed, or subtitled) on multitasking behavior and how this relationship alters the recall of product placements.

It is reasonable to assume that viewers who must read subtitles in order to understand what is being said in a scene might miss something visual in the scene due to a limitation in their information processing capacity (Lang 2000) or the time spent reading the subtitles. However, studies have demonstrated that scene processing is not impaired by subtitle reading (Perego et al. 2010). Studies also found that viewers watching subtitled movies had better comprehension

of specific events than viewers exposed to the original version, although they presented worse comprehension of the movie as a whole (Lee, Roskos, and Ewoldsen 2013).

Reading subtitles tends to be such an automatic process for viewers (Bisson et al. 2014) that time spent on reading is extremely short (Szarkowska and Gerber-Morón 2018). The necessity to read subtitles to understand what is being said might result in viewers spending more time looking at the screen, increasing the phenomenon called *attentional inertia* (Hawkins et al. 2005) and making them resort less to concurrent activities (Koolstra, Peeters, and Spinhof 2002).

Therefore, we want to investigate whether the version of a program will interfere with multitasking or multiscreening behavior. This translates into the following hypothesis:

H3: Viewers watching programs with subtitles engage less in multitasking than viewers watching programs with no subtitles.

We also test the following version-specific hypotheses:

H4: Viewers watching programs in the original version with subtitles engage less in multitasking than viewers watching original versions of the programs with no subtitles.

H5: Viewers watching programs with subtitles engage less in multitasking than viewers watching dubbed versions of the programs with no subtitles.

H6: Viewers watching programs in their original versions with no subtitles engage less in multitasking than viewers watching dubbed versions of the programs with no subtitles.

4.6 Method

Stimuli

To ensure a high degree of external validity, we chose episodes of real TV shows. We intentionally did not use edited or shortened clips of the shows or even produce content specifically for the experiment because we wanted to come as close as possible to the natural setting of watching a real TV show in the home environment (Bressoud, Lehu, and Russell 2010).

The stimuli chosen were a total of four episodes from two different situation comedy series:

- *The Big Bang Theory* (TBBT)
 - Season 7, Episode 21, length = 18m:53s
 - Season 8, Episode 8, length = 20m:08s
 - Season 8, Episode 12, length = 19m:56s
- *Friends* (F)
 - Season 10, Episode 10, length = 22m:01s

Sitcoms were chosen because of the length of their episodes (18–22 minutes), which are much shorter than dramas (40–42 minutes) or films (90+ minutes of length) and therefore more eligible as experimental stimuli. Also, compared to other fictional formats, sitcoms have more placements per time period (La Ferle and Edwards 2006).

Ten randomly chosen episodes of each series were screened to identify at least one immediately recognizable visual placement. Visual placements with no verbal reference to the brand are the most common form of placements in such shows (La Ferle and Edwards 2006). Therefore, this form of placement was the focus of the investigation. For an episode to be included, the

placement had to appear on the screen for more than 2 seconds (Avery and Ferraro 2000) and not be directly related to the plot (Cowley and Barron 2008).

The final sample of episodes included six brands from three product categories (Table 1). The Fiji Water brand was featured in two episodes of TBBT and one episode of *Friends*, but it was not present in one of the selected TBBT episodes, enabling a between-sitcom comparison. Three student assistants were assigned to watch the episodes and to report the timestamps when they recognized the brands of interest.

Table 1 – Placements identified in the stimulus material

Product Category	Brand	Stimuli
Bottled water	Fiji Water	TBBT S07E21; TBBT S08E12; F S10E10
	Icelandic Water	TBBT S07E21; TBBT S08E08; TBBT S08E12
	Smart water	TBBT S08E12
Snacks	Nut Thins	TBBT S07E21
	Rice Thins	TBBT S08E12
Beer	Petre Devos	TBBT S08E12

Note: TBBT = The Big Bang Theory; F = Friends; S = season; E = episode

Study 1: Analyzing exposure to sitcom episodes in a home environment using a survey

The study participants could freely choose one of the four episodes when asked to watch a program. The participants were also allowed to freely choose the AVT version with which they felt most at ease with the advice to only activate subtitles if they could not understand the spoken dialogs. This was done to ensure that the design was as externally valid as possible. To

test the hypotheses, we designed a between-subject design in which the participants were exposed to one of four possible program formats. After watching one of the episodes, the participants were asked to fill out an online questionnaire.

Questionnaire

The questions related to brand recall were divided into product categories through aided recall (Matthes et al. 2012). To test brand recall (Balasubramanian, Karrh, and Patwardhan 2006), the participants were asked if they had seen any of the brands and were presented with pictures of the products, including brand visuals. For the sake of distraction, other known and unknown brands were also presented. The participants had to answer if they recalled seeing any of the brands of the product categories presented.

The questionnaire was available in English, German, and Portuguese to allow for more participants to answer in their own language and avoid comprehension issues. Also, to facilitate the procedure, the questionnaire was designed in a format that could easily be visualized and completed on a computer, tablet, or smartphone. The questionnaire also included attention tests (Brühlmann et al. 2020), such as inserting a code manually and questions that demanded the input of numbers to increase the quality of data collection. Respondents were also asked whether they have watched the program until the end without skipping any parts and received instructions to finish watching in case they have started the questionnaire without doing so.

Pre-tests

An initial pretest was conducted with 27 students of a German University. This was done in order to ensure clarity of questions and answers, time spent on the questionnaire, as well as test the methods and tables prepared to analyze the results since a much larger sample was expected for the main experiment. No substantial changes needed to be made for the experiment.

Sample

The study participants were recruited from marketing and business students at a German university, where the recruiters received course credits according to the number of participants they were able to recruit. To maximize the sample despite time and research resource restrictions, a crowdsourced sampling approach (Brühlmann et al. 2020), where recruiters and participants could send the protocol and link to the questionnaire together with a code consisting of the number assigned to the recruiter and a random alphabetical letter, this code would be then used to assign credit to the recruiter and as an attention test for the respondent. A total of 2483 participants started filling out the online questionnaire, of whom 181 did not complete it and were excluded from the study. The final sample consisted of 2302 participants. The respondents were between 18 and 83 years old ($M = 29.44$, $SD = 14.471$), and 57% identified as female, 42.4% as male, and 0.3% as diverse; furthermore, 0.3% made no statement about gender. Most of the respondents were German (86.4%), while 13.6% declared coming from 54 different countries.

Since the participants were allowed to freely choose one out of four episodes from two different series, the distribution of participants per episode was unequal (Table 2). Furthermore, the participants had to choose between the language version and AVT format. This also resulted in an unequal number of participants exposed to each version and AVT method.

Table 2 – Distribution of the participants

Stimulus	Version / AVT						Total
	No subtitles			With subtitles			
	OV	DB	Total	OV + ST	DB + ST	Total	Total
TBBT S07E21	100	485	585	127	8	135	720
TBBT S08E08	61	418	479	79	15	94	573
TBBT S08E12	65	384	449	75	7	82	531
F S10E10	106	228	334	132	12	144	478
Total	332	1515	1847	413	42	455	2302

Note: AVT = audiovisual translation; OV = original version; DB = dubbed version; ST = with subtitle

Table 3 shows how many participants engaged in multitasking while watching the episode, dependent on the presence of subtitles and different AVT formats in the content (Table 3).

Table 3 – Multitasking engagement in different AVT formats

Multitasking	OV	DB	OV + ST	DB + ST	Without subtitles	With subtitles	Total
	N = 332	N = 1515	N = 413	N = 42	N = 1847	N = 455	N = 2302
Yes	48%	48%	43%	36%	48%	43%	47%
No	52%	52%	57%	64%	52%	57%	53%
χ^2	0.434	1.854	7.324	3.429	2.287	9.866	7.569
df	1	1	1	1	1	1	1
<i>p</i>	.510	.173	.007	.064	.130	.002	.006

Note: AVT = audiovisual translation; OV = original version; DB = dubbed version; ST = with subtitles

In total, 47% of the participants reported that they had engaged in other activities while viewing the episode. There was no statistically significant difference in the amount of multitasking by the respondents who watched the episode in OV, the dubbed version, the dubbed version with subtitles, or without subtitles in general. The participants who watched the OV with subtitles or with subtitles in general reported being less likely to be involved in multitasking.

4.7 Results

To test whether viewers who engage in multitasking have lower brand recall of placements than those who do not execute secondary activities, the participants were asked if they had engaged in other activities while watching the show (Table 4).

Table 4 – Correct brand recall of the participants

Brand	Stimulus	N	Multitasking		χ^2	df	p
			Yes	No			
Fiji	TBBT S07E21	720	45%	34%	8.006	1	.005
	TBBT S08E12	531	49%	50%	0.178	1	.672
	F S10E10	478	37%	35%	0.172	1	.678
Icelandic	TBBT S07E21	720	15%	15%	0.197	1	.657
	TBBT S08E08	573	16%	15%	0.114	1	.735
	TBBT S08E12	531	8%	6%	0.703	1	.402
Smart	TBBT S08E12	531	20%	19%	0.131	1	.718
Nut Thins	TBBT S07E21	720	27%	24%	0.607	1	.436
Rice Thins	TBBT S08E08	573	33%	35%	0.166	1	.684
Petre Devos	TBBT S08E08	573	6%	7%	0.713	1	.398

Note: TBBT = The Big Bang Theory; F = Friends; S = season; E = episode

The recall performance of the participants hardly differed regardless of whether or not they had been multitasking while watching. The most notable difference was obtained for Fiji; in contrast to our hypothesis, Fiji as a brand was significantly better recalled by the participants in the multitasking condition. χ^2 -tests were performed to put H1 to the test (Table 4). Except for Fiji ($\chi^2(1, N = 720) = 8.01, p = 0.005$), the level of brand recall was independent of the multitasking condition, as indicated by the non-significant χ^2 -statistics. In light of these results, we can reject H1; engaging or not in other tasks while watching sitcom episodes in the home environment did not affect brand recall in any way.

The second hypothesis stated that an amount of time spent on multitasking causes lower brand recall. This test was also performed on all conditions. The respondents were asked how long they had engaged in other activities while watching the program. Possible answer categories were less than 1 minute, between 1 and 5 minutes, between 5 and 10 minutes, between 10 and 15 minutes, or for 15 minutes or more. Of the participants, 55% reported being engaged in other activities than watching the episode for one minute or less, 33% between 1 and 5 minutes, 8% between 5 and 10 minutes, 2% between 10 and 15 minutes, and 2% declared having engaged in other activities for 15 minutes or more. Put simply, 88% of the participants had been engaged in multitasking for no longer than 5 minutes while watching one of the episodes.

Levels of correct recall of placements were compared among the different levels of multitasking (Table 5). According to H2, we expected a negative relationship between the duration of multitasking and brand placement recall. That would mean, for example, that we would expect participants who had been engaged in multitasking for less than 1 minute to show better brand placement recall performance than those with multitasking engagement of between 1 and 5 minutes, 5 and 10 minutes, 10 and 15 minutes, and more than 15 minutes. In other words, we would expect to see decreasing percentage values the longer the time span of their multitasking.

Table 5 – Correct recall of the participants with different levels of multitasking

Brand	Stimulus	Time multitasking (minutes)					χ^2	df	p
		t < 1	1 ≤ t < 5	5 ≤ t < 10	10 ≤ t < 15	15 ≤ t			
Fiji	TBBT S07E21	37% N = 379	46% N = 242	39% N = 44	22% N = 18	47% N = 17	7.978	4	.092
	TBBT S08E12	49% N = 325	55% N = 150	35% N = 32	47% N = 15	25% N = 4	5.581	4	.233
	F S10E10	38% N = 212	37% N = 188	39% N = 36	42% N = 12	40% N = 5	0.140	4	.998
Smart	TBBT S08E12	20% N = 325	19% N = 150	22% N = 32	7% N = 15	0% N = 4	2.778	4	.596
Icelandic	TBBT S07E21	14% N = 379	17% N = 242	16% N = 44	0% N = 18	12% N = 17	4.566	4	.335
	TBBT S08E08	14% N = 315	20% N = 178	14% N = 51	0% N = 10	0% N = 6	5.756	4	.218
	TBBT S08E12	7% N = 325	7% N = 150	13% N = 32	0% N = 15	0% N = 4	2.822	4	.588
Nut Thins	TBBT S07E21	25% N = 379	24% N = 242	30% N = 44	33% N = 18	35% N = 17	2.277	4	.685
Rice Thins	TBBT S08E08	32% N = 315	38% N = 178	35% N = 51	10% N = 10	17% N = 6	5.339	4	.254
Petre Devos	TBBT S08E08	7% N = 315	7% N = 178	2% N = 51	20% N = 10	0% N = 6	5.257	4	.262

Note: TBBT = The Big Bang Theory; F = Friends; S = season; E = episode

Table 5 shows that in all conditions, there were no significant relationships. We therefore reject H2. In three situations (Fiji: TBBT S07E21, Icelandic: TBBT S07E21, Rice Thins: TBBT S08E08), the level of correct recall was even smaller for viewers engaging in multitasking for less than 1 minute than for viewers doing so between 1 and 5 minutes.

The comparison of multitasking engagement between viewers watching programs without subtitles and those watching with subtitles (Table 6) indicated a significant increase in multitasking when subtitles are not used ($\chi^2(1, N = 2302) = 4.60, p = 0.032$). We therefore confirm H3.

Table 6 – Multitasking and the presence of subtitles

Multitasking	Without subtitles (N = 1847)	With subtitles (N = 455)	Total (N = 2302)
Yes	48%	43%	47%
No	52%	57%	53%

$\chi^2(1, N = 2302) = 4.599, p = .032.$

We expected viewers who watched programs in the original version with subtitles to engage less in multitasking than those who did so with no subtitles. However, it turned out that multitasking engagement was independent of the presence of subtitles when viewers watched the program in its original version ($\chi^2(1, N = 745) = 1.75, p = 0.186$) (Table 7). Hence, we rejected H4.

Table 7 – Multitasking between viewers of OV and of OV with subtitles

Multitasking	OV + Subtitles (N = 413)	OV (N = 332)	Total (N = 745)
Yes	43%	48%	46%
No	57%	52%	54%

$$\chi^2(1, N = 745) = 1.747, p = .186.$$

According to H5, we expected viewers watching programs with subtitles to engage less in multitasking than those watching dubbed versions of the programs with no subtitles. Table 8 shows a statistically significant relationship ($\chi^2(1, N = 1970) = 4.43, p = 0.035$). H5 is therefore confirmed.

Table 8 – Multitasking between viewers of programs with subtitles and viewers of dubbed programs

Multitasking	With subtitles (N = 455)	Dubbed (N = 1515)	Total (N = 1970)
Yes	43%	48%	47%
No	57%	52%	53%

$$\chi^2(1, N = 1970) = 4.427, p = .035.$$

According to H6, viewers watching programs in their original versions with no subtitles will engage less in multitasking than viewers watching dubbed versions of the programs with no subtitles. Table 9 shows that we had to reject this hypothesis ($\chi^2(1, N = 1847) = 0.0004, p = 0.985$).

Table 9 – Multitasking between viewers of OV and of dubbed versions

Multitasking	OV (N = 332)	Dubbed (N = 1515)	Total (N = 1847)
Yes	48%	48%	48%
No	52%	52%	52%

$\chi^2 (1, N = 1847) = 0.0004, p = .985.$

4.8 Study 2: Observing exposure to sitcom episodes in a home environment

Most people remember correctly if they have performed a particular action in the last 20 minutes during television viewing. But when it comes to how long or how many times they have performed a particular action, the risk of under- or overreporting is much higher (Bechtel, Achelpohl, and Akers 1972). For this reason, we ran a parallel observation study on a subsample of 294 participants. For this group of volunteers, an action camera (59 mm × 41 mm × 25 mm) was used to record them while they watched their chosen episode.

Design

We intentionally used the method of observation to detect false-positive brand recall. That happened when a participant was not looking at the screen during the only time that a placement appeared but still answered that they remembered seeing that brand in the program. Therefore, the sound of the recording was used later to synchronize the recorded video with the episode watched, and during observations, the periods when participants were not looking at the screen were tabulated and matched with the timestamps of when the placements appeared.

Measurement

Action cameras were chosen for this experiment due to their small size, their ease of operation, and the ability to cover or turn off any lights or screen that could call attention to the camera.

These action cameras have been used in other recent studies (Lofthus and Frers 2021; Vannini and Stewart 2017) and proven to be valid research instruments. The rather unobtrusive presence of a small action camera, in comparison to other camera settings, contributed to the high degree of external validity of the study. The recruiters could either take a camera to the participants or use the rear camera of a smartphone; in this case, the recruiters were instructed to use their own smartphones, so the participants would keep theirs, thereby providing the most natural viewing environment. Cameras were placed either under, above or on one of the sides of the screen in a position where it could view the hands, arms, and face of the participant while not blocking any part of the screen. The position close to the screen was also crucial for sound recording. Once the recording session had finished, the recruiter delivered the video file or the camera for further analysis of the videos.

4.9 Results

The average time that the participants engaged in multitasking or looking away from the screen was 2 minutes and 3 seconds ($n = 274$). Since the episodes were of different lengths, the average time of multitasking was also calculated proportionally, resulting in 10% of the total time watching. Of the 274 participants, 79 (29%) observed via action camera did not look away from the screen while watching. After excluding these, we computed the average time that the participants had engaged in multitasking. The average time of distraction for the 195 participants was 2 minutes and 53 seconds (14%).

Cross-checking the answers with how long the participants did not look at the screen while watching showed that 39 respondents (13%) reported a different level of duration. There were 12 participants (4%) who did not look at the screen for a longer time than they had estimated, and 27 participants (9%) engaged less in multitasking than they had estimated. Overall, Study 2 showed that the differences between the self-reporting and the observations were tolerable.

The other objective of the video observations was to spot false positive brand recall. In other words, if a participant who had signaled seeing a placement during the program but had not been looking at the screen when the placement was actually being shown, a false positive brand recall was generated. Overall, no false positives could be identified among the participants (N = 274) observed.

4.10 Discussion, limitations, and future research

Multitasking did not prevent the participants from correctly recalling brand placements. The hypothesized distraction effect (i.e., time spent looking not at the screen) could not be confirmed. A similar result was found when the time spent on multitasking was taken in consideration. Most viewers spent between 1 and 5 minutes not looking at the screen. Interestingly, these viewers reported higher levels of correct brand recall than the viewers who had looked away for less than 1 minute. It would be a worthwhile endeavor to investigate the content that viewers consume while using their smartphones when watching a show or movie in parallel. If the content consumed on the smartphone has any relation to the show or movie that is being watched in parallel, higher overall program involvement and attention would be expected (Segijn et al. 2020).

Future studies with narrower time intervals could detect potential distraction effects with higher precision. However, the results indicate that not looking at the screen for an interval of between 1 and 5 minutes does not affect product placement effectiveness.

The results of this study differ from those of previous studies on multiscreening and advertising effectiveness, where recall of commercials decreased with multiscreening (Segijn et al. 2017a) or where multi-screening was a negative moderator to brand recall (Grzyb, Dolinski, and Kozłowska 2018; Segijn, Voorveld, and Smit 2017), also when brands appeared via product placements (Gunawardena and Waiguny 2014).

The second part of this study focused on levels of multitasking and whether the presence of subtitles, as well as different forms of audiovisual translation, influences viewers' level of multitasking. Of the participants (N = 2302), 47% stated that they did engage in multitasking while watching the episode. We assume that this number would be higher in natural situations, not to mention with films or shows longer than 20 minutes. On the other hand, taking part in a scientific study may have affected the overall attention and alertness of the participants, leading to them engaging less in secondary activities. Also, although the participants were allowed to choose one out of four episodes, the feeling of forced exposure cannot be ruled out categorically. In contrast, when content is freely chosen by an audience, higher program involvement can be expected, leading to lower levels of multitasking and multiscreening (Segijn, Voorveld, and Smit 2017).

Considering AVT and multitasking, the study showed a decrease in levels of multitasking when viewers watched the content with subtitles (43%), compared to viewers seeing the program without subtitles (48%). The necessity for subtitle reading increased attentional inertia to the content. The comparison between the dubbed version and the original version without subtitles did not result in significant differences in multitasking activities. The scenario in which viewers watched a dubbed version of the show in a language that they did not understand in addition to subtitles in a language that they could understand resulted in a much lower level of multitasking (36%). However, with the sample size being much smaller than in the other groups, the difference obtained was not as statistically significant. A more equal distribution of sample sizes per group would have been favorable. It has to be noted that the scenario in which a program is dubbed into a language that is not spoken by the viewer, which then requires subtitles in order for the viewer to understand the spoken dialog, is not as common as selecting a dubbed version that is already in the understood language or keeping the spoken dialog in its original version and adding subtitles in a language that the viewer understands.

The motivation for Study 2 was to identify false positive brand recall (i.e., participants reporting having seen a brand on the program, although they were not looking at the screen at the very moment when the brand was depicted). Not a single false positive was detected, underlining the reliability of the design of Study 1.

It would have been interesting to have used mobile eye-tracking devices to investigate visual attention with higher precision. However, wearing eye-tracking glasses while watching a sitcom episode could diminish the validity of the study. Using the camera recordings to infer the eye movements of the participants while watching is still in its infancy (Boerman, Van Reijmersdal, and Neijens 2015; Zdarsky, Treue, and Esghaei 2021). Future studies could also include other types of observation to test how precise are the answers of participants on multitasking activities. Perhaps a method where they are secretly observed by recruiters before being informed about the experiment – of course with an opt-out after being informed – could be an option.

Another aspect that could be further analyzed is the size of the screen used by the viewers. Since participants were free to choose which platform and type of screen to watch the programs, as well as the distance to those screens, this combination could also have an impact on the results (Bressoud, Lehu, and Russell 2010).

4.11 Implications

The first main outcome of this study is that multiscreening or multitasking while watching shows or movies should not be of concern for advertisers investing in product placement. If the viewer does not spend most of their time looking at the screen while watching the show, the brands placed on the program will still be effectively recalled.

Multiscreening is often seen as a distraction and a hindrance to the benefit of brand placements. However, multiscreening could also be exploited for the benefit of advertisers and content

producers. For example, audio watermarking could be used to play out brand advertisements on the viewers' smartphones. Audio watermarking is a technique through which sound signals are added to audiovisual content, and once that content is played on the first screen (i.e., the television), the second screen will receive a sound signal that cannot be perceived by the human ear, and these sound signals would activate the retrieval of enriched content on the second screen (Arnold et al. 2014; Hua et al. 2016). This way, cross-screen brand promotion would become possible. This means that even when a viewer is not paying attention to the program and misses the placed product, it is still possible to expose this viewer to the product or ads in case she is looking at her smartphone or tablet at that moment, increasing chances of effective reach.

The findings concerning whether the use of subtitles when the viewer does not understand a program's spoken dialogs makes a difference to the level of the viewer's multitasking, in comparison to viewers watching a version that the spoken dialog (either original or dubbed) that is understandable to them, revealed a slight decrease in multitasking when subtitle reading was necessary.

In general, the implication of this study for advertisers is that they should not refrain from placing internationally known brands on internationally distributed shows or movies in different languages. This is because, no matter which AVT format is used by the audience, the effect differences of multitasking or product placement effectiveness are minimal to non-existent. Streaming services no longer wait for the dubbing process to be completed, and the release date of content in different countries is very often the same; moreover, dubbed versions are sometimes completed and made available later.

Whether an international foreign language series or film will be distributed to or be available on streaming platforms in English-speaking countries, or vice versa, advertisers would still be

advised to make use of placement opportunities—even more, so once these placements can be combined with the activation of further content available for a second screen.

For media planners in sometimes placement-saturated media markets such as the United States and the United Kingdom, searching for product placement prospects in productions made in other countries might prove rewarding. The reasons for this include the fact that product placement in such productions might be considerably less expensive. Moreover, the popularity of streaming platforms has led to an explosion in the number of successful foreign-language movies and series (Bolaños-García-Escribano, Díaz-Cintas, and Massidda 2021), thereby increasing the chances of foreign-language programs reaching larger audiences than previously. In addition, the issue of audiences only having access to a dubbed version or version with subtitles will not alter the effectiveness of product placement.

On the theoretical aspects, the present study can join the body of research covering not only multitasking but also attention levels and limited capacity in terms of interchanging activities in natural environments where the activities are not tasks to be performed, as much of the research in the field covers (Beuckels et al. 2021). Viewers not being fully attentive to content and still being able to remember products on equal levels as fully attentive viewers, whether these levels were lower or higher is a quite an interesting outcome that could indicate improvement in the multitasking performance of the populations.

The video observation of the participants brings new perspectives for behavioral research where participants can be observed in their own homes, but not necessarily in front of their computers, as many panels do to take advantage of the webcams available, with little interference of measurement equipment. Overall results of participants recorded in video did not differ from the respondents who watched the program without an action cam in front of their TV. This experiment also indicates that self-reported levels of multitasking by

respondents can be tested with the methodology used of the video recordings and do carry an acceptable level of precision that future research can further investigate.

4.12 References

- Anderson, D. R. 2017. Attention and awareness. In *The international encyclopedia of media effects*, ed. P. Rössler, C. A. Hoffner and L. van Zoonen, vol. 23, 1–11. Hoboken, NJ, USA: John Wiley & Sons, Inc.
- Andriasova, A. 2006. They placed, i saw, i was conquered: Evaluating the effects of persuasion knowledge and prominence of brand placement on viewers' attitudes and behavior. Doctoral Dissertation - University of Texas, University of Texas.
- Auty, S., and C. Lewis. 2004. Exploring children's choice: The reminder effect of product placement. *Psychology and Marketing* 21, no. 9: 697–713. <https://doi.org/10.1002/mar.20025>.
- Avery, R. J., and R. Ferraro. 2000. Verisimilitude or advertising? Brand appearances on prime-time television. *Journal of Consumer Affairs* 34, no. 2: 217–44. <https://doi.org/10.1111/j.1745-6606.2000.tb00092.x>.
- Babin, B. J., J.-L. Herrmann, M. Kacha, and L. A. Babin. 2021. The effectiveness of brand placements: A meta-analytic synthesis. *International Journal of Research in Marketing* 38, no. 4: 1017–33. <https://doi.org/10.1016/j.ijresmar.2021.01.003>.
- Balasubramanian, S. K., J. A. Karrh, and H. Patwardhan. 2006. Audience response to product placements: An integrative framework. *Journal of Advertising* 35, no. 3: 115–41. <https://doi.org/10.2753/JOA0091-3367350308>.
- Bechtel, R. B., C. Achelpohl, and R. Akers. 1972. Correlates between observed behavior and questionnaire responses in television behavior. In *Television and social behavior: Television*

- in day-to-day life: Patterns of use*, ed. E. A. Rubenstein, G. A. Comstock and J. P. Murray, 274–344. United States: National Institute of Mental Health.
- Beuckels, E., G. Ye, L. Hudders, and V. Cauberghe. 2021. Media multitasking: A bibliometric approach and literature review. *Frontiers in Psychology* 12: 623643. <https://doi.org/10.3389/fpsyg.2021.623643>.
- Bisson, M.-J., W. J. B. van Heuven, K. Conklin, and R. J. Tunney. 2014. Processing of native and foreign language subtitles in films: An eye tracking study. *Applied Psycholinguistics* 35, no. 02: 399–418. <https://doi.org/10.1017/S0142716412000434>.
- Boerman, S. C. 2014. This program contains product placement: Effects of sponsorship disclosure on television viewers' responses. Doctoral Dissertation, University of Amsterdam.
- Boerman, S. C., E. A. Van Reijmersdal, and P. C. Neijens. 2015. Using eye tracking to understand the effects of brand placement disclosure types in television programs. *Journal of Advertising* 44, no. 3: 196–207. <https://doi.org/10.1080/00913367.2014.967423>.
- Bolaños-García-Escribano, A., J. Díaz-Cintas, and S. Massidda. 2021. Latest advancements in audiovisual translation education. *The Interpreter and Translator Trainer* 15, no. 1: 1–12. <https://doi.org/10.1080/1750399X.2021.1880308>.
- Brennan, I., K. M. Dubas, and L. A. Babin. 1999. The influence of product-placement type & exposure time on product-placement recognition. *International Journal of Advertising* 18, no. 3: 323–37. <https://doi.org/10.1080/02650487.1999.11104764>.
- Bressoud, E., J.-M. Lehu, and C. A. Russell. 2010. The product well placed: The relative impact of placement and audience characteristics on placement recall. *Journal of Advertising Research* 50, no. 4: 374–85. <https://doi.org/10.2501/S0021849910091622>.

- Brühlmann, F., S. Petralito, L. F. Aeschbach, and K. Opwis. 2020. The quality of data collected online: An investigation of careless responding in a crowdsourced sample. *Methods in Psychology* 2: 100022. <https://doi.org/10.1016/j.metip.2020.100022>.
- Burroughs, B. 2018. House of netflix: Streaming media and digital lore. *Popular Communication* 5, no. 2: 1–17. <https://doi.org/10.1080/15405702.2017.1343948>.
- Chan, F. F. Y., B. Lowe, and D. Petrovici. 2017. Young adults' perceptions of product placement in films: An exploratory comparison between the united kingdom and hong kong. *Journal of Marketing Communications* 23, no. 3: 311–28. <https://doi.org/10.1080/13527266.2015.1061036>.
- Cowley, E., and C. Barron. 2008. When product placement goes wrong: The effects of program liking and placement prominence. *Journal of Advertising* 37, no. 1: 89–98. <https://doi.org/10.2753/JOA0091-3367370107>.
- D'Astous, A., and F. Chartier. 2000. A study of factors affecting consumer evaluations and memory of product placements in movies. *Journal of Current Issues & Research in Advertising* 22, no. 2: 31–40. <https://doi.org/10.1080/10641734.2000.10505106>.
- Delorme, D. E., and L. N. Reid. 1999. Moviegoers' experiences and interpretations of brands in films revisited. *Journal of Advertising* 28, no. 2: 71–95. <https://doi.org/10.1080/00913367.1999.10673584>.
- Díaz-Cintas, J. 1999. Dubbing or subtitling: The eternal dilemma. *Perspectives* 7, no. 1: 31–40. <https://doi.org/10.1080/0907676X.1999.9961346>.
- Fox, J. R., B. Park, and A. Lang. 2007. When available resources become negative resources: The effects of cognitive overload on memory sensitivity and criterion bias. *Communication Research* 34, no. 3: 277–96. <https://doi.org/10.1177/0093650207300429>.
- Gambier, Y. 2003. Introduction. *The Translator* 9, no. 2: 171–89. <https://doi.org/10.1080/13556509.2003.10799152>.

- Gregorio, F. de, and Y. Sung. 2010. Understanding attitudes toward and behaviors in response to product placement. *Journal of Advertising* 39, no. 1: 83–96. <https://doi.org/10.2753/JOA0091-3367390106>.
- Grzyb, T., D. Dolinski, and A. Kozłowska. 2018. Is product placement really worse than traditional commercials? Cognitive load and recalling of advertised brands. *Frontiers in Psychology* 9: 1519. <https://doi.org/10.3389/fpsyg.2018.01519>.
- Gunawardena, T., and M. K. Waiguny. 2014. So many things to do! How multitasking affects memory and attitude for product and brand placements. *Australasian Marketing Journal* 22, no. 4: 288–95. <https://doi.org/10.1016/j.ausmj.2014.09.001>.
- Guo, F., G. Ye, L. Hudders, W. Lv, M. Li, and V. G. Duffy. 2019. Product placement in mass media: A review and bibliometric analysis. *Journal of Advertising* 48, no. 2: 215–31. <https://doi.org/10.1080/00913367.2019.1567409>.
- Gupta, P. B., and K. R. Lord. 1998. Product placement in movies: The effect of prominence and mode on audience recall. *Journal of Current Issues & Research in Advertising* 20, no. 1: 47–59. <https://doi.org/10.1080/10641734.1998.10505076>.
- Gupta, P. B., and S. J. Gould. 1997. Consumers' perceptions of the ethics and acceptability of product placements in movies: Product category and individual differences. *Journal of Current Issues & Research in Advertising* 19, no. 1: 37–50. <https://doi.org/10.1080/10641734.1997.10505056>.
- Hawkins, R. P., S. Pingree, J. Hitchon, B. Radler, B. W. Gorham, L. Kahlor, E. Gilligan, R. C. Serlin, T. Schmidt, P. Kannaovakun, et al. 2005. What produces television attention and attention style? Genre, situation, and individual differences as predictors. *Human Communication Research* 31, no. 1: 162–87. <https://doi.org/10.1111/j.1468-2958.2005.tb00868.x>.

- Ho, V. T. 2021. Advertising avoidance: A literature review. *Independent Journal of Management & Production* 12, no. 1: 185–200. <https://doi.org/10.14807/ijmp.v12i1.1264>.
- Homer, P. M. 2009. Product placements - the impact of placement type and repetition on attitude. *Journal of Advertising* 38, no. 3: 21–32. <https://doi.org/10.2753/JOA0091-3367380302>.
- Jin, C., and J. Villegas. 2007. The effect of the placement of the product in film: Consumers' emotional responses to humorous stimuli and prior brand evaluation. *Journal of Targeting, Measurement and Analysis for Marketing* 15, no. 4: 244–55. <https://doi.org/10.1057/palgrave.jt.5750049>.
- Johnstone, E., and C. A. Dodd. 2000. Placements as mediators of brand salience within a UK cinema audience. *Journal of Marketing Communications* 6, no. 3: 141–58. <https://doi.org/10.1080/13527260050118649>.
- Kazakova, S., V. Cauberghe, L. Hudders, and C. Labyt. 2016. The impact of media multitasking on the cognitive and attitudinal responses to television commercials: The moderating role of type of advertising appeal. *Journal of Advertising* 45, no. 4: 403–16. <https://doi.org/10.1080/00913367.2016.1183244>.
- Kilborn, R. 1993. 'speak my language': Current attitudes to television subtitling and dubbing. *Media, Culture & Society* 15, no. 4: 641–60. <https://doi.org/10.1177/016344393015004007>.
- Koolstra, C. M., A. L. Peeters, and H. Spinhof. 2002. The pros and cons of dubbing and subtitling. *European Journal of Communication* 17, no. 3: 325–54. <https://doi.org/10.1177/0267323102017003694>.
- La Ferle, C., and S. Edwards. 2006. Product placement: How brands appear on television. *Journal of Advertising* 35, no. 4: 65–86. <https://doi.org/10.2753/JOA0091-3367350405>.
- Lang, A. 2000. The limited capacity model of mediated message processing. *Journal of Communication* 50, no. 1: 46–70. <https://doi.org/10.1111/j.1460-2466.2000.tb02833.x>.

- Lång, J., H. Vrzakova, and L. Mehtätalo. 2021. Modelling gaze behaviour in subtitle processing. *Journal of Audiovisual Translation* 4, no. 1: 71–95. <https://doi.org/10.47476/jat.v4i1.2021.104>.
- Lee, M., B. Roskos, and D. R. Ewoldsen. 2013. The impact of subtitles on comprehension of narrative film. *Media Psychology* 16, no. 4: 412–40. <https://doi.org/10.1080/15213269.2013.826119>.
- Lehu, J.-M., and E. Bressoud. 2008. Effectiveness of brand placement: New insights about viewers. *Journal of Business Research* 61, no. 10: 1083–90. <https://doi.org/10.1016/j.jbusres.2007.09.015>.
- Lewis, J. 1971. *The total film maker*. United States: Random House.
- Matthes, J., W. Wirth, C. Schemer, and N. Pachoud. 2012. Tiptoe or tackle? The role of product placement prominence and program involvement for the mere exposure effect. *Journal of Current Issues & Research in Advertising* 33, no. 2: 129–45. <https://doi.org/10.1080/10641734.2012.700625>.
- Mitchell, T. A., and M. R. Nelson. 2018. Brand placement in emotional scenes: Excitation transfer or direct affect transfer? *Journal of Current Issues & Research in Advertising* 39, no. 2: 206–19. <https://doi.org/10.1080/10641734.2018.1428252>.
- Naderer, B., J. Matthes, and I. Spielvogel. 2017. How brands appear in children's movies. A systematic content analysis of the past 25 years. *International Journal of Advertising* 57, no. 4: 1–21. <https://doi.org/10.1080/02650487.2017.1410000>.
- Nebenzahl, I. D., and E. Secunda. 1993. Consumers' attitudes toward product placement in movies. *International Journal of Advertising* 12, no. 1: 1–11. <https://doi.org/10.1080/02650487.1993.11104518>.

- Newell, J., C. T. Salmon, and S. Chang. 2006. The hidden history of product placement. *Journal of Broadcasting & Electronic Media* 50, no. 4: 575–94. https://doi.org/10.1207/s15506878jobem5004_1.
- Perego, E., F. Del Missier, M. Porta, and M. Mosconi. 2010. The cognitive effectiveness of subtitle processing. *Media Psychology* 13, no. 3: 243–72. <https://doi.org/10.1080/15213269.2010.502873>.
- Peters, G. 2022. “Netflix to Partner With Microsoft on New Ad Supported Subscription Plan.” News release. 2022. Accessed August 16, 2022. <https://about.netflix.com/en/news/netflix-partners-with-microsoft>.
- PQ Media. 2022. Global product placement forecast 2022-2026, PQ Media LLC, Stamford, CT. <https://www.pqmedia.com/product/global-product-placement-forecast-2022-2026/>. Accessed April 2023.
- Ronft, S., M. G. Friedrich, and M. Sofiullah. 2023. Effect of product placement labeling on visual product and brand reception – an empirical eye tracking study. *Journal of Marketing Communications*. <https://doi.org/10.1080/13527266.2023.2275133>.
- Russell, C. A. 2002. Investigating the effectiveness of product placements in television shows: The role of modality and plot connection congruence on brand memory and attitude. *Journal of Consumer Research* 29, no. 3: 306–18. <https://doi.org/10.1086/344432>.
- Russell, C. A., and B. B. Stern. 2006. Consumers, characters, and products: A balance model of sitcom product placement effects. *Journal of Advertising* 35, no. 1: 7–21. <https://doi.org/10.2753/JOA0091-3367350101>.
- Segijn, C. M., and M. Eisend. 2019. A meta-analysis into multiscreening and advertising effectiveness: Direct effects, moderators, and underlying mechanisms. *Journal of Advertising* 48, no. 3: 313–32. <https://doi.org/10.1080/00913367.2019.1604009>.

- Segijn, C. M., T. Araujo, H. A. M. Voorveld, and E. G. Smit. 2020. Related multiscreening as a strategy to retain audiences and increase persuasion during a commercial break. *Journal of Broadcasting & Electronic Media* 64, no. 1: 41–61. <https://doi.org/10.1080/08838151.2020.1718962>.
- Segijn, C. M., H. A. Voorveld, and E. G. Smit. 2017. How related multiscreening could positively affect advertising outcomes. *Journal of Advertising* 46, no. 4: 455–72. <https://doi.org/10.1080/00913367.2017.1372233>.
- Segijn, C. M., H. A. Voorveld, and E. G. Smit. 2016. The underlying mechanisms of multiscreening effects. *Journal of Advertising* 45, no. 4: 391–402. <https://doi.org/10.1080/00913367.2016.1172386>.
- Smink, A. R., E. A. Van Reijmersdal, and S. C. Boerman. 2017. Effects of brand placement disclosures: An eye tracking study into the effects of disclosures and the moderating role of brand familiarity. In *Advances in advertising research viii*, ed. V. Zabkar and M. Eisend, 85–96. Wiesbaden: Springer Fachmedien Wiesbaden.
- Sun, S., B. Wojdyski, M. T. Binford, and C. Ramachandran. 2022. How multitasking during video content decreases ad effectiveness: The roles of task relevance, video involvement, and visual attention. *Journal of Promotion Management* 28, no. 1: 91–109. <https://doi.org/10.1080/10496491.2021.1955081>.
- Szarkowska, A., and O. Gerber-Morón. 2018. Viewers can keep up with fast subtitles: Evidence from eye movements. *PloS one* 13, no. 6: e0199331. <https://doi.org/10.1371/journal.pone.0199331>.
- van Cauwenberge, A., G. Schaap, and R. van Roy. 2014. “Tv no longer commands our full attention”: Effects of second-screen viewing and task relevance on cognitive load and learning from news. *Computers in Human Behavior* 38: 100–109. <https://doi.org/10.1016/j.chb.2014.05.021>.

- Van Reijmersdal, E. A. 2015. Disclosing brand placements in movies: Effects of disclosure type and movie involvement on attitudes. *Journal of Media Psychology* 28, no. 2: 78–87. <https://doi.org/10.1027/1864-1105/a000158>.
- Van Reijmersdal, E. A., P. Neijens, and E. G. Smit. 2009. A new branch of advertising. *Journal of Advertising Research* 49, no. 4: 429–49. <https://doi.org/10.2501/S0021849909091065>.
- Yang, M., and D. R. Roskos-Ewoldsen. 2007. The effectiveness of brand placements in the movies: Levels of placements, explicit and implicit memory, and brand-choice behavior. *Journal of Communication* 57, no. 3: 469–89. <https://doi.org/10.1111/j.1460-2466.2007.00353.x>.
- Yoon, S., Y. K. Choi, and S. Song. 2011. When intrusive can be likable - product placement effects on multitasking consumers. *Journal of Advertising* 40, no. 2: 63–75. <https://doi.org/10.2307/23048705>.
- Zdarsky, N., S. Treue, and M. Esghaei. 2021. A deep learning-based approach to video-based eye tracking for human psychophysics. *Frontiers in human neuroscience* 15: 685830. <https://doi.org/10.3389/fnhum.2021.685830>.

5 General Findings, Conclusions, Practical Implications and Future Research

5.1 Findings

The four chapters of this dissertation were originally written independently as articles for publication. Moreover, each chapter has its own structure, including its own abstract, introduction, methodology, results, discussion, and reference list.

The articles presented here as Chapters 1 and 2 concern the results of the same systematic literature search of key databases. Of the 1711 entries found in the three databases (Web of Science, Scopus, and EBSCO), 517 were eligible publications related to product placement in audiovisual content. From these 517, 107 publications were initially selected based on rankings of citations, while further publications were chosen using the snowball sampling method (Beuckels et al. 2021) or because they were published in the five years prior to this research. These publications were all retrieved and individually analyzed to identify the studies, hypotheses, research questions, and/or results. The findings of the analysis were divided into the two original articles and, subsequently, these two chapters of the dissertation as follows.

Chapter 1: Not all 107 analyzed publications featured studies or experiments concerning the effects or variables associated with product placement. However, 80 of the publications did feature such studies or experiments, and 70 of them were centered on the effects of product placement.

Of the 393 research items (i.e., hypotheses, research questions, or results), 320 included effects. Some effects conveying the same concept appeared under different names in different publications, so they were grouped and considered as the same effect. The total number of effects identified was 11.

The most commonly observed effect was brand attitude, which translates into the presence of product placement altering the viewer's attitude in terms of liking a brand more or less than before the exposure (Van Reijmersdal 2015). This effect was present in 133 research items in 44 publications. The next most common effect was brand memory or brand recall, which entails viewers recalling seeing the brand featured in the program (Cholinski 2012). It was found in 126 research items divided spread into 42 publications.

A list of all the extracted publications, including the featured effects and the number of research items, is provided in Chapter 1.

Chapter 2: Among the same 80 studies analyzed in Chapter 1, 74 contained research items centered on the drivers of the effectiveness of product placement.

Some 57 variables were identified in the 417 hypotheses, research questions, and results. These 57 variables were divided into two categories: 33 variables stemming from the characteristics of the audience and 24 variables pertaining to the content, medium, or placement.

In the viewer-originated category, viewers' attitudes, opinions, and resistance concerning the practice of product placement represented the variable found in the highest number of publications (19) and dimensions of interest (64), followed by persuasion knowledge on the ranking of research items (41) or attitude toward the content if the ranking would prioritize the number of publications containing the variable (14).

With regard to the content-originated category, 24 variables originating at the content features prominence of placement as the most studied factor in the analyzed publications, appearing in 17 publications and 50 dimensions of interest.

Tables highlighting all the identified factors along with their corresponding operationalizations, frequencies of detection in the publications, and the sources in which they appeared are provided in Chapter 2.

Chapter 3: The results concerning the recall of brands remained constant throughout the different conditions and different products. Punctual percentual differences were identified, although reversed results appeared for different products and the Chi-square tests revealed no statistically significant differences. The presence of subtitles did not significantly alter viewers' brand recall.

Brand recall also remained stable among viewers of programs in the original, dubbed, and subtitled versions.

Chapter 4: The results presented in this chapter are divided into several parts. The first set of results compared brand recall of placements between viewers who declared that they engaged in other activities while watching the program and viewers who did not multitask. The levels of brand recall did not differ significantly between these two groups.

The time spent not looking at the screen was the next aspect evaluated in the experiment. Here, no significant difference in the levels of brand recall was identified between the viewers who did not look at the screen for less than 1 minute and the viewers who looked away from the screen for between 1 and 5 minutes during programs of around 20 minutes in length. The groups who admitted to engaging in other activities for more than 5 minutes were associated with some discrepancies in their levels of recall. Nevertheless, these groups included only a few individuals, and as the groups who reported spending less time multitasking were more sizable, a direct comparison is not recommended.

The different versions of the program were tested with regard to their influence on multitasking behavior. The presence of subtitles decreased viewers' levels of multitasking when compared with those of viewers who watched the program in its original or dubbed versions with no subtitles added to enhance comprehension of the spoken dialogues. The levels of multitasking remained constant between viewers of the dubbed and original versions of the program.

The video analysis revealed reliable answers from the respondents concerning their brand recall. Indeed, no false positives, whereby respondents declared seeing a brand that appeared at a moment that they were looking away from the screen, could be identified.

Among the 274 respondents analyzed in the video recordings, the average time spent not looking at the screen during the program was 2 minutes and 3 seconds, which amounts to around 10% of the total duration of the program. When the 79 respondents who did not look away during the program (29%) were excluded, the average time spent multitasking and so not looking at the screen of the remaining respondents so was 2 minutes and 53 seconds or 14% (n = 195) of the total running time of the program.

The video observations also allowed for the comparison of respondents' answers concerning the time spent not looking at the screen with their actual non-looking time. Some 39 (14%, n = 274) reported a different time interval than was observed, 12 (4%, n = 274) did not look at the screen for a longer time than they estimated, and 27 (10%, n = 274) engaged in less multitasking than they estimated.

5.2 Conclusions

The main objective of this dissertation was to investigate the relationship between the AVT versions, or audiovisual translation formats and product placement effectiveness, as well as the role of multitasking in this relationship.

A literature review divided into two phases revealed that product placement has been investigated in many forms. Some of these forms could be categorized as effectiveness or behaviors marketers would expect from audiences when choosing product placement as a strategy for their brands, while others are not exactly what practitioners in this area might be looking for or interested in but had also been the subjects of experiments and publications.

Other areas covered by previous research concerning product or brand placement focused not on the effects themselves but rather on what could moderate or alter those effects. These factors were characteristics of viewers or aspects pertaining to the content or medium.

This literature review revealed research gaps concerning multitasking and AVT forms as influencing factors with regard to the effectiveness of product placement. First, with the expansion of foreign language content on streaming platforms, a growing number of viewers will watch movies and programs not only featuring their original spoken dialogue but also either dubbed into the language that those viewers understand or including subtitles in that language. Whether or not this plays a role in the effectiveness of product placement has not yet been thoroughly examined.

The second factor not yet fully investigated concerns whether multitasking and multiscreening also have any influence on the effectiveness of product placement with regard to audiences. Given the massification of smartphones and tablets, it is important to revisit both multitasking behavior during television viewing and its possible outcomes in different aspects.

The results of the conducted experiment indicated constant levels of brand recall among viewers who watched a program in its original, dubbed, or subtitled versions. Aside from some percentual differences in correct recall between viewers who were exposed to different versions of the same program, no statistically significant variations were detected.

The experimental results also revealed constant levels of recall of brands among viewers who admitted to engaging in other activities while watching the program and viewers who reported that they did not do anything else while watching the program. Further investigation of the time spent multitasking showed no significant difference in recall among viewers who declared not engaging in any other activities or only doing so for 1 minute or less during a 20-minute

program and viewers who reported doing other activities for between 1 and 5 minutes during the same 20-minute show.

In terms of the AVT methods and multitasking, the experiment indicated that viewers who watched the program with subtitles engaged less in other activities while watching it when compared with viewers who watched the program without subtitles. The need to read the subtitles seemed to increase viewers' attention inertia toward the content. No significant alterations were detected when comparing viewers of the original version with no subtitles and viewers who watched the dubbed version of the same show.

The video analysis indicated that viewers spent an average of 2 minutes and 3 seconds, or 10% of the total running time of the program, doing something else that caused them to not look at the screen, whether that be using a smartphone, tablet, or smartwatch (i.e., multiscreening) or eating, reading a book, drinking, playing with a pet, or even sleeping. The video analysis also improved confidence in the results, as no false positives were identified.

5.3 Practical implications

The two main outcomes of this research for marketers are that neither audiences watching different versions of movies and programs nor audiences demonstrating a reasonable amount of multitasking engagement during viewing should be considered reasons for concern. On the contrary, the findings of this research indicate even more possibilities for product placement.

In terms of different versions, viewers who watched programs in the original version, dubbed version, or version with subtitles exhibited similar levels of brand recall. This suggests that any risks brand managers might consider related to lower audience recall or reduced product placement effectiveness due to the use of subtitles when featuring their products in programs that will be distributed and watched in different versions are minimal to non-existent.

These findings highlight advantages of product placement in foreign-language content. For media planners in sometimes placement-saturated media markets such as the United States and the United Kingdom, searching for product placement prospects in productions made in other countries might prove rewarding. The reasons for this include the fact that product placement in such productions might be considerably less expensive. Moreover, the popularity of streaming platforms has led to an explosion in the number of successful foreign-language movies and series (Bolaños-García-Escribano, Díaz-Cintas, and Massidda 2021), thereby increasing the chances of foreign-language programs reaching larger audiences than previously. In addition, the issue of audiences only having access to a dubbed version or version with subtitles will not alter the effectiveness of product placement.

In support of the benefits of multitasking and multiscreening, the results of the experiment conducted in this research revealed no loss of effectiveness of product placement when audiences engaged in other activities while watching a program for a reasonable amount of time. In this case, up to 5 minutes of not looking at the screen during a 20-minute program was not enough to alter viewers' recall of the brands featured in the episodes. Not enough respondents looked away from the screen for longer periods to allow for a more precise analysis of the effects. However, the normal behavior analyzed showed that the vast majority of viewers stayed below that 5-minute margin. Furthermore, the video analysis of 274 respondents revealed that they did not look at the screen for an average of 2 minutes and 3 seconds.

Of course, if viewers are not looking at the screen at the moment when a brand is presented in its visual-only form, no recall will be achieved. Nevertheless, multiscreening creates opportunities for marketers. Some multiscreening occurs due to audiences looking for more information about the program they are watching. For media planners, this means that if information easily found about the program is somehow attached to more advertisements or to the brand itself, the chances of viewers being exposed to the brand or looking for more

information about the relevant product will increase, as will the chances of conversion, making it more likely that the viewer will purchase the product or service in question. Additionally, the search might be for the brand itself rather than for the program being watched. This is where it is crucial that further information or purchase options are easy to find for viewers watching a program on their smartphone who decide to search for a product they have just viewed in a scene.

This journey could be facilitated by product placements carrying synchronized advertisements with them. For example, when a product placement is accompanied by audio watermarking, a technique whereby sounds inaudible to the human ear are played and able to activate applications or retrieve content from the internet on another device such as a smartphone (Arnold et al. 2014), such content could be an advertisement for the placed brand that is shown directly on the viewer's smartphone. This feature would guarantee exposure to the brand for viewers who are multiscreening and so might miss the product placement if they are looking at their smartphone at the same time the brand is being shown on the primary screen. This could also facilitate the search for further information or the next step in the customer's journey toward making a purchase, a journey that began with exposure to the product placement of that brand in a movie or series that the viewer was watching.

5.4 Future research

Although the landscape of product placement research appears to be quite well defined and full, there are not only many factors that still to be considered in future studies in this area but also new factors that are changing the way audiovisual content is consumed, which need to be included in the body of product placement literature.

Both multitasking and multiscreening behaviors while watching television, streaming, or even at movie theatres represent a growing phenomenon that has yet to be fully measured. The same

is true of the consequences of consuming media products and how practitioners can take advantage of those consequences to enhance audience engagement.

In terms of measuring multitasking and multiscreening behaviors, several different forms of experiments could be conducted. The options here include the use of cameras to observe viewers in a laboratory or in their own home, relying on the self-reports of respondents, and even observers not informing viewers that they are being observed but later informing them while providing an opt-out disclaimer concerning the usage of information gathered during the experiment. Creating an observation environment that resembles viewers' reality as closely as possible represents a challenge that remains to be addressed.

More research regarding the link between AVT forms and the effectiveness of product placement is necessary. Numerous drivers that are viewer- or content-originated could serve as moderators by altering the factors investigated in this dissertation as well as the effectiveness or any other effects caused by exposure to product placement. For instance, viewers who are more accustomed to reading subtitles might present different results than viewers who are less familiar with the need to read subtitles in order to understand spoken dialogue. This is just an example of at least 57 drivers and 11 effects already investigated in the product placement research in some form, albeit not yet with the differentiating element of the version being viewed nor the multitasking aspect.

5.5 References

Arnold, M., X.-M. Chen, P. Baum, U. Gries, and G. Doerr. 2014. A phase-based audio watermarking system robust to acoustic path propagation. *IEEE Transactions on Information Forensics and Security* 9, no. 3: 411–25. <https://doi.org/10.1109/TIFS.2013.2293952>.

- Beuckels, E., G. Ye, L. Hudders, and V. Cauberghe. 2021. Media multitasking: A bibliometric approach and literature review. *Frontiers in Psychology* 12: 623643. <https://doi.org/10.3389/fpsyg.2021.623643>.
- Bolaños-García-Escribano, A., J. Díaz-Cintas, and S. Massidda. 2021. Latest advancements in audiovisual translation education. *The Interpreter and Translator Trainer* 15, no. 1: 1–12. <https://doi.org/10.1080/1750399X.2021.1880308>.
- Cholinski, A. 2012. The effectiveness of product placement: A field quasi-experiment. *International Journal of Marketing Studies* 4, no. 5: 14–28. <https://doi.org/10.5539/ijms.v4n5p14>.
- Van Reijmersdal, E. A. 2015. Disclosing brand placements in movies: Effects of disclosure type and movie involvement on attitudes. *Journal of Media Psychology* 28, no. 2: 78–87. <https://doi.org/10.1027/1864-1105/a000158>.

