DO YOU LIKE WHAT YOU RECOGNIZE?

The Effects of Brand Placement Prominence and Movie Plot Connection on Brand Attitude as Mediated by Recognition

Nathalie Dens, Patrick De Pelsmacker, Marijke Wouters, and Nathalia Purnawirawan

ABSTRACT: This study represents a field experiment on the effectiveness of brand placements in movies. The authors investigate the interaction effect of prominence (how prominently the brand is represented in the movie) and plot connection (how well the placement is related to the movie's story line) on actual moviegoers' recognition of brands and their attitude toward them. The results show that brand recognition scores are highest for brand placements that are both highly prominent and strongly plot connected, whereas brand attitude is most positive when brands are strongly connected to the plot, but placed less prominently. The results further show that brand recognition mediates the effect of plot connection, but not prominence, on brand attitude.

Product placement or, more appropriately, brand placement, the paid inclusion of branded products or brand identifiers within mass media programming (Karrh 1998), is an increasingly popular form of marketing communication. Although the phenomenon of brand placement in motion pictures and television is as old as the industry itself (Newell, Salmon, and Chang 2006), the popularity of movie placements among advertisers and brand managers soared in 1982, after sales of Hershey's Reese's Pieces increased by more than 65% when Steven Spielberg's extraterrestrial in *E.T.* followed a trail of that particular candy (Reed and Dutka 1989). Other famous brand placements in movies include Tom Hanks as a Fedex executive who is stranded on a deserted island and ends up talking to his Wilson volleyball in *Cast Away* or Carrie (Sarah Jessica Parker) and friends' adoration of Louis Vuitton handbags, Manolo Blahnik shoes, and other high-end designer items in the *Sex and the City* television series and movies.

Across the world, the growth of brand placement spending is outpacing that of traditional advertising, totaling $6.25 billion in 2009 (PQ Media 2010). Traditionally, brand placement has been more controversial in Europe than in the United States, but the European Union (EU) has recently loosened advertising regulations to allow for brand placements as well. The spending on brand placements in Europe totaled $610 million in 2009 and is expected to grow 18.2% each of the next five years (PQ Media 2010). Although brand placements constitute an increasingly important societal and business phenomenon, many issues regarding their effectiveness remain to be explored.

STUDY PURPOSE AND CONTRIBUTION

Previous studies examining the effectiveness of brand placement indicate that not all brand placements are equally effective (McCarty 2004). Early studies yielded mixed results with respect to consumers' memory of brands placed in films or television programs, and generally showed weak or nonexistent effects of placement on brand attitude (e.g., Babin and Carder 1996; Ong and Meri 1994). The mixed and weak results of these early studies on effectiveness resulted, in part, from their failure to recognize the multidimensional nature of brand placement. That is, they tended to define all brand placements as similar. Later on, some investigations (e.g., Russell 2002) have attempted to consider these complexities of brand placement.

Prominence and plot connection are two key characteristics of brand placements that may influence their effectiveness

Nathalie Dens (Ph.D., University of Antwerp) is an assistant professor of marketing, Marketing Department, University of Antwerp, Faculty of Applied Economics.

Patrick De Pelsmacker (Ph.D., Ghent University) is a professor of marketing, Marketing Department, University of Antwerp, Faculty of Applied Economics.

Marijke Wouters (Master in Applied Economics, University of Antwerp) is a Ph.D. student, Marketing Department, University of Antwerp, Faculty of Applied Economics.

Nathalia Purnawirawan (Master in Applied Economics, Ghent University) is a Ph.D. student, Marketing Department, University of Antwerp, Faculty of Applied Economics.

(Balasubramanian, Karrh, and Patwardhan 2006; Gupta and Lord 1998; Russell 2002). Prominence relates to how noticeably a brand is represented in the movie or the program, that is, the extent to which the brand is a central focus of audience attention (Cowley and Barron 2008; Gupta and Lord 1998). A number of studies indicate that prominent brands are more likely to be recognized than less prominent brands (e.g., Brennan and Babin 2004; d'Astous and Chartier 2000; Law and Braun 2000). At the same time, however, prominence can have a negative effect on attitude (and choice) for the placed brands (Cowley and Barron 2008; Law and Braun 2000).

Plot connection is the degree to which a placement is connected with the plot or story line of the movie or program (Russell 1998). Highly plot connected brand placements are intimately tied to the plot (e.g., AOL in *You've Got Mail*). However, movies often include brands that appear without connecting to the main part of the story (McCarty 2004). Studies have shown that a brand placement's connection to the plot significantly influences viewers' attention to and attitudes toward the placed brand (d'Astous and Seguin 1999; Russell 2002).

The first purpose of this research is to disentangle the effects of prominence and plot connection and their interaction with consumers' recognition of and attitude toward brands placed in movies. To date, very little research exists on how different brand placement characteristics, and prominence and plot connection in particular, interact to influence the effectiveness of brand placements. Where Russell (2002) studies the interaction of plot connection and modality of presentation (visual or audio), this study focuses on the broader construct of prominence.

The second contribution of the present study is that by studying brand recognition as a measure for explicit memory, as well as attitude toward the placed brands, this study offers a comprehensive framework on brand placement effects. In addition, this paper explicitly studies the mediating role of brand recognition for the effects of prominence and plot connection on brand attitude formation. Previous studies have largely ignored how brand placement characteristics may have a differential impact on consumers' memory and attitudes. With a few notable exceptions (e.g., Cowley and Barron 2008; d'Astous and Chartier 2000; Russell 2002), the vast majority of empirical studies on brand placements have measured their effectiveness solely in terms of brand recognition or recall (e.g., Gupta and Gould 2007; Gupta and Lord 1998; Johnstone and Dodd 2000; Lehu and Bressoud 2008; Roehm, Roehm, and Boone 2004).

To our knowledge, this research is one of the first to study the impact of brand placement characteristics on brand attitude, and the effect of brand recognition in this process. In the context of brand placements, there are very few studies that actually test for the link between brand memory and attitude.

Recent brand placement research by Law and Braun (2000) and Russell (2002) suggests that memory for the placements may be independent of the evaluations of the brands that are placed. The aim of the current research is to add to the debate by studying whether brand recognition can play a role in brand attitude formation, and how this may be dependent on brand placement characteristics (i.e., placement prominence and plot connection).

One of the contributions of this study is also its high degree of ecological validity. The research was conducted through a field experiment in a natural exposure setting. Although the analyses are based on a well-controlled experimental design, the test persons were actual moviegoers who were made aware of the study only after they saw one of two movies under completely natural viewing conditions in a real movie theatre. In that way, the study takes the full movie-going experience and the natural cognitive and emotional "clutter" associated with watching an entire movie into account. This greatly enhances the ecological validity of the findings (see discussion in Deighton, Romer, and McQueen 1989).

Most previous experimental studies on brand placements have been conducted with student samples in an artificial laboratory setting (e.g., Cowley and Barron 2008; d'Astous and Chartier 2000; Gupta and Gould 2007; Law and Braun 2000; Russell 2002). Problems typically related to these kinds of "forced exposure" designs are that (1) researchers run the risk of testing participants who are suspicious of the true purpose of the experiment, thereby compromising research results; and (2) participants tend to attend to stimuli more than they would otherwise. Moreover, time constraints in most previous laboratory experiments impose the artificial exposure to brand placements within a single scene or short excerpts of a television program or movie (e.g., d'Astous and Seguin 1999; Gupta and Lord 1998; Lehu and Bressoud 2008; Roehm, Roehm, and Boone 2004; for exceptions, see Russell 2002), followed immediately by the dependent measures. These represent unrealistic simulations of a typical brand placement exposure. Movies or television series often contain more than one placement incidence for the same brand, which may or may not have an effect in the longer run. Hence, it makes more sense to measure the overall effect of a brand's placement(s) (a certain time) after the movie or program has ended.

In the current study, the questionnaire was mailed a few days after participants saw the movie, allowing for time to pass before measurement. The external validity of the results is further enhanced by studying brands placed in two different movies. As such, confounding effects of the movie context and idiosyncratic effects of specific brands placed in a given movie were taken into account. The cry for greater ecological validity in advertising and branding research has long since been heard (e.g., d'Astous and Chartier 2000; Deighton, Romer, and McQueen 1989).

CONTEXT

The study was conducted in a Belgian setting. Belgium is a small open economy, centrally located within Western Europe, with a consumer market that in many ways represents an average EU profile (De Pelsmacker and Janssens 2007). Popular television (sitcoms, reality shows, game show formulas, etc.), movies (all major blockbusters), and music (charts and video clips) are dominated by American productions (e.g., De Bens and de Smaele 2001). On average, Belgian television viewers are exposed to a brand placement every 12 minutes (Wouters and De Pelsmacker 2010). The average amount of placements in domestic television programs does not differ significantly from that in U.S. programs (Wouters and De Pelsmacker 2010).

With the exception of a few alternative independent theaters, the mainstream movie theaters in Belgium are all large complexes with multiple theaters, owned by three large, international chains (UGC, Kinepolis, and Utopolis). At the time of this writing, 9 of the top 10 most popular movies in Belgian theaters were Hollywood blockbusters or animated films.

The bulk of empirical research on brand placement has been conducted in Canada and the United States (e.g., d'Astous and Chartier 2000; La Ferle and Edwards 2006; Russell 2002). A few notable exceptions include cross-national comparisons by Gould, Gupta, and Grabner-Kräuter (2000) and McKechnie and Zhou (2003), as well as a recent series of studies in the Netherlands by van Reijmersdal, Smit, and Neijens (Smit, van Reijmersdal, and Neijens 2009; van Reijmersdal, Neijens, and Smit 2007, 2009; van Reijmersdal, Smit, and Neijens 2010). A minority of studies has also been carried out in Australia (e.g., Cowley and Barron 2008), in the United Kingdom (Johnstone and Dodd 2000), and in France (Lehu and Bressoud 2008). As Gould, Gupta, and Grabner-Kräuter (2000) argue, considering brand placement effectiveness in different countries is important from a marketing point of view in terms of the issue of standardization versus adaptation. Although many American movies are widely exported, their product placements are not normally culturally adapted. It is therefore important to gauge international reactions to product placements. The above-mentioned arguments make it relevant to study brand recognition and brand attitudes in a European (Belgian) sample.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Defining Prominence and Plot Connection in the Context of this Study

In her Tripartite Typology, Russell (1998) distinguishes three dimensions of brand placement characteristics. The first dimension is visual and refers to the appearance of the brand on the screen. Russell's second dimension is the auditory nature of the placement, which concerns whether the brand is verbally mentioned. Within a single scene of a movie or program, a brand placement can be either purely visual, purely auditory, or a combination of both (audiovisual). The presence of visual or auditory references to a brand is often called the "modality" of the placement and has been frequently studied (e.g., Brennan and Babin 2004; Gupta and Lord 1998; Russell 2002). Placements in any of the three modes can be more or less obvious, central, or emphasized (Gupta and Lord 1998). The level of visual placement varies as a function of the size (close-up or not), the duration, the centrality on the screen (whether a brand is central or adjacent to the action in the scene), position (background versus foreground), the style of camera shot for the product, the number of times a placement is seen, and so forth. The level of auditory placement varies depending on how many times the brand name is repeated, whether it is mentioned with special emphasis (tone of voice, place in the dialogue, etc.), and so forth. These different levels of modality approach what Gupta and Lord (1998) define as "prominence," that is, the extent to which the brand placement possesses characteristics designed to make it a central focus of audience attention.

On occasion, modality and musicality have been conceptually intertwined in the literature (Wouters and De Pelsmacker 2010). In a full-length feature film, brand placements are often repeated, in different modalities and at different levels (more or less prominent) within these modalities. Consider the James Bond BMW Z3 example in *GoldenEye.* Before it is shown on screen, Q mentions that Bond's new car will be a BMW. The car is then shown in the workshop, with a visual of 007 checking it out, while Q lists the usual refinements in a voice-over. A different scene later in the movie shows 007 cruising in his roadster through a Caribbean landscape (naturally, a beautiful woman by his side), when he comes under attack. The following scenes display the car chase, but not a single verbal reference to the car is made. Thus, for a single brand, it is difficult to separate modality and degree of prominence across multiple placements in a movie. Together, these dimensions are combined to constitute the "prominence" dimension in the current study.

Low prominence ("subtle"; viz. Cowley and Barron 2008; Gupta and Lord 1998; Homer 2009) brand placements are those in which visual or verbal identifiers of the brand name or logo are not shown or mentioned prominently (e.g., small in size, a background prop outside of the main field of visual focus, lost in an array of multiple products or objects, low time of exposure, mentioned by a person outside of the screen, appearing once or a limited number of times). High prominence (prominent) placements are those that are frequently repeated or emphasized either verbally, visually, or both. For the exact

conceptualization of prominence and its different dimensions in the study, we refer readers to the research method section.

Russell's third dimension, plot connection, refers to the degree to which the brand is integrated in the plot of the movie (Russell 1998, 2002). Weakly plot-connected placements do not contribute much to the story (e.g., driving by a supermarket, seeing a random advertisement on television), while a strong plot connection means the placement is closely tied in to the plot and constitutes a major thematic element (Holbrook and Grayson 1986). For example, one of the episodes of *Friends* is almost completely devoted to the tension between Rachel and Phoebe concerning a Pottery Barn apothecary table. In several James Bond movies, the main character is clearly identified with the Aston Martin brand. These examples illustrate strongly plot-connected brands.

The purpose of this research is to investigate the interaction between prominence and plot connection. In line with Russell's (1998) framework, prominence and plot connection constitute separate, conceptually independent dimensions. Prominence relates to how prominently a brand features in a movie, regardless of how well this fits in the plot. For example, in one of the scenes of the second *Sex and the City* (SATC) movie, Samantha (Kim Cattrall) very prominently holds and mentions a can of Pringles potato chips. The connection to the rest of the story or the women's usual preference for luxury brands is limited at best. At the same time, plot connection can be defined irrespectively of how prominently a brand is shown. Again referring to the SATC 2 movie, the women find themselves rescued from a mob of angry Arab men by a group of Arab fashionistas, who reveal their designer clothes under their robes. While this situation is strongly plot connected, the specific designer labels are not very prominent (only Louis Vuitton is briefly mentioned). As such, prominence and plot connection are two distinct constructs that can trigger different psychological mechanisms.

Effects of Prominence on Brand Recognition and Attitude

Regardless of the operationalization of prominence, a number of studies indicate that brand recognition is more likely for prominently placed brands than for subtly placed ones (e.g., d'Astous and Chartier 2000; Law and Braun 2000; Lehu and Bressoud 2008). Exposure to the brand name or logo through brand placements should increase the accessibility (the degree to which a piece of information can be retrieved from memory) of the brand in memory (Cowley and Barron 2008). In addition, those characteristics that render a brand placement prominent are likely to attract viewers' attention to the brand, making the brand more accessible than it would be if it were placed more subtly (Gupta and Lord 1998). Brands that are more accessible should be more easily recognized. In

advertising, for instance, increasing the size of a picture in an advertisement also increases the probability that it will attract attention (Finn 1988). Studies in an advergaming context also found that placement prominence positively affected players' memory for the placed brands (e.g., Cauberghe and De Pelsmacker 2010; Lee and Faber 2007; Schneider and Cornwell 2005). Therefore, we expect:

Hypothesis 1a: A prominently placed brand leads to higher brand recognition than a subtly placed brand.

The few studies on the effect of prominence on brand attitudes indicate that prominence can have a negative effect on attitude toward and choice for the placed brands (Cowley and Barron 2008; Law and Braun 2000). The positive effect of brand placements on brand attitudes relies on consumers' lack of awareness of their persuasive attempts (Bhatnagar, Aksoy, and Malkoc 2004). The increased processing accompanying prominence may have a down side (Campbell 1995), as the audience might start wondering about the reasons for the placement. The Persuasion Knowledge Model (PKM) (Friestad and Wright 1994) posits that when consumers understand a communication as a persuasion attempt, they process the message differently than they would if no such understanding occurred (Cowley and Barron 2008; Friestad and Wright 1994).

The more prominent a brand placement, the more likely it activates persuasion knowledge, so that viewers are likely to consider the appropriateness of the placement in light of its manipulative intent (Cowley and Barron 2008). Prominent placements may no longer benefit the realism of the movie. At that point, the persuasive intent interrupts the viewing experience and this may be interpreted by viewers as intrusive, causing irritation and/or distraction (Cowley and Barron 2008; Edwards, Li, and Lee 2002), as well as an increase in counterarguing (Friestad and Wright 1994). Persuasion knowledge and the resulting counterarguing and irritation should result in a negative shift in brand attitude (Campbell and Kirmani 2000; Cowley and Barron 2008). Subtle placements are less likely to result in negative shifts in brand attitude. Therefore, we hypothesize the following:

Hypothesis 1b: A subtly placed brand leads to a more positive brand attitude than a prominently placed brand.

The Impact of Plot Connection on Brand Recognition and Attitude

A strong degree of plot connection of a brand placement should facilitate brand recognition (Wouters and De Pelsmacker 2010). Greater fit between a brand and a movie is expected to enhance the attention to and increase recognition of brand portrayals, because the relevance of the message within a given context is high (Bhatnagar, Aksoy, and Malkoc 2004).

Brennan, Dubas, and Babin (1999), for example, indeed showed that brand placements that were more central to the story were better recognized.

Strongly plot-connected brands are part of the narrative structure and story of movies and television programs, and characterize a dimension of meaning (Russell 2002). Therefore, a strongly plot-connected brand can be considered as "primary information" (important information that is closely related to the story), whereas a weakly plot-connected brand instead represents secondary (less important, peripheral) information, which is normally not retrieved from memory as well as primary information (Roberts, Cowen, and MacDonald 1996). This idea is in line with the "associative network" model of memory (e.g., Dens and De Pelsmacker 2010; Krishnan 1996), which considers semantic memory as a network of nodes (stored information) and links (associations between nodes). A "spreading activation" process from node to node determines the extent of retrieval in memory. The retrieval of information that is associated with a cue (e.g., a movie) will facilitate the retrieval of similar information that is also associated with that cue (see Meyvis and Janiszewski 2004). Thus, if a brand placement is more closely associated with the plot of a movie, this should result in a strong network of associations between the brand and the movie, which makes it easy for activation to spread, so that the prompting of the movie will promote the retrieval of information about plot-connected brands, thus improving brand recognition.

Hypothesis 2a: A strongly plot-connected placement leads to higher brand recognition than a weakly plot-connected placement.

At the same time, a high degree of plot connection can transform a viewer's perception of the brand, because the brand is embedded in the movie (McCarty 2004). The brand is no longer just considered in its functional sense, but is related to the context of the story, thus improving consumers' attitude toward the placed brand, especially when it is placed in a movie that viewers like. In an experiment using written vignettes, d'Astous and Séguin (1999) indeed found that when a brand placement is natural and consistent with the context of the program, it leads to more positive brand evaluations.

Applicable frameworks to explain the effects of plot connection on attitudes are the accessibility-diagnosticity model (Ahluwalia and Gürhan-Canli 2000; Feldman and Lynch 1988) and again the Persuasion Knowledge Model (Friestad and Wright 1994). The accessibility-diagnosticity framework proposes that responses to stimuli are based on both how accessible the input is in memory (how easily it comes to mind) and how diagnostic the input is perceived to be for the judgment (how suited or indicative the input is on which an evaluation would be based). Past research has suggested that the greater the shared associations between two targets, the more diagnostic one target is for making judgments about the other (e.g., Skowronski and Carlston 1987). In the context of brand placements, as the degree of plot connection becomes stronger, the shared associations between a movie's plot and the brand increase, and so does the diagnosticity of the movie for influencing attitudes toward the placed brands. That is, one may expect a positive relationship between the degree of plot connection and brand attitudes. Bhatnagar, Aksoy, and Malkoc (2004) argue that a good fit of the plot or the context with placed brands should engender a transfer of positive attitudes from the former to the latter, and that viewers' attitudes toward the placed brands will become more positive with increasing degrees of fit or plot connection.

Weak plot connection may also stimulate the activation of persuasion knowledge. Placed brands that do not quite fit into the story line are likely to raise suspicions of superfluity and of media motives other than artistic expression (Bhatnagar, Aksoy, and Malkoc 2004). In other words, placements that are out of context are expected to be scrutinized negatively and result in more negative attitudes toward the placed brand. The more a brand is connected to the plot, the less counterarguing by the audience should occur, as opposed to when a brand is placed for no apparent reason other than commercial motives.

Hypothesis 2b: A strongly plot-connected placement leads to a more positive brand attitude than a weakly plot-connected placement.

Interaction Between Prominence and Plot Connection

We expect the effects of prominence and plot connection on brand recognition and brand attitude postulated in H1 and H2 to reinforce each other. In H1a and H2a, it is posited that prominent placements, as well as strongly plot-connected ones, are most likely to trigger high brand recognition as a result of both the accessibility of the information and the higher number of shared associations between the brand and the movie. It can be expected that the combination of both (i.e., a prominently placed, strongly plot-connected brand) will trigger the highest levels of attention and will elicit a higher recognition score than any other combination of placement characteristics. For example, Brennan, Dubas, and Babin (1999) show that the length of exposure (an aspect of prominence) was positively related to brand recognition, but only for placements that were more central to the story. Conversely, a subtly placed brand with a weak plot connection is least likely to be remembered. The following hypothesis is presented:

Hypothesis 3a: Brand placements that are both prominent and strongly plot connected result in the highest brand recognition, whereas brand placements that are both subtle and weakly plot connected result in the lowest brand recognition.

In terms of brand attitudes, we have argued that persuasion knowledge is most likely activated in the case of a prominently placed or a weakly plot-connected brand. The negative effects of these two characteristics in terms of persuasion knowledge will likely reinforce one another. If a weakly plot-connected placement is also highly prominent, the attempt at persuasion will be most obvious, and the resulting counterarguing and resistance to persuasion should result in a negative attitude toward the placed brand. In the case of prominently placed brands, counterarguments to the message can especially be expected when the prominently placed brand in question does not have anything to do with the story. Therefore, we expect:

> *Hypothesis 3b: Brand placements that are both subtle and strongly plot connected result in the most positive brand attitude, whereas brand placements that are both prominent and weakly plot connected result in the most negative brand attitude.*

The Mediating Role of Brand Recognition in Brand Attitude Formation

As mentioned, most brand placement research has focused solely on explicit memory (recall or recognition) as a measure for brand placement effectiveness (e.g., Gupta and Gould 2007; Gupta and Lord 1998; Johnstone and Dodd 2000; Lehu and Bressoud 2008; Roehm, Roehm, and Boone 2004). Past research has shown that memory measures sometimes only poorly predict persuasion (e.g., Law and Braun 2000; Petty, Cacioppo, and Schumann 1983; Russell 2002). It is not because something is remembered that it will also be liked. At the same time, the reverse can be true, as numerous authors have argued that brand placements may improve brand attitudes without necessarily improving explicit memory (e.g., Cowley and Barron 2008; Law and Braun 2000). The mere exposure effect posits a positive attitude resulting from a brief exposure to a brand, without explicit recall or recognition, based on a misattribution of the increase in accessibility (implicit memory) for the brand as liking (Cowley and Barron 2008; Zajonc 1968). Classical conditioning assumes affect transfer from a well-known actor or well-liked scene to a jointly presented brand (Baker 1999; d'Astous and Chartier 2000). The mere exposure effect and classical conditioning have been used to explain the increase in brand choice after exposure to brand placements found by Law and Braun (2000), and could also be used to explain the positive attitude shift for (subtle) visual (weakly plot connected) placements in Russell's (2002) study.

Based on accessibility-diagnosticity theory, we argue that brand recognition may mediate the effects of brand placements on brand attitudes, but that the type of mediation will depend on placement prominence and plot connection. As mentioned, prominence and plot connection should increase the acces-

sibility of brand placements. According to the accessibility-diagnosticity model, any factor that increases the accessibility of an input is also expected to increase the likelihood with which that input will be used for the judgment (Ahluwalia and Gürhan-Canli 2000). In terms of prominence, our H1a and H1b posit opposing effects on brand recognition and brand attitude. Thus, although prominence leads to a higher accessibility and better brand recognition, it is also likely to trigger persuasion knowledge and result in negative brand attitudes. The opposing effects of prominence on brand recognition and brand attitude should result in a competitive mediation (the direct effect and the indirect effect have an opposing sign), as described by Zhao, Lynch, and Chen 2010. This means that even though prominence has a positive effect on brand recognition, and this effect will carry over to brand attitude, this positive effect is countered by the direct negative effect of prominence on brand attitude.

Plot connection should affect the strength of associations between the movie and the brand, making the brand more easily accessible in memory and increasing its diagnosticity for judgment. The accessibility-diagnosticity model predicts that a stimulus will only affect attitudes when it is also considered diagnostic or relevant for the evaluation. Thus, the recognition of the brand in the movie is likely to trigger a more positive reaction to the brand if it is highly plot connected. Russell (2002) already noted that an increase in brand recognition coincided with a positive shift in brand attitude after exposure to strongly plot-connected auditory placements. Whether the direct positive effect of plot connection on brand attitude should be fully absorbed by brand recognition (direct-only mediation), or will continue to exist (complementary mediation) (Zhao, Lynch, and Chen 2010), is difficult to predict.

> *Hypothesis 4a: Brand recognition competitively mediates the impact of prominence on brand attitude.*

> *Hypothesis 4b: Brand recognition mediates the impact of plot connection on brand attitude.*

RESEARCH METHOD

Study Design and Brand Placement Characteristics Coding

We set up a 2 (prominence: subtle, prominent) × 2 (plot connection: weak, strong) full-factorial design. The study was conducted on two separate occasions of a ladies-only "Ladies Movie Night" in two major cities. This event takes place every month at several Belgian movie theaters. The movie shown at this event is generally a preview of a Hollywood blockbuster, due to officially open in theaters a few weeks later. This offers the advantage that none of the participants could have seen the movie before or were likely exposed to promotion for or

information about the movie, which may otherwise bias the results of the study. On the nights of the study, the movies shown were *Bride Wars* and *The Women.* Both movies contain several placements for well-known brands.

We first conducted a content analysis on the two movies included in the study to allocate placements in each movie to the four conditions to be tested, using a coding instrument developed on the basis of existing literature (Brennan, Dubas, and Babin 1999; Ferraro and Avery 2000; Gupta and Gould 2007; Gupta and Lord 1998; La Ferle and Edwards 2006; Roehm, Roehm, and Boone 2004; Russell 1998). Every mention or visual display of a brand identifier (brand name or logo) in the movie was considered a brand placement. For the purpose of this study, a brand incidence was registered when the brand was referred to verbally or shown visually in a movie scene for at least one second (see Ferraro and Avery 2000).

The prominence of each brand occurrence was scored using a multidimensional coding scheme, encompassing the most important dimensions: (1) modality of presentation (visual, auditory, audiovisual), (2) time on screen/number of mentions in the same scene, (3) visibility of the brand name, (4) appearance of the brand in close up, (5) appearance of the brand in the foreground/background, (6) amount of other branded products shown or mentioned in the same scene (clutter), and finally, (7) character interaction (is the character shown using or handling the brand or actively mentioning the brand name?) (see Brennan, Dubas, and Babin 1999; Cowley and Barron 2008; Gupta and Gould 2007; La Ferle and Edwards 2006). For each brand, an overall evaluation of the prominence level in the movie was made based on the characteristics of the individual occurrences.

A three-item plot connection measure used in an experiment by Russell (2002) (". . . plays an important role in the story"; "Without the references to . . . , the story would be different"; and ". . . is connected to the plot") served as a guideline to classify the level of a brand placement's plot connection into four categories (none to high). The level of plot connection was assessed per brand across the entire movie, for it is only after seeing the entire movie that the complete plot and the scope of the role of the brand therein can be assessed.

Two coders independently coded the brands in both movies. One coder extensively tested the coding instrument to identify and correct coding problems, as advised by Perreault and Leigh (1989). The second coder received detailed instructions on the coding scheme. Each coder then placed every brand present in the movies (36 in *The Women,* 15 in *Bride Wars*) in a prominence (subtle, prominent) × plot connection (weak, strong) framework. Both coders placed 43 of the 51 brands (87.8%) in the same cell of this 2 × 2 framework; agreement on prominence level was 91.8%, while agreement on plot connection level was 93.9%. Cohen's κ (a more conservative measure of intercoder reliability) for the overall categorization was κ = .755

TABLE 1
Overview of Brands per Condition for Both Movies

| | | Prominence | |
		Subtle	Prominent
Plot connection	Weak	Dove[a]	Lexus[a]
		DHL[b]	iPod[b]
	Strong	Botox[a]	Saks Fifth Avenue[a]
		Tiffany & Co.[b]	The Plaza Hotel[b]

[a] *The Women.*

[b] *Bride Wars.*

(+1 indicates perfect agreement; 0 indicates no agreement other than expected by chance) (Cohen 1960; Perreault and Leigh 1989). In the end, one brand per movie was selected for every cell of the framework of which both coders judged the categorization was up for no discussion whatsoever. To reduce memory interference across brands and conditions and potential contamination of the results by previous exposure to the product category, we verified that each brand represented a different product category (Burke and Srull 1988). Table 1 gives an overview of the categorization of the brands and the movies to which they belong (see Appendixes 1 and 2 for examples of screen shots).

Data Collection Procedure

The e-mail addresses for this study were collected prior to the movie showing. The women were told that they would be asked to take part in an academic study, but its precise nature was not revealed. Everyone who provided an e-mail address received an e-mail a few days later containing the link to the questionnaire, which contained questions on the movie they watched and on the brands that were placed within that particular movie and were part of the study (see below). Respondents could win two movie tickets in return for their participation. In total, 472 useful e-mail addresses were collected for the *Bride Wars* movie (February 3, 2009), and 226 for *The Women* (January 20, 2009). This yielded 187 completed questionnaires for *Bride Wars* (response rate: 39.6%) and 103 for *The Women* (response rate: 45.6%). Only participants who scored all brands included in the study were retained for analyses.

To be able to control postexposure attitudes toward the existing brands studied for preexisting brand attitudes (see discussion in Webb 1979), an online survey was also conducted with a control group of individuals who did not see the movies, to measure attitudes toward the selected brands in a group that had not been exposed to either of the two test movies. The e-mail addresses for this control group were collected in an identical fashion at the previous month's "Ladies Movie Night"

event (January 6, 2009) and cross-checked with those of the main study's respondents to rule out any potential overlap. A Web link to the questionnaire was e-mailed the day after this movie, which contained questions on attitudes toward the brands to be used in the main study and on demographic variables (age, gender). This control questionnaire was completed by a sample of 85 women. None of the eight brands under study appeared in the movie that the control group watched (*Last Chance Harvey*). By collecting respondents for both the control and the main study at a similar event, the groups resembled each other as closely as possible: all respondents were women, and a cross-tabulation analysis pointed out that the difference in age distribution between the samples of the main study and the control study was statistically insignificant, χ^2 (3) = 3.596, p = .309.

Measures

The first set of questions determined the respondents' liking of the movie (*Bride Wars* = BW, *The Women* = TW) on a seven-point Likert scale ("I enjoyed watching ____," I don't regret watching ____," "I'm glad I saw ____," "I would watch ____ again," "I like the story of ____," "The acting in ____ is good," "____ is a good movie") (Cronbach's α: α_{TW} = .945, α_{BW} = .913). Participants were then asked to mark which brands they recognized as seeing or being referred to from a list of brands placed in the movie, mixed in among filler or distraction brands not shown in the movie. As such, brand memory was measured as brand recognition, which was coded as 0 (not recognized) or 1 (recognized). In line with, for instance, Singh and Rothschild (1983), Law and Braun (2000) argue that recognition is a more sensitive measure of learning about products than recall. For the purpose of the analyses, this measure was converted to a facilitated brand recognition score (see Brennan and Babin 2004; Law and Braun 2000). This technique allows controlling for false recall. As none of the brands under study appeared in both movies, the proportion of respondents who correctly recognized the brand after being exposed to the placement in the movie was reduced by the proportion who falsely remembered seeing the brand in the other movie (which in that case served as a control group). Differences in the facilitated recognition scores across experimental conditions (placement executions) are then attributed to treatment-induced memory effects rather than respondent inferences.

Finally, brand attitude (A_b) was measured for each of the four separate brands under study in the movie by means of a four-item, seven-point semantic differential scale (negative/positive, don't like/like, unpleasant/pleasant, low quality/high quality; $\alpha \geq .858$). Brand attitude toward these brands was also measured in the control group, for the eight brands under study ($\alpha \geq .883$). Per brand, summated scales were

calculated for both the main group and the control group. For each brand, the control group's mean brand attitude score was subtracted from each individual's postexposure brand attitude score in the main group. This resulted in a "brand attitude difference" measure that is used in subsequent analyses. In the final section of the questionnaire, respondents were asked to note their gender (as a control) and age range.

RESULTS

Brand Recognition

The effects of prominence and plot connection on facilitated brand recognition (see Table 2) are assessed for each movie separately through Z-tests for proportions. Prominent placements consistently resulted in better recognition scores (TW: 50.5%; BW: 65.3%) than subtle ones (TW: 25.7%; BW: 27.1%) (Z_{TW} = 3.887, p < .001; Z_{BW} = 3.229, p < .001), and strongly plot connected placements resulted in better recognition scores (TW: 55.5%; BW: 67.5%) than weakly plot connected ones (TW: 20.7%; BW: 24.9%) (Z_{TW} = 5.255, p < .001; Z_{BW} = 3.683, p < .001). Hypotheses 1a and 2a are fully supported. Regarding the combination of the two brand placement characteristics (see Figure 1), we see in both movies that recognition is significantly highest for strongly plot connected, prominently placed brands (TW: 63.3%; BW: 84.9%) (higher than all other conditions, Z_{TW} > 2.357, p < .018; Z_{BW} > 3.618, p < .001). Brand placements that are both subtle and weakly plot connected are recognized significantly less than any other combination (TW: 3.7%; BW: 4.1%) (Z_{TW} > 6.187, p < .001; Z_{BW} > 4.104, p < .001). This confirms H3a.

Brand Attitude

The attitude toward the brand for each of the test brands in both the experimental and the control condition is provided in Table 3. A 2 (prominence: subtle, prominent) × 2 (plot connection: weak, strong) × 2 (movie: *Bride Wars, The Women*) univariate analysis of variance on A_b difference was first analyzed. Since there were no significant interactions between the movie and prominence, $F(1, 628)$ = .258, p = .612, or the movie and plot connection, $F(1, 628)$ < .001, p = .996, the data of the two movies were pooled for further analyses.

As previous research has demonstrated that program liking may influence viewers' attitudes toward embedded brands (e.g., Cowley and Barron 2008; Lehu and Bressoud 2008; Murry, Lastovicka, and Singh 1992), movie liking was modeled as a covariate in the current study. Both movies were fairly well liked by their respective audience (M_{BW} = 5.54, M_{TW} = 4.71). A 2 (prominence: subtle, prominent) × 2 (plot connection: weak, strong) ANCOVA (analysis of covariance) and simple effect tests were conducted to investigate the impact of

TABLE 2
Brand Recognition and Facilitated Brand Recognition per Condition

	Subtle placement		Prominent placement	
	Weak PC	**Strong PC**	**Weak PC**	**Strong PC**
Brand (*The Women*)	**Dove**	**Botox**	**Lexus**	**Saks Fifth Avenue**
Brand recognition	12.20%	65.85%	41.46%	80.49%
Control group	8.47%	18.22%	3.81%	17.16%
Facilitated recognition	3.73%	47.63%	37.65%	63.33%
Brand (*Bride Wars*)	**DHL**	**Tiffany & Co.**	**iPod**	**Plaza Hotel**
Brand recognition	6.57%	57.42%	52.97%	87.29%
Control group	2.44%	7.32%	7.32%	2.44%
Facilitated recognition	4.13%	50.10%	45.65%	84.85%

Note: PC = plot connection.

prominence and plot connection (PC) and their interaction on (the differential measure of) brand attitude. Movie liking did not prove to be a significant covariate, $F(1, 631) = .007$, $p = .935$. Brand attitudes were significantly more positive for subtly placed brands ($M = .352$) than for prominently placed brands ($M = .022$), $F(1, 631) = 14.788$, $p < .001$, which is in line with H1b.

Plot connection, by contrast, has only a marginally significant effect on brand attitude, $F(1, 631) = 2.748$, $p = .098$. The relationship is in the anticipated direction, in that a strongly plot connected placement ($M = .258$) leads to a greater increase in brand attitude than a weakly plot connected brand ($M = .116$). Hence, H2b is marginally supported. The simple effects and planned contrast analyses for the prominence × plot connection interaction effect, $F(1, 631) = 1.636$, $p = .201$, confirm H3b (see Figure 2): Subtly placed brands that are strongly plot connected enjoy the highest A_b score ($M = .478$), whereas prominently placed, weakly plot connected brands received the lowest brand attitude score ($M = .006$) ($p < .001$). In addition, we see that when the brand placement is subtle, A_b is significantly higher with a strong plot connection ($M = .478$) than with a weak plot connection ($M = .226$), $F(1, 631) = 4.31$, $p = .038$. However, when a brand is prominently placed, the difference between a weak ($M = .006$) and a strong plot connection ($M = .039$) is actually not significant, $F(1, 631) = .07$, $p = .789$.

The Mediating Role of Brand Recognition on Brand Attitude Effects

To test whether brand recognition mediates the described effects of prominence and plot connection and their interaction on A_b, we performed a mediated moderation analysis, following the recommendations by Zhao, Lynch, and Chen (2010)

(see Figure 3). Because the mediator, brand recognition, is a nominal variable, we estimated the model in Mplus, performing a bootstrap with 5,000 draws.

First, the results of the model showed that movie liking as a covariate remained insignificant ($b = -.009$, $p = .821$). As expected, brand recognition exerts a significant positive influence on brand attitude ($b = .181$, $p = .003$), meaning that those who recognized the brands in the movie on average expressed a more positive attitude. Although this step is not strictly necessary to determine mediation (Zhao, Lynch, and Chen 2010), this is an interesting finding in itself, as it shows that brand placements work through more than mere exposure (Zajonc 1968). The indirect effect of prominence on A_b difference through brand recognition is positive and significant ($b = .101$, $p = .005$). As the direct effect of prominence on A_b difference is negative ($b = -.269$, $p < .001$), and the indirect effect through recognition is positive, Zhao, Lynch, and Chen (2010) classify this as competitive mediation, as expected in H4a. Thus, despite the fact that direct, prominent placements lead to more negative brand attitudes than subtle placements, the beneficial effect of prominence on brand recognition results in an indirect positive effect. The overall effect of prominence on brand attitude is negative. The direct effect of plot connection on brand attitude is not significant ($b = -.054$, $p = .344$), but the indirect effect is ($b = .126$, $p = .004$), signaling that the effect of plot connection is only indirect and works completely through its positive effect on brand recognition. If strongly plot connected placements are more effective in generating a positive A_b than weakly connected placements, this effect is driven by the fact that they are more closely associated with the movie, and thus have a greater chance of being recognized as being in the movie. This result supports H4b. When considering the interaction of plot connection and prominence on A_b difference, we see that the direct effect is not significant

FIGURE 1
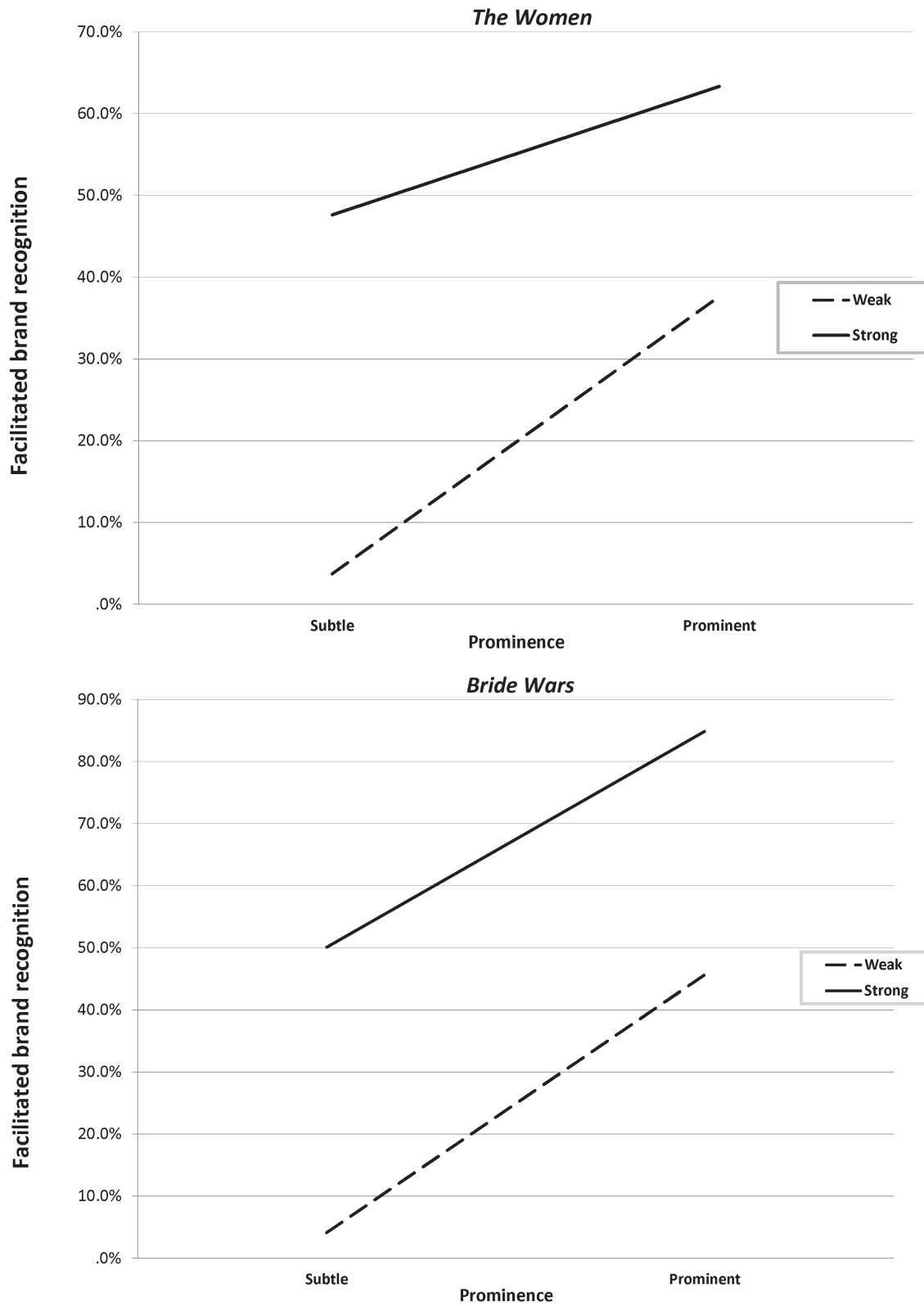Interaction Effect Between Prominence and Plot Connection on Brand Recognition

TABLE 3
Attitude Toward the Placed Brands in Experimental and Control Group

	Subtle placement		Prominent placement	
	Weak PC	**Strong PC**	**Weak PC**	**Strong PC**
Brand (*The Women*)	**Dove**	**Botox**	**Lexus**	**Saks Fifth Avenue**
Main study	5.77 (1.35)	3.48 (.96)	4.71 (.87)	4.57 (.93)
Control group	5.96 (1.19)	3.01 (1.24)	4.64 (.88)	4.88 (.93)
Differential measure	−.19 (1.35)	+.46 (.96)	+.07 (.87)	−.31 (.93)
Brand (*Bride Wars*)	**DHL**	**Tiffany & Co.**	**iPod**	**Plaza Hotel**
Main study	4.88 (1.04)	5.05 (1.05)	5.31 (1.30)	4.84 (.89)
Control group	4.51 (.77)	4.56 (.96)	5.30 (1.22)	4.69 (.98)
Differential measure	+ .37 (1.04)	+.49 (1.05)	+.01 (1.30)	+.14 (.89)

Notes: PC = plot connection.
Values in parentheses indicate standard deviation.

FIGURE 2
Interaction Effect Between Prominence and Plot Connection on Brand Attitude (Differential Measure)
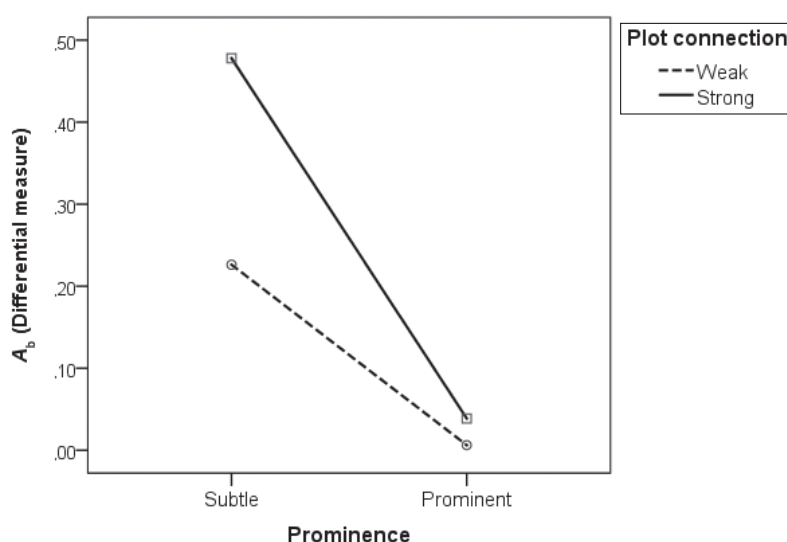

($b = -.035$, $p = .411$), and the indirect effect through brand recognition is marginally significant ($b = -.025$, $p = .086$) (the 2.5% confidence interval does not contain 0), again pointing to an indirect-only mediation. This means that the interaction between plot connection and prominence on A_b difference, as described in H3b, is fully mediated by brand recognition. Thus, if subtle brand placements that are strongly plot connected enjoy the highest A_b score, this is driven by the fact that strong plot connection exerts a significant impact on brand recognition. Through brand recognition, a subtle placement receives an extra "boost" in A_b when it is highly plot connected. The same goes for a lowly plot connected brand, which benefits

A_b through recognition when it is highly prominent (although the total effect of this combination is still negative).

DISCUSSION AND CONCLUSION

The research presented here is a step toward conducting more ecologically valid brand placement research. In this study, we measure the impact of brand placements after a full movie-going experience, a few days after seeing the movie. The concept of prominence used in this study is a broader and more ecologically valid construct than the construct of "modality" used in some earlier studies. Moreover, the effects on

FIGURE 3
Mediation Model
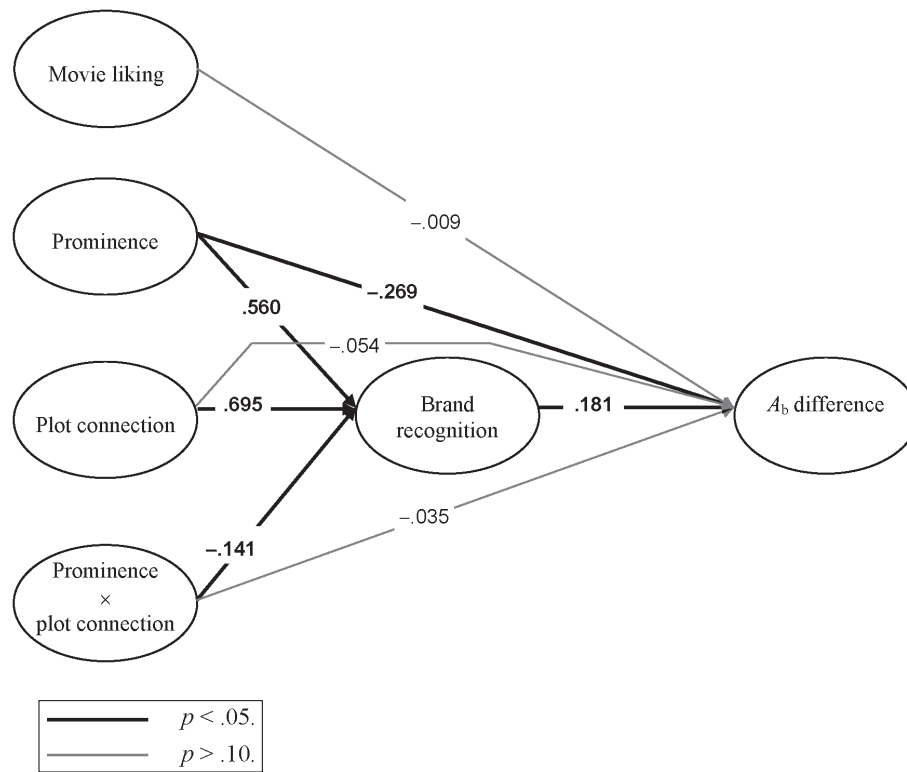
memory are substantially different from brand attitude effects, especially when considering brand placement prominence. In addition, this research was one of the first to shed light on how brand recognition plays a role in attitude formation.

Prominently (as opposed to subtly) placed brands, as well as strongly plot connected (as opposed to weakly plot connected) brands, are most likely to be recognized afterward, and these effects reinforce each other. These results are in line with prevailing information-processing theories, such as accessibility and associative network theories. Although brand name accessibility was not explicitly tested in the current study, it may be argued that prominently placed brands are more accessible in memory, and therefore more easily recognized. Plot connection, however, ties the brand more closely to the associative network of the movie, which should also benefit brand recognition.

Placement prominence has a consistently negative impact on brand attitude, whereas plot connection—contrary to popular belief—is not a strong enough factor to cause more than a marginally significant positive attitude change. The results for prominence support our hypotheses based on persuasion knowledge (Friestad and Wright 1994). That consumers notice prominent placements is evidenced by the high brand recognition scores. However, the prominence of the placement

also seems to trigger the activation of persuasion knowledge, causing viewers to consider the appropriateness of the placement (Homer 2009). This finding is also consistent with the results of other studies, showing that prominent placements are perceived to be less realistic and more disruptive or distracting (e.g., Atkinson 2003; Cowley and Barron 2008; Homer 2009). Subtle placements, while noticed less, may be effective through mere exposure or classical conditioning. The results of the mediation analysis confirm that brand recognition competitively mediates the effects of prominence on brand attitude. While prominence has an indirect positive impact on A_b through brand recognition, a significant direct negative effect of placement prominence on brand attitude still remains. Moreover, this negative effect is substantially larger than the indirect positive effect through brand recognition. All in all, prominence has a direct negative effect on brand attitudes, despite the fact that recognizing the prominently placed brand partly compensates for this negative effect.

Although as a main effect plot connection might have only a marginally significant influence on brand attitude, it also reinforces the effects of prominence on brand attitude. Especially when a prominent brand is only weakly connected to the plot, this will negatively affect viewers' attitudes toward the placed brand. The most positive change in brand attitude

is obtained for a subtle, strongly plot connected brand. The effect of plot connection is especially pronounced for subtle brand placements: When a brand placement is subtle, a high plot connection generates significantly more positive A_b than a weak plot connection. For prominent brand placements, persuasion knowledge seems to eliminate the positive effect of plot connection. The mediation analysis also showed that all plot connection effects were fully mediated by the accompanying increase in brand recognition. This may explain why plot connection is especially beneficial for subtle placements, which may otherwise go unnoticed.

Managerial implications

Our study sheds more light on the effects of different types of brand integrations in a full movie and on their differential effects, thus helping advertisers and media to refine their business model with respect to brand placement and brand integration. First, it should be noted that, on average, the levels of brand recognition for most conditions were fairly high. Given that brand recognition was already measured with a time delay of a few days after seeing the movie, the results of this study suggest that viewers do notice and remember brands in movies, and the results may exceed industry professionals' standards for success (Steortz 1987).

On the basis of this research, it can also be concluded that the integration of the brand into the plot engenders positive results for both brand recognition and attitude, as opposed to when a brand is placed for no apparent reason. Brand placement practitioners seem to have understood this, as the current research confirms their intuitive belief that placements work best when the brand is shown in a manner that makes it integral to the story line (Karrh, McKee, and Pardun 2003). With respect to prominence, however, the standard practice seems to go against what would be recommended on the basis of this study. How much marketers are willing to pay for a placement is often determined by prominence, where highly prominent placements are considered stronger and thus more expensive (Cowley and Barron 2008). Marketers should better consider the relationship between placement characteristics (such as plot connection and prominence) to maximize the return on their investment.

The results of this research show there is no absolute optimal way to place brands that would improve both brand recognition and brand attitude. When brand recognition is the main objective, brand managers should note that placements that are both subtle and, at the same time, weakly connected to the plot generate extremely low recognition scores. Thus, to create brand awareness, this strategy would likely not be effective. At the other end of the spectrum, highly prominent and plot-connected placements are highly noticed and do get recognized; they are called for if the focus is brand awareness.

At the same time, however, brand recognition is not a necessary or sufficient condition to improve brand attitude. Highly prominent placements—although being recognized more easily—result in a more negative brand attitude. When placements become too obvious, consumers are likely to infer manipulative intent and may become less susceptible to persuasion attempts. Placements that make consumers think "I wonder how much this has cost [the brand sponsor]?" are likely no more effective than advertising, or may even be worse (Bhatnagar, Aksoy, and Malkoc 2004). For example, the book *The Bulgari Connection* received a great deal of criticism for excessively placing the Bulgari jewelry brand (Bhatnagar, Aksoy, and Malkoc 2004). For most brand managers, the main purpose of using brand placements will likely be to create a favorable impression and possibly generate sales. What good is a high level of brand awareness when it is coupled with a negative brand attitude? When the goal is to improve viewers' attitudes toward the placed brand, subtle placements that are in some way connected to the movie plot seem to be the best strategy. A prominent, weakly plot connected placement results in the most negative brand attitudes. This means marketers should carefully consider the repercussions of (paid and unpaid) placements on their brand.

An interesting result in the present study is also that movie liking did not significantly influence the attitude toward the placed brands. This means that although brand managers should try to select movies where the brand fits into the plot, they do not necessarily have to be choosy about the popularity of the movies. This may be a relief, as the success of a movie is often difficult to predict. Of course, popular movies will generally draw a larger audience, therefore exposing the brand to a greater public. In addition, previous research has shown that movie appreciation and connectedness (the level of intensity of the relationship[s] that a viewer develops with the characters and contextual settings of a program) have a positive effect on brand placement recall (Lehu and Bressoud 2008; Russell, Norman, and Heckler 2004). In terms of brand attitude, however, there seems to be no immediate effect.

Limitations and Suggestions for Further Research

The present study considered brand placement effectiveness in terms of brand recognition and attitude, but purchase intention, choice, and buying behavior are also important factors to consider in a brand placement context. In addition, recognition and attitude in this study were measured as self-reported, explicit measures. Future research should incorporate implicit measures, such as implicit association or choice tests.

The role of movie liking should be further explored. As mentioned, in the present study, movie liking did not have a significant effect on brand attitude. However, both movies were scored relatively positively by most viewers. Consequently,

there may have been insufficient variation in movie liking as a result of which the role of this variable cannot adequately be assessed. Nevertheless, movie liking may be considered as an important moderator of brand placement effects to determine the conditions under which movie liking may matter. For example, Cowley and Barron (2008) show that the effects of prominence are different for viewers reporting low and high program liking, and that high program liking viewers are more prone to report negative attitudes in response to prominent placements than low program liking viewers. Similar effects should be studied for plot connection as well. In addition, as Homer (2009) points out, there may be a potential reduction in movie- or program-related attitudes (liking) due to too many prominent or not plot-connected product placements. This is a contention that needs to be investigated further. Other moderators that may be considered in this context are movie or program involvement or degree of connectedness with a character (e.g., in a weekly sitcom or in a series of movies, such as the Harry Potter or James Bond movies). This also links to the influence of program characteristics: As brand placements are more obvious and to be expected in certain program genres (e.g., game shows or reality shows) or in certain movies (e.g., James Bond), does this influence their effectiveness?

Another issue that may be related to placement effectiveness is the location of the placement in the course of the film (i.e., primacy or recency effects). Gupta and Gould (2007), for example, uncovered a primacy effect on recall and recognition of brands placed in game shows. For a full movie, the location effect is difficult to isolate, because (especially prominent) placements may be repeated throughout the length of the movie. However, sequence effects of single placements in movies are worthy of further research.

The current study does not account for potential copromotion deals combining the movies with any of the placed brands. The brands in the movies and the movies themselves were not actively promoted during the time of the study. Joint promotion efforts represent an interesting line for future research, to see how integrated marketing communications campaigns might influence brand recognition or brand attitude.

In the present study, only women were involved, and both movies were typical Hollywood romantic comedies. Gould, Gupta, and Grabner-Kräuter (2000) found significant gender and cross-cultural differences regarding reaction to the placement of, for example, ethically charged products. The study should be extended to other demographic segments, other genres (e.g., action movies, thrillers, alternative cinema), other media (e.g., television programs, books, game shows), and different viewing situations to see whether its results can be replicated in different contexts. The extent to which contextual, individual, and cultural differences, as well as other factors such as the general attitude toward brand place-

ment, play a role in the impact of placements are avenues for further research. The present study also used an online survey to contact participants. This could potentially have biased the results due to the biasing effect of different degrees of Internet access in segments of the population studied. However, since the Internet penetration rate is fairly high (77.8%) in Belgium and all "Ladies Movies Nights" participants are young urban women, this is not likely to have had a substantial impact. It should be noted, however, that online surveys do entail limitations that may be overcome by using different contact methods in future studies.

Most brands placed in movies are familiar brands (Brennan and Babin 2004), as was the case in the present study. Familiar brands tend to exhibit stronger associations with their product categories (Lee and Sternthal 1999), making them more accessible in memory (Nedungadi 1990). This may inflate recognition scores in general (Babin and Carder 1996). At the same time, attitudes developed toward familiar brands may be relatively stable, and not easily changed by a single occurrence in a movie (Stammerjohan et al. 2005). Future research could study the extent to which brand placement techniques have different effects for familiar and unfamiliar brands.

The hypotheses regarding the effects of the different types of brand placements were developed using theoretical frameworks such as the Persuasion Knowledge Model, the accessibility-diagnosticity framework, and factors influencing attention. These processing measures were not actually incorporated, however. Future research could more explicitly take into account the processes mediating the effect of different types of brand placements. Other frameworks such as the Elaboration Likelihood Model may also represent interesting angles to study placement characteristics effects (e.g., to what extent are prominence and plot connection connected to central or peripheral processing).

Finally, the present study aimed to make a contribution by conducting a field experiment and studying the delayed effects of prominence and plot connection throughout the course of two entire movies. Although this is a relevant and ecologically valid approach, it also entails the loss of some information on a scene-by-scene basis. A placement may be highly plot connected to a scene (e.g., a character explicitly saying she is thirsty and drinking a soda), without being plot connected to the entire movie. Further breakdown of the analyses on a scene-by-scene basis and more nuanced classifications of plot connection and prominence (e.g., using a seven-point scale as opposed to a dichotomy) would allow us to better understand what is really driving the effects. Although we have investigated one potential mediator of brand attitude effects (brand recognition) others may surely exist. More research is definitely called for, so that both academics and brand managers can come to a better understanding of how brand placements work.

REFERENCES

Ahluwalia, Rohini, and Zeynep Gürhan-Canli (2000), "The Effects of Extensions on the Family Brand Name: An Accessibility-Diagnosticity Perspective," *Journal of Consumer Research,* 27 (3), 371–381.

Atkinson, Claire (2003), "Merger of Advertising and Content Worries Consumers," *Advertising Age,* 74 (1), 1–2.

Babin, Laurie A., and Sheri T. Carder (1996), "Advertising Via the Box Office: Is Product Placement Effective?" *Journal of Promotion Management,* 3 (1/2), 31–51.

Baker, William E. (1999), "When Can Affective Conditioning and Mere Exposure Directly Influence Brand Choice?" *Journal of Advertising,* 28 (4), 31–46.

Balasubramanian, Siva K., James A. Karrh, and Hemant Patwardhan (2006), "Audience Response to Product Placements: An Integrative Framework and Future Research Agenda," *Journal of Advertising,* 35 (3), 115–141.

Bhatnagar, Narmita, Lerzan Aksoy, and Selin A. Malkoc (2004), "Embedding Brands Within Media Content: The Impact of Message, Media, and Consumer Characteristics on Placement Efficiency," in *The Psychology of Entertainment Media: Blurring the Lines Between Entertainment and Persuasion,* L. J. Shrum, ed., Mahwah, NJ: Lawrence Erlbaum, 99–116.

Brennan, Ian, and Laurie A. Babin (2004), "Brand Placement Recognition: The Influence of Presentation Mode and Brand Familiarity," *Journal of Promotion Management,* 10 (1/2), 185–202.

———, Khalid M. Dubas, and Laurie A. Babin (1999), "The Influence of Product-Placement Type and Exposure Time on Product-Placement Recognition," *International Journal of Advertising,* 18 (3), 323–337.

Burke, Raymond R., and Thomas K. Srull (1988), "Competitive Interference and Consumer Memory for Advertising," *Journal of Consumer Research,* 15 (1), 55–68.

Campbell, Margaret C. (1995), "When Attention-Getting Advertising Tactics Elicit Consumer Inferences of Manipulative Intent: The Importance of Balancing Benefits and Investments," *Journal of Consumer Psychology,* 4 (3), 225–254.

———, and Amna Kirmani (2000), "Consumers' Use of Persuasion Knowledge: The Effects of Accessibility and Cognitive Capacity on Perceptions of an Influence Agent," *Journal of Consumer Research,* 27 (1), 69–83.

Cauberghe, Verolien, and Patrick De Pelsmacker (2010), "Advergames: The Impact of Brand Prominence and Game Repetition on Brand Responses," *Journal of Advertising,* 39 (1), 5–18.

Cohen, Jacob (1960), "A Coefficient of Agreement for Nominal Scales," *Educational and Psychological Measurement,* 20 (1), 37–46.

Cowley, Elisabeth, and Chris Barron (2008), "When Product Placement Goes Wrong: The Effects of Program Liking and Placement Prominence," *Journal of Advertising,* 37 (1), 89–98.

d'Astous, Alain, and Francis Chartier (2000), "A Study of Factors Affecting Consumer Evaluations and Memory of Product Placements in Movies," *Journal of Current Issues and Research in Advertising,* 22 (2), 31–40.

———, and Nathalie Séguin (1999), "Consumer Reactions to Product Placement Strategies in Television Sponsorship," *European Journal of Marketing,* 33 (9/10), 896–910.

De Bens, Els, and Hedwig de Smaele (2001), "The Inflow of American Television Fiction on European Broadcasting Channels Revisited," *European Journal of Communication,* 16 (1), 51–76.

De Pelsmacker, Patrick, and Wim Janssens (2007), "A Model for Fair Trade Buying Behaviour: The Role of Perceived Quantity and Quality of Information and of Product-Specific Attitudes," *Journal of Business Ethics,* 75 (4), 361–380.

Deighton, John, Daniel Romer, and Josh McQueen (1989), "Using Drama to Persuade," *Journal of Consumer Research,* 16 (3), 335–343.

Dens, Nathalie, and Patrick De Pelsmacker (2010), "How Advertising Strategy Affects Brand and USP Recall for New Brands and Extensions," *International Journal of Advertising,* 29 (2), 165–194.

Edwards, Steven M., Hairong Li, and Joo-Hyun Lee (2002), "Forced Exposure and Psychological Reactance: Antecedents and Consequences of the Perceived Intrusiveness of Pop-up Ads," *Journal of Advertising,* 31 (3), 83–95.

Feldman, Jack M., and John G. Lynch (1988), "Self-Generated Validity and Other Effects of Measurement on Belief, Attitude, Intention, and Behavior," *Journal of Applied Psychology,* 73 (3), 421–435.

Ferraro, Rosellina, and Rosemary J. Avery (2000), "Brand Appearances on Prime-Time Television," *Journal of Current Issues and Research in Advertising,* 22 (2), 1–15.

Finn, Adam (1988), "Print Ad Recognition Scores: An Information Processing Perspective," *Journal of Marketing Research,* 25 (2), 168–177.

Friestad, Marian, and Peter Wright (1994), "The Persuasion Knowledge Model: How People Cope with Persuasion Attempts," *Journal of Consumer Research,* 21 (1), 1–31.

Gould, Stephen J., Pola B. Gupta, and Sonja 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 (4), 41–58.

Gupta, Pola B., and Stephen J. Gould (2007), "Recall of Products Placed as Prizes Versus Commercials in Game Shows," *Journal of Current Issues and Research in Advertising,* 29 (1), 44–53.

———, and Kenneth R. Lord (1998), "Product Placement in Movies: The Effect of Prominence and Mode on Audience Recall," *Journal of Current Issues and Research in Advertising,* 20 (1), 47–59.

Holbrook, Morris B., and Mark W. Grayson (1986), "The Semiology of Cinematic Consumption: Symbolic Consumer Behavior in *Out of Africa*," *Journal of Consumer Research,* 13 (3), 374–381.

Homer, Pamela M. (2009), "Product Placements: The Impact of Placement Type and Repetition on Attitude," *Journal of Advertising,* 38 (3), 21–31.

Johnstone, Emma, and Christopher A. Dodd (2000), "Placements as Mediators of Brand Salience Within a UK Cinema Audience," *Journal of Marketing Communications,* 6 (3), 141–158.

Karrh, James A. (1998), "Brand Placement: A Review," *Journal of Current Issues and Research in Advertising,* 20 (2), 31–49.

———, Kathy B. McKee, and Carol J. Pardun (2003), "Practitioners' Evolving Views on Product Placement Effectiveness," *Journal of Advertising Research,* 43 (2), 138–149.

Krishnan, H. Shanker (1996), "Characteristics of Memory Associations: A Consumer-Based Brand Equity Perspective," *International Journal of Research in Marketing,* 13 (4), 389–405.

La Ferle, Carrie, and Steven M. Edwards (2006), "Product Placement: How Brands Appear on Television," *Journal of Advertising,* 35 (4), 65–86.

Law, Sharmistha, and Kathryn A. Braun (2000), "I'll Have What She's Having: Gauging the Impact of Product Placements on Viewers," *Psychology and Marketing,* 17 (12), 1059–1075.

Lee, Angela Y., and Brian Sternthal (1999), "The Effects of Positive Mood on Memory," *Journal of Consumer Research,* 26 (2), 115–127.

Lee, Mira, and Ronald J. Faber (2007), "Effects of Product Placement in On-line Games on Brand Memory: A Perspective of the Limited-Capacity Model of Attention," *Journal of Advertising,* 36 (4), 75–90.

Lehu, Jean-Marc, and Etienne Bressoud (2008), "Effectiveness of Brand Placement: New Insights About Viewers," *Journal of Business Research,* 61 (10), 1083–1090.

McCarty, John A. (2004), "Product Placement: The Nature of the Practice and Potential Avenues for Inquiry," in *The Psychology of Entertainment Media: Blurring the Lines Between Entertainment and Persuasion,* L. J. Shrum, ed., Mahwah, NJ: Lawrence Erlbaum, 45–61.

McKechnie, Sally A., and Jia Zhou (2003), "Product Placement in Movies: A Comparison of Chinese and American Consumers' Attitudes," *International Journal of Advertising,* 22 (3), 349–374.

Meyvis, Tom, and Chris Janiszewski (2004), "When Are Broader Brands Stronger Brands? An Accessibility Perspective on the Success of Brand Extensions," *Journal of Consumer Research,* 31 (2), 346–357.

Murry, John P., Jr., John L. Lastovicka, and Surendra N. Singh (1992), "Feeling and Liking Responses to Television Programs: An Examination of Two Explanations for Media-Context Effects," *Journal of Consumer Research,* 18 (4), 441–451.

Nedungadi, Prakash (1990), "Recall and Consumer Consideration Sets: Influencing Choice Without Altering Brand Evaluations," *Journal of Consumer Research,* 17 (3), 263–276.

Newell, Jay, Charles T. Salmon, and Susan Chang (2006), "The Hidden History of Product Placement," *Journal of Broadcasting and Electronic Media,* 50 (4), 575–594.

Ong, Beng Soo, and David Meri (1994), "Should Product Placement in Movies Be Banned?" *Journal of Promotion Management,* 2 (3/4), 159–175.

Perreault, William D., Jr., and Laurence E. Leigh (1989), "Reliability of Nominal Data Based on Qualitative Judgments," *Journal of Marketing Research,* 26 (2), 135–148.

Petty, Richard E., John T. Cacioppo, and David W. Schumann (1983), "Central and Peripheral Routes to Advertising Effectiveness: The Moderating Role of Involvement," *Journal of Consumer Research,* 10 (2), 135–146.

PQ Media (2010), "Global Branded Entertainment Marketing Forecast 2010–2014," available at www.pqmedia.com/brandedentertainmentforecast2010-read.html (accessed December 1, 2012).

Reed, J. D., and Elaine Dutka (1989), "Plugging Away in Hollywood," *Time* (January 2), available at www.time.com/time/magazine/article/0,9171,956646,00.html (accessed December 1, 2012).

Roberts, Daniel S. L., Paul S. Cowen, and Brenda E. MacDonald (1996), "Effects of Narrative Structure and Emotional Content on Cognitive and Evaluative Responses to Film and Text," *Empirical Studies of the Arts,* 14 (1), 33–47.

Roehm, Michelle L., Harper A. Roehm, Jr., and Derrick S. Boone (2004), "Plugs Versus Placements: A Comparison of Alternatives for Within-Program Brand Exposure," *Psychology and Marketing,* 21 (1), 17–28.

Russell, Cristel A. (1998), "Toward a Framework of Product Placement: Theoretical Propositions," *Advances in Consumer Research,* 25 (1), 357–362.

——— (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.

———, Andrew T. Norman, and Susan E. Heckler (2004), "The Consumption of Television Programming: Development and Validation of the Connectedness Scale," *Journal of Consumer Research,* 31 (1), 150–161.

Schneider, Lars-Peter, and Bettina B. Cornwell (2005), "Cashing in Crashes Via Brand Placement in Computer Games," *International Journal of Advertising,* 24 (3), 321–343.

Singh, Surendra N., and Michael L. Rothschild (1983), "Recognition as a Measure of Learning from Television Commercials," *Journal of Marketing Research,* 20 (3), 235–248.

Skowronski, John J., and Donal E. Carlston (1987), "Social Judgment and Social Memory: The Role of Cue Diagnosticity in Negativity, Positivity, and Extremity Biases," *Journal of Personality and Social Psychology,* 52 (4), 689–699.

Smit, Edith G., Eva A. van Reijmersdal, and Peter C. Neijens (2009), "Today's Practice of Brand Placement and the Industry Behind It," *International Journal of Advertising,* 28 (5), 761–82.

Stammerjohan, Claire, Charles M. Wood, Yuhmiin Chang, and Esther Thorson (2005), "An Empirical Investigation of the Interaction Between Publicity, Advertising, and Previous Brand Attitudes and Knowledge," *Journal of Advertising,* 34 (4), 55–67.

Steortz, Eva M. (1987), "The Cost Efficiency and Communication Effects Associated with Brand Name Exposure Within Motion Pictures," master's thesis, West Virginia University.

van Reijmersdal, Eva A., Peter C. Neijens, and Edith G. Smit (2007), "Effects of TV Brand Placement on Brand Image," *Psychology and Marketing,* 24 (5), 403–420.

———, ———, and ——— (2009), "A New Branch of Advertising: Reviewing Factors That Influence Reactions to Product Placement," *Journal of Advertising Research,* 49 (4), 429–449.

———, Edith G. Smit, and Peter C. Neijens (2010), "How Media Factors Affect Audience Responses to Brand Placement," *International Journal of Advertising,* 21 (2), 279–302.

Webb, Peter H. (1979), "Consumer Initial Processing in a Difficult Media Environment," *Journal of Consumer Research,* 6 (3), 225–236.

Wouters, Marijke, and Patrick De Pelsmacker (2010), "Brand Placement in Scripted and Non-Scripted Belgian and US Programs on Belgian Prime Time Television," *Journal of Marketing Communications,* 17 (5), 299–318.

Zajonc, Robert B. (1968), "Attitudinal Effects of Mere Exposure," *Journal of Personality and Social Psychology,* 9 (2, Part 2), 1–27.

Zhao, Xinshu, John G. Lynch, Jr., and Qimei Chen (2010), "Reconsidering Baron and Kenny: Myths and Truths About Mediation Analysis," *Journal of Consumer Research,* 37 (2), 197–206.

APPENDIX 1

Bride Wars: Story Line and Placements

In Manhattan, the lawyer Liv and the school teacher Emma have been best friends since their childhood. Their boyfriends propose to them on the same day and they plan their wedding parties at the Plaza Hotel, using the services of the famous Marion St. Claire. However, due to Marion's secretary's mistake, their weddings are scheduled for the same day. Neither agrees to change the date and they become enemies, trying to sabotage the wedding party of the rival.

a. Strong plot connection, prominent placement: Plaza Hotel
Auditory mentions: 11; visual shots: 3 (plus interior).
Example (00:01:56): Zoom-in, 9 seconds. Voice-over: "It all began at the Plaza Hotel 20 years ago in the month of June. . . ."

b. Weak plot connection, prominent placement: iPod
Auditory mentions: 3; visual shots: 1.
Example (00:05:33): Liv: "Okaaay, slow down. Why can't we run with iPods?"

c. Strong plot connection, subtle placement: Tiffany's
Auditory mentions: 2; visual shots: 1.
Example (00:09:11): Liv: "[Gasps] Tiffany box." Emma: "You're getting . . ." Both together: "Engaged!" Liv [jumps ecstatically]: "I'm getting engaged!"

d. Weak plot connection, subtle placement: DHL
Auditory mentions: 0; visual shots: 1.
Example (00:42:30): Visual in background, no auditory reference.

APPENDIX 2

The Women: **Story Line and Placements**

When clothing designer Mary Haynes finds out her husband, Steven, is having an affair with a younger woman (Crystal Allen), who is a perfume salesgirl at Saks Fifth Avenue, she is devastated. Despite the exhortations of her mother (Catherine) to keep quiet about what she knows and take a vacation, Mary confronts, first, Crystal and, then, Steven before asking for a divorce. Her friends Sylvie, Edie, and Alex join forces to support their spurned friend, while also struggling through their own romantic and professional problems. Fired from her job by her own father, Mary gets a makeover, decides to open her own clothing design firm and begins to get her life in order again.

a. Strong plot connection, prominent placement: Saks Fifth Avenue
Auditory mentions: 11; visual shots: 1 (plus interior).
Example (01:40:42): Mary (incredulous): "Saks Fifth Avenue is gonna order my clothes?"

b. Weak plot connection, prominent placement: Lexus
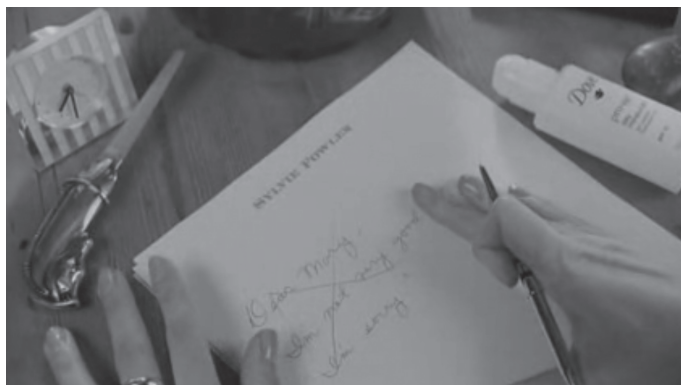Auditory mentions: 1; visual shots: 5.
Example (00:08:21): No dialogue. Car on screen, 19 seconds (car on road, pulling up at house, Meg Ryan and dog getting out).

c. Strong plot connection, subtle placement: Botox
Auditory mentions: 1; visual shots: 0.
Example (01:35:40): Catherine: "Don't be bitter, Mary; it leads to Botox."

d. Weak plot connection, subtle placement: Dove
Auditory mentions: 0; visual shots: 2.
Example (01:18:19): Visual shot on side of screen, 3 seconds. No dialogue.