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"This program contains product placement": Effects of sponsorship disclosure on television viewers' responses

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CHAPTER 5

THE ROLE OF DISCLOSURE TYPE AND AWARENESS

ABSTRACT

This eye tracking experiment ($N = 149$) investigates the influence of different ways of disclosing brand placement on viewers' visual attention, the use of persuasion knowledge, and brand and program responses. The results show that (1) a combination of text ("This program contains product placement") and a PP ("product placement") logo is most effective in enhancing the recognition of advertising, and a logo alone is least effective; (2) this effect is mediated by viewers' visual attention to the disclosure and the brand placement; and (3) the recognition of advertising consequently increases brand memory and decreases brand attitudes but does not influence program trustworthiness.

INTRODUCTION

The proliferation of brand placement in television programs has been a cause of concern for policy makers, consumer organizations, and academics because it may violate the right of consumers to know when they are being subjected to an advertisement (e.g., Cain, 2011; Lee, 2008; Nebenzahl & Jaffe, 1998). To guarantee fair communication and to protect the consumer from unaware persuasion, the EU developed regulations that obligate broadcasters to disclose brand placement in TV programs. The implementation of these brand placement disclosures (also referred to as sponsorship disclosures) differs between countries, although they all have the same goal: To help consumers distinguish commercial content from editorial content and recognize embedded advertising in TV programs (Cain, 2011). In other words, brand placement disclosures aim to activate consumers' persuasion knowledge. Earlier research has shown that brand placement disclosure can indeed enhance the recognition of sponsored program content as advertising (Boerman, Van Reijmersdal, & Neijens, 2012b). However, no study to date has compared the effects of the different types of disclosure on the recognition of advertising. The first aim of this study is therefore to test which type of disclosure currently used in the EU (i.e., a PP [product placement] logo, text stating "This program contains product placement," and a combination of the logo and text) most effectively enhances the recognition of advertising.

Furthermore, to better understand why disclosures are effective, it is important to investigate the processes underlying disclosure effects. A prior study on brand placement disclosures demonstrated that disclosures only influence the use of persuasion knowledge when viewers recall seeing the disclosure (Boerman, Van Reijmersdal, & Neijens, 2012a). This was tested by comparing the level of activation of persuasion knowledge of viewers who recalled the disclosure to that of viewers who did not. Although this study shows disclosure effects depend on viewers' memory of the disclosure, it does not show the processes that occur while viewers watch the program. Hence, it is not known whether viewers' attention to different disclosure types may mediate their effects on the use of persuasion knowledge and how viewers' attention to the disclosure may affect viewers' attention to brand placement.

Moreover, prior studies used self-reported measures of memory to indicate viewers' attention to brand placements and disclosures (e.g., Boerman et al., 2012a, 2012b; Campbell, Mohr, & Verlegh, 2013; Tessitore & Geuens, 2013; Van Reijmersdal, Tutaj, & Boerman, 2013). These self-reported measures have the disadvantage that viewers who process messages with relatively little attention are not likely to remember them in the context of a recall task (Slater, 2004). Because attention is not always active or "conscious," physiological measures of attention have been argued to be more reliable (Krugman, 1965; Rosbergen, Pieters, & Wedel, 1997). In particular, integrated persuasive messages, such as brand placement and disclosures, can be processed implicitly or heuristically and thus call for implicit measures of processing (Auty & Lewis, 2004; Smit & Neijens, 2011). Therefore, in this study, we use eye tracking to estimate viewers' visual attention while



watching the program. Eye tracking is particularly useful because it enables us to unobtrusively and directly measure viewers' attention not only to a program but also to specific visual elements within a program, such as a disclosure or brand placement. In this way, we can measure which disclosure type is best at attracting attention and how long viewers attend to the disclosure and the brand placement.

Although eye tracking has been used in previous research to indicate consumers' attention to other types of warnings, such as product warnings in print advertisements (Fox, Krugman, Fletcher, & Fischer, 1998; Krugman, Fox, Fletcher, Fischer, & Rojas, 1994), no study has used this technology to examine the role of attention in the effectiveness of a disclosure in a television program. This focus on attention is of particular interest because prior research claimed that it is more likely that people activate and use their persuasion knowledge when they process the message elaborately (Buijzen, Van Reijmersdal, & Owen, 2010), and elaborate processing requires high levels of attention to the message (Petty, Cacioppo, Strathman, & Priester, 2005). By examining the mediating role of attention for the activation of persuasion knowledge, this study thus provides an important theoretical contribution to the Persuasion Knowledge Model. The second aim of this study is to test the processes that precede the recognition of advertising by investigating what viewers visually attend to while watching a TV program containing a disclosure and brand placement.

Additionally, the recognition of advertising induced by a brand placement disclosure may have consequences for viewers' responses to the brand and program. When the manipulative intent of a message is inferred, a change of meaning can occur, and the viewer may adopt a more critical processing style, which may influence the evaluation of the sender (Campbell, 1995; Campbell & Kirmani, 2000; Wentzel, Tomczak, & Herrmann, 2010), in this case, the brand and program. Prior studies have indeed demonstrated that brand placement disclosures affect brand responses, such as brand memory and brand attitude (e.g., Boerman et al., 2012b; Campbell et al., 2013; Van Reijmersdal et al., 2013). This effect is likely to be mediated by the activation of levels of persuasion knowledge such as the recognition of advertising (Boerman et al., 2012b). Moreover, because disclosures inform the audience about advertising that is integrated in a traditionally noncommercial TV program, the realization that the program also has commercial purposes may cause viewers to feel betrayed or deceived by the program. Therefore, the recognition of the advertising embedded in the program may backfire on the program by affecting its perceived trustworthiness. In addition, as different disclosure types may be more or less effective at enhancing the recognition of advertising, the consequential effects of different disclosures on brand and program responses may vary. Therefore, our third aim is to investigate how brand placement disclosure types affect viewers' brand and program responses. By doing so, we attempt to replicate earlier findings that brand placement disclosures affect viewers' brand responses, and to extend our knowledge by comparing the effects of different disclosure types, by testing their effects on program trustworthiness, and by assessing the mediating role of viewers' visual attention and the recognition of advertising.

Altogether, we examine the effects of different disclosure types by testing viewers' visual attention to the disclosure and the brand placement and, subsequently, their recognition of the brand placement as advertising (i.e., the activation of persuasion knowledge). Additionally, we explore the consequential effects of the recognition of advertising on brand memory, brand attitude, and program trustworthiness.

BRAND PLACEMENT DISCLOSURE REGULATIONS

The European Audiovisual Media Services Directive obligates broadcasters to disclose brand placement in TV programs, and specifically states:

“Viewers shall be clearly informed of the existence of product placement. Programmes containing product placement shall be appropriately identified at the start and the end of the programme, and when a programme resumes after an advertising break, in order to avoid any confusion on the part of the viewer”

(Audiovisual Media Services Directive, 2010, p. 17).

Although this regulation clearly expresses the intent of brand placement disclosure, it does not mention *how* brand placement should be disclosed. As a result, the way disclosures are implemented in TV programs differs between countries. For instance, the UK, France, and Belgium use PP logos, whereas Poland and the Netherlands use text (e.g., “This program contains product placement”).

The current sponsorship identification rules in the US also obligate the announcement of brand placement. Section 317 of the Communications Act of 1934, as amended, 47 U.S.C. § 317, requires broadcasters to disclose to their listeners or viewers “if matter has been aired in exchange for money, services or other valuable consideration” (Federal Communications Commission [FCC], 2013). These rules require one announcement, which has to be made either at the beginning or end of a broadcast. In practice, identifying the sponsors within a show's end credits satisfies the current disclosure rules, and these disclosures are often unreadable and incomprehensible (Ong, 2011). Therefore, the FCC proposed new revised regulations to make sponsorship identification more obvious to consumers (FCC, 2008), and consumer organizations suggested various ways in which to disclose brand placement (Cain, 2011). Hence, although this study focuses on the specific disclosures used in the EU, the findings of this study can be useful for the development of effective brand placement disclosures in the US.

VISUAL ATTENTION TO DISCLOSURE TYPES AND BRAND PLACEMENT

Research on warning labels (e.g., on products) provides an information-processing model that represents the sequential stages of information processing that consumers engage in when they are exposed to warnings (e.g., Wogalter & Laughery, 1996). The first stage in



this model is attention: if a warning is not noticed, it cannot produce the intended effects (Goldman, 2006; Wogalter & Laughery, 1996). Similarly, prior research has demonstrated that the viewers' recall of a brand placement disclosure is crucial for its effectiveness (Boerman et al., 2012b).

Whether viewers pay attention to a disclosure may depend on its characteristics. Haramundanis (1996) argues that icons can be useful as reminders, but only after people have learned their meaning. Therefore, she argues that icons cannot stand alone and need descriptive, supporting text in order to be understood (Haramundanis, 1996). Studies on the use of icons to inform people online emphasize that an icon only is less effective in communicating information compared to text or a combination of an icon and text (Leon et al., 2012; Wiedenbeck, 1999). With respect to brand placement disclosure, a PP logo is similar to an icon. Thus, a PP logo is most likely less clear to viewers than a textual disclosure. Prior research has indicated that the comprehensibility of a PP logo can be enhanced by providing a verbal label that mentions "product placement" (Tessitore & Geuens, 2013). Hence, a PP logo may be less effective and attract less attention than a textual disclosure or a combination of the logo and text.

In addition, there is the obvious difference in size: A PP logo is usually smaller than text, and a combination of the two is evidently the largest. The size of elements has been repeatedly shown to be positively related to attention (e.g., Rosbergen et al., 1997). Therefore, we hypothesize:

H1: The type of disclosure influences viewers' attention to the disclosure, with a PP logo attracting the least attention, followed by text ("This program contains product placement"), and a combination of the two attracting the most attention.

RECOGNITION OF ADVERTISING

The Persuasion Knowledge Model (Friestad & Wright, 1994) provides a conceptual basis for understanding how consumers respond to persuasive messages such as advertising. Persuasion knowledge is defined as consumers' theories about persuasion, including beliefs about the effectiveness and appropriateness of marketers' motives, strategies, and tactics as well as the ways of coping with persuasion attempts (Campbell & Kirmani, 2000). When consumers recognize the persuasive intent of a message, they can cope with this attempt by drawing on relevant persuasion knowledge to select and execute coping tactics believed to be effective and appropriate (Friestad & Wright, 1994). Because this coping behavior only occurs when consumers realize that a message has a persuasive intent, the ability to differentiate the persuasive message (such as advertising) from other content is considered the first level of persuasion knowledge (John, 1999; Rozendaal, Lapierre, Van Reijmersdal, & Buijzen, 2011). As brand placement disclosures aim to help viewers distinguish commercial content from editorial content, the recognition of advertising is an important factor when evaluating the effectiveness of disclosures.

Prior persuasion knowledge research has demonstrated that whether consumers use persuasion knowledge in response to a persuasive message depends on their personal focus (Kirmani & Zhu, 2007), the accessibility of ulterior persuasion motives, and their cognitive capacity (Campbell & Kirmani, 2000). In addition, the salience of the manipulative intent of the message itself also determines consumers' use of persuasion knowledge (Kirmani & Zhu, 2007; Main, Dahl, & Darke, 2007). When the persuasive intent of a message is not salient, the disclosure of this intent can enhance the activation and use of persuasion knowledge. For instance, research on consumers' use of persuasion knowledge during interpersonal communication with a salesperson has revealed that priming the ulterior persuasion motives prior to a sales interaction increases the use of persuasion knowledge (Campbell & Kirmani, 2000). Additionally, prior research on brand placement disclosures demonstrated that disclosures might indeed activate different dimensions of persuasion knowledge, such as the recognition of advertising (Boerman et al., 2012b; Campbell et al., 2013).

However, a disclosure only affects the use of persuasion knowledge of viewers who recall seeing the disclosure (Boerman et al., 2012a). Thus, viewers' attention while watching the program may play an important mediating role in the effectiveness of brand placement disclosures. The importance of attention is also stressed in persuasion knowledge and persuasion processing theories. Viewers are most likely to apply their persuasion knowledge when they process the message elaborately (Buijzen et al., 2010; Campbell & Kirmani, 2000). Elaborate processing requires high levels of attention to the message (Petty et al., 2005), which in this case is the brand placement the disclosure is informing viewers about. This would mean that the amount of attention viewers pay to the brand placement will most likely increase the likelihood that they will recognize it as advertising.

Viewers' attention to the brand placement, in turn, is most likely influenced by the brand placement disclosure. As the attention to the disclosure increases, so does its opportunity to effectively communicate its message. Because a disclosure informs the viewer about upcoming brand placements in the program, it may function as a cue or information prime for the brand's appearance in the program (Bennett, Pecotich, & Putrevu, 1999). In this way, the disclosure makes viewers aware of the upcoming brand placement in a program, which makes them pay greater attention to it. Subsequently, this greater attention results in a higher likelihood that they recognize it as advertising. Therefore, we propose that the attention that viewers pay to the disclosure and subsequently to the brand placement increases the likelihood that they recognize it as advertising:

H2: A brand placement disclosure increases viewers' recognition of advertising; this effect is mediated by their visual attention to the disclosure and the brand placement.



EFFECTS ON BRAND AND PROGRAM RESPONSES

Brand memory

Because a brand placement disclosure can influence viewers' attention while watching a program and enhance the recognition of advertising, it may have important consequential effects on viewers' brand responses. A relevant brand response for both advertisers and legislators is viewers' memory of the brand. Prior research has, on the one hand, demonstrated that the disclosure of brands in movies and TV programs directly increases viewers' brand recall (Bennett et al., 1999; Boerman et al., 2012b; Van Reijmersdal et al., 2013). On the other hand, Campbell et al. (2013) found that the top-of-mind awareness of the brand was lower after a brand placement disclosure when compared to no disclosure. They argued that viewers correct their brand recall (by intentionally not mentioning the brand) to avoid the influence of the brand placement. In addition, they showed that the extent to which participants infer persuasive influence of the placement mediated the effect of disclosure on brand recall. Thus, viewers' persuasion knowledge, such as the recognition of advertising, could be an important mediator of the effect of a disclosure on brand memory.

This notion is consistent with the Limited Capacity Model of Motivated Mediated Message Processing (LC4MP), which argues that the memory of a message is a composite of the outcome of three sub-processes of information processing: encoding (i.e., constructing a mental representation of the message in working memory), storage (i.e., linking the message to information in the working memory) and retrieval (i.e., reactivating specific piece of information in working memory; Lang, 2006). Because the application of persuasion knowledge requires elaborate processing of the message (Buijzen et al., 2010), the recognition of advertising may increase the encoding, storing, and retrieval of the brand in the program. Thus, a brand placement disclosure increases the likelihood that viewers attend to the brand placement and elaborate upon it to recognize it as advertising. Because of this elaborate processing of the brand placement, chances are high that viewers allocate processing resources to encode, store, and retrieve the brand placement. These processes make the brand placement and the information closely related to it more active in working memory. Because the brand is part of the brand placement and hence closely related, elaborate processing of the brand placement may thus lead to better brand memory.

Brand attitude

The activation of persuasion knowledge may also change viewers' evaluation of the brand. When persuasion knowledge is activated, people may adopt a more critical processing style and evaluate the persuasive message suspiciously (Campbell, 1995; Campbell & Kirmani, 2000; Wentzel et al., 2010). As a result, the activation of persuasion knowledge can lead to diminished persuasion (Buijzen et al., 2010; Greenwald & Leavitt, 1984; Petty, Ostrom, & Brock, 1981). This process is related to the reactance theory (Brehm, 1966), which argues that people want to maintain their freedom and do not want to be manipulated.

Hence, people tend to resist persuasion attempts when they recognize them as such (Main et al., 2007; Sagarin, Cialdini, Rice, & Serna, 2002; Wei, Fischer, & Main, 2008).

Research has shown that the activation of persuasion knowledge has a negative effect on consumers' attitudes toward the advertisement and brand (Campbell, 1995) and leads to decreased interest in the featured items (Brown & Krishna, 2004). Furthermore, various studies have demonstrated that disclosures of persuasive intent can induce these negative results. For example, forewarning research showed that disclosing the persuasive intent of a (noncommercial) message leads to resistance and diminished persuasion (e.g., Chen, Reardon, Rea, & Moore, 1992; Quinn & Wood, 2004). Additionally, earlier studies on the disclosure of brands embedded in radio shows (Wei et al., 2008), forewarning of the persuasive intent of a print ad (Lee, 2010), and online ad breaks (An & Stern, 2011) all demonstrated negative disclosure effects on brand evaluations. Moreover, the disclosure of brand placements was also shown to negatively affect brand attitudes (Boerman et al., 2012b; Campbell et al., 2013), product claim acceptance (Dekker & van Reijmersdal, 2013), and purchase intention (Tessitore & Geuens, 2013).

Hence, as a result of the recognition of advertising, a disclosure may also affect viewers' evaluation of the brand that was integrated into the program: when viewers are aware of the brand placement attempting to persuade them, they may counteract this and adapt their attitudes toward the brand, meaning that the disclosure could mitigate the persuasive effect of the brand placement. Thus, based on persuasion knowledge and reactance theories and prior research, we expect that the recognition of program content as advertising induced by the disclosure negatively affects viewers' brand attitude.

Program trustworthiness

The recognition of advertising in a program stimulated by a brand placement disclosure may also lead to less favorable attitudes toward the vehicle that incorporated the embedded advertising. According to the change of meaning principle (Friestad & Wright, 1994), becoming conscious of a persuasive attempt redefines the nature of the interaction with the sender. When the manipulative intent of a message is inferred, people evaluate the attempt suspiciously and adopt a more critical processing style, which influences the evaluation of the sender (Campbell, 1995; Campbell & Kirmani, 2000; Wentzel et al., 2010). In line with this reasoning, prior studies showed that the activation of persuasion knowledge leads to lower perceptions of the salesperson's sincerity (Campbell & Kirmani, 2000) and trustworthiness (Main et al., 2007). Because brand placement is incorporated in a program, the program can be seen as the sender of the persuasive message. When viewers recognize program content as advertising, they realize that the intent of the program is not only to entertain or inform but also to persuade. Given that people do not want to be manipulated (Brehm, 1966), the realization that the program also has commercial purposes may lead to a sense of betrayal and deception. The recognition of the advertising embedded in the program may then backfire on the program, and viewers may perceive the program as less honest and trustworthy. A study on embedded advertising in a radio show revealed



that the activation of persuasion knowledge (by telling participants that a brand paid for the show) led to less favorable evaluations of the radio show, the host of the show, and the radio station (Wei et al., 2008).

Altogether, when a brand placement disclosure increases the recognition of advertising, this activation of persuasion knowledge may subsequently affect viewers' responses to the brand and program. Because the effect of a disclosure on the recognition of advertising is likely to be mediated by viewers' visual attention to the disclosure and the brand placement, we propose an indirect effect:

H3: A brand placement disclosure has an indirect effect on viewers' (a) brand memory, (b) brand attitude, and (c) the perceived program trustworthiness; this effect is mediated by viewers' visual attention to the disclosure and brand placement and the recognition of advertising.

METHOD

Participants and procedure

To test these hypotheses, we conducted an experiment ($N = 180$ students from a Dutch university, $M_{\text{age}} = 21.78$; 73% female) using an eye tracker to measure participants' visual attention while watching a TV program. The between-subjects experimental design included four conditions: a program without a brand placement disclosure, and three disclosure conditions, namely, a PP logo, a text reading "This program contains product placement" and a combination of the two conditions. Participants were randomly assigned to one of conditions. Regardless of its type, the brand placement disclosure was shown for six seconds at the right upper corner. This was chosen because earlier research showed that a disclosure that is displayed for six seconds is more effective compared to a disclosure that is displayed for three seconds (Boerman et al., 2012b). All types of disclosures were displayed at the beginning of the program after 24 seconds, just after the opening leader.

Two participants were excluded from the analyses due to technical problems, leaving a sample of 178 participants (no disclosure $n = 29$, logo $n = 50$, text $n = 50$, text+logo $n = 49$). Additionally, because there were no data for the attention to the disclosure (the first mediator) for the no-disclosure condition, this group was not taken into account in the serial multiple mediation models.

Participants were recruited through posters and flyers posted throughout the university building and were told that they were participating in an eye tracking study on how people watch TV. Participants were first asked to read an introduction text and to sign an informed consent. They were then asked to sit behind the screen with the eye tracker and to make themselves comfortable. Eye tracking was conducted using the SMI RED eye tracker with a gaze sample rate of 120 Hz per second. This eye tracker was attached to a 22-inch screen, which was placed 23-32 inches from the participant. For calibration, participants had to follow a moving black dot with their eyes. After calibration, participants watched an episode of a TV program. Afterwards, participants filled out

the questionnaire on a computer in a cubicle. This questionnaire started with questions related to the program (in order: program familiarity, program viewing frequency, episode familiarity, attention to the program, program involvement, and program trustworthiness) followed by, among others, advertising recognition and the brand-related questions (i.e., brand recall, brand familiarity, and brand attitude). Finally, participants were asked about their gender and age. After the questionnaire, participants were debriefed, thanked and given either five euros or a research credit for their participation.

Stimulus materials

All participants watched a shortened episode of *Grijpstra & De Gier*, a Dutch police series about two officers, which lasted seven minutes and 38 seconds and was about one of the officer's new girlfriend. With regard to the brand placement, there were two moments in which the coffee brand Nescafé was visible in the episode. During the first placement, the two officers stood in front of a coffee machine while getting coffee and having a conversation. The brand name Nescafé was clearly readable on the coffee machine for a total of 11 seconds. The second placement occurred during a conversation between the officers and their assistant. The assistant held a cardboard coffee cup with the brand Nescafé on it close to his face and sipped from the cup. The cup with the brand was visible for a total of 14 seconds.

Measures

The eye tracking data were prepared and exported using the SMI BeGaze software. To determine the time viewers' eyes were directed at the disclosure and the brand placements, we created three Areas of Interest (AOIs): one for each disclosure, one for the first brand placement and one for the second brand placement. Because of possible noise in the eye tracking data and possible peripheral attention (see, e.g., Purucker, Landwehr, Sprott, & Herrmann, 2013), the surface size of the AOIs were 300% of the actual disclosure or brand name. Visual attention to the AOIs was estimated by the fixation time (the sum of all fixation durations) in seconds inside the AOI; a fixation was measured when the eyes stayed at a particular point for a minimum of 80 milliseconds. Research has demonstrated the validity of fixation time as an indicator of attention (e.g., Christianson, Loftus, Hoffman, & Loftus, 1991).

Visual attention to the disclosure and the brand placement

Participants' *visual attention to the disclosure* was measured by the fixation time in seconds inside the disclosure AOI ($M = 0.70$, $SD = 0.82$). In addition, we created a dummy variable in which participants scored 0 if they did not fixate on the disclosure AOI and 1 if they fixated at least once on the AOI (in total, 63% fixated on one of the disclosures). *Visual attention to the brand placement* was reported by the total fixation time in seconds inside the AOIs of the first and second brand placement ($M = 1.40$, $SD = 1.13$).



Recognition of advertising

Viewers' recognition of the advertising in the program (i.e., the activation of the first level of persuasion knowledge) was measured by asking the participants to indicate on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) to what extent they agreed with the statement: "The episode of *Grijpstra & De Gier I* just watched contained advertising" ($M = 4.91$, $SD = 2.21$). The same measure was used by Boerman et al. (2012b) and is based on measures used to estimate consumers' ability to recognize content as advertising (e.g., Rozendaal, Buijzen, & Valkenburg, 2010; Van Reijmersdal, Neijens, & Smit, 2005).

Brand and program responses

Brand memory was measured by asking participants whether they recalled seeing any brands in the episode of *Grijpstra & De Gier*. If they answered "yes," they were given the option to indicate which brands. Brand recall was coded 1 (*recalled Nescafé*) or 0 (*did not recall any brands or recalled an incorrect brand*). Approximately half of the participants (48%) correctly recalled seeing Nescafé. *Brand attitude* was measured using three 7-point semantic differential scales: bad/good, dislike/like and negative/positive (e.g., Bruner, 2009; Campbell, 1995). The mean score of the three items was used as a measurement of brand attitude (Eigenvalue = 2.66; explained variance = 88.49%; Cronbach's alpha = .93; $M = 4.51$, $SD = 1.05$). To measure the perceived *program trustworthiness*, participants were asked to what extent they found the episode of *Grijpstra & De Gier* honest, trustworthy, and convincing. These items were based on a scale measuring source trustworthiness (Ohanian, 1990). The mean score for the three items was used to represent perceived program trustworthiness (Eigenvalue = 2.00; explained variance = 66.57%; Cronbach's alpha = .73, $M = 4.35$, $SD = 0.92$).

Control variables

The questionnaire included several control variables to ensure that the effects of disclosure type were not caused by other differences between the experimental groups. To measure participants' *program familiarity* and *program viewing frequency*, we asked them whether they were familiar with the television program *Grijpstra & De Gier* (0 = *no*, 1 = *yes*) and how many episodes (of a total of 46 episodes divided over 5 seasons aired between 2004 and 2007) they had watched entirely or partially. Approximately half of the participants (51%) did know the program, and on average, they had seen five episodes ($M = 5.17$, $SD = 6.67$). The participants who indicated that they were familiar with the program were also asked whether they had ever seen the episode shown in the experiment before. Approximately 2% were familiar with the episode. Furthermore, all participants were asked to rate how attentively they had just watched the episode on a scale from 1 (*absolutely not attentive*) to 7 (*very attentive*; self-reported *attention to the program*; $M = 5.79$, $SD = 0.94$). We measured *program involvement* using the mean of the ten 7-point semantic differential scales from Zaichkowsky's (1994) personal involvement inventory (Eigenvalue = 5.50; explained variance = 54.99%; Cronbach's alpha = .91, $M = 4.32$, $SD = 0.86$). Furthermore, we measured

participants' *brand familiarity* ("Do you know the brand Nescafé?" 0 = no, 1 = yes) and *brand use* ("How often do you drink Nescafé coffee?" 1 = never, 2 = monthly, 3 = weekly, 4 = daily one cup, 5 = daily more than one cup). Most participants (98%) were familiar with the brand Nescafé, but 69% said that they never drink Nescafé coffee, whereas 10% said that they drink Nescafé weekly or more often. Hence, brand use was dichotomized (0 = never, 1 = drinks Nescafé). Additionally, we asked participants to indicate on a 7-point scale (1 = strongly disagree, 7 = strongly agree) to what extent they were interested in coffee (*product interest*; $M = 4.13$, $SD = 2.10$).

RESULTS

Randomization

The experimental groups did not differ with respect to gender, $\chi^2(2) = 0.16$, $p = .924$, age, $F(2, 146) = 1.21$, $p = .301$, brand familiarity, $\chi^2(2) = 0.50$, $p = .779$, brand use, $\chi^2(2) = 1.39$, $p = .498$, and product interest, $F(2, 146) = 2.50$, $p = .085$. With regard to the program, there were no differences between the experimental groups in participants' program familiarity, $\chi^2(2) = 0.28$, $p = .868$, program viewing frequency, $F(2, 146) = 0.89$, $p = .417$, episode familiarity, $\chi^2(2) = 2.03$, $p = .362$, attention to the program, $F(2, 146) = 1.29$, $p = .233$, and program involvement, $F(2, 146) = 1.23$, $p = .296$. Gender, brand use, product interest, and attention to the program were included as covariates in all analyses to control for any confounding effects.

Descriptive statistics

Table 1 shows the descriptive statistics for all variables for the experimental groups. There are no direct significant differences between the groups except with regard to visual attention to the disclosure type (see next section) and the recognition of advertising, $F(3, 170) = 17.98$, $p = .013$, $\eta^2 = .06$. The lack of significant differences is likely because the effects of the disclosure are mediated by viewers' visual attention to the disclosure.

Visual attention to disclosure types

To test the amount of attention participants paid to the different disclosure types, we ran an ANCOVA with the disclosure type as the independent variable, visual attention to the disclosure as the dependent variable, and gender, brand use, product interest, and attention to the program as covariates. The results (see Table 1) show a significant difference in the attention to the types of disclosure, $F(2, 142) = 18.08$, $p < .001$, $\eta^2 = .37$. Post-hoc pairwise comparisons using the Bonferroni correction demonstrate significant differences between the logo ($M_{\text{logo}} = 0.04$, $SD_{\text{logo}} = 0.18$) and the text ($M_{\text{text}} = 0.90$, $SD_{\text{text}} = 0.69$; $p < .001$) and between the logo and the combination of the text and the logo ($M_{\text{text+logo}} = 1.19$, $SD_{\text{text+logo}} = 0.91$; $p < .001$). Additionally, the text+logo combination attracted more visual attention than the text ($p = .032$).



Table 1 Descriptive statistics for the experimental conditions

	No disclosure	Logo	Text	Text+Logo
Visual attention to disclosure	n.a.	0.04 (0.18) ^a	0.90 (0.69) ^b	1.19 (0.91) ^c
Visual attention to brand placement	1.26 (1.17) ^a	1.17 (0.94) ^a	1.62 (1.22) ^a	1.42 (1.19) ^a
Recognition of advertising	4.17 (2.33) ^{ab}	4.20 (2.40) ^a	5.48 (1.88) ^b	5.04 (2.17) ^{ab}
Brand memory	37.9% ^a	40.0% ^a	60.0% ^a	42.9% ^a
Brand attitude	4.74 (1.12) ^a	4.27 (0.94) ^a	4.57 (1.01) ^a	4.69 (1.16) ^a
Program trustworthiness	4.56 (0.85) ^a	4.40 (0.87) ^a	4.42 (0.89) ^a	4.22 (1.01) ^a

Note Visual attention is fixation time in seconds; brand memory represents the percentage of participants who did recall the brand; all other variables are scaled 1 - 7. $N = 178$: no disclosure $n = 29$, logo $n = 50$, text $n = 50$, text+logo $n = 49$.

^{a b c} Means with a different superscript in the same row differ significantly at $p < .05$.

In addition to the amount of attention, we tested which disclosure type was most likely to be fixated on. The results from a Chi-square analysis are comparable to the ANCOVA, $\chi^2(2) = 98.43, p = .000$. Only 8% of the participants fixated on the logo, 88% fixated on the text, and 94% fixated on the combination of the text and logo. These results support hypothesis 1: the PP logo attracted the least visual attention, followed by the text, and a combination of the two attracted the most attention.

Recognition of advertising

To test the effects of the brand placement disclosures on the recognition of advertising mediated by viewers' visual attention to the disclosure and to the brand placement (hypothesis 2), we used Hayes' PROCESS macro (Hayes, 2012). This macro uses an ordinary least squares or logistic regression-based path analytical framework to estimate the direct and indirect effects in mediator models. In addition, the macro implements bootstrap methods for inference about indirect effects in mediation models. Thus, other than Baron and Kenny's method (1986), this macro provides a formal test of indirect effects when there is no direct effect of the independent variable and the dependent variable (Hayes, 2009). This makes PROCESS particularly suited for the serial multiple mediation model in this study because the model only assumes an indirect effect of the brand placement disclosure on the recognition of advertising, on brand and program responses and no direct effect. All analyses used 10,000 bootstrap samples to estimate the bias-corrected bootstrap confidence intervals (BCBCI).

To test the differences between the three disclosure types, we created dummy variables for each. We ran three separate serial multiple mediation analyses with one of the disclosure types as independent variable and another as a covariate, making the excluded

type the reference category. In the analyses, the attention to the disclosure functioned as the first mediator, the attention to the brand placement as the second mediator, and the recognition of advertising as the dependent variable. Gender, brand use, product interest, and attention to the program were included as covariates. The results are shown in Table 2, which corresponds to the model in Figure 1.

These results demonstrate significant indirect effects of the brand placement disclosure on advertising recognition for all comparisons. Compared to the logo, both the text (Indirect effect = 0.26, boot SE = 0.14, 95% BCBCI [.03, .60]) and text+logo (Indirect effect = 0.37, boot SE = 0.18, 95% BCBCI [.07, .77]) resulted in better recognition of advertising. In addition, the text+logo resulted in a higher recognition of advertising compared to the text (Indirect effect = 0.11, boot SE = 0.06, 95% BCBCI [.03, .30]). This indirect effect of the disclosure types on the recognition of advertising is mediated by the effect of viewers' visual attention to the disclosure on their visual attention to the brand placement ($b = 0.40$, $p = .076$), which consequently increased the recognition of advertising ($b = 0.79$, $p < .001$). These significant indirect effects provide evidence to support hypothesis 2.

Table 2 *Indirect effects of brand placement disclosure type on the recognition of advertising*

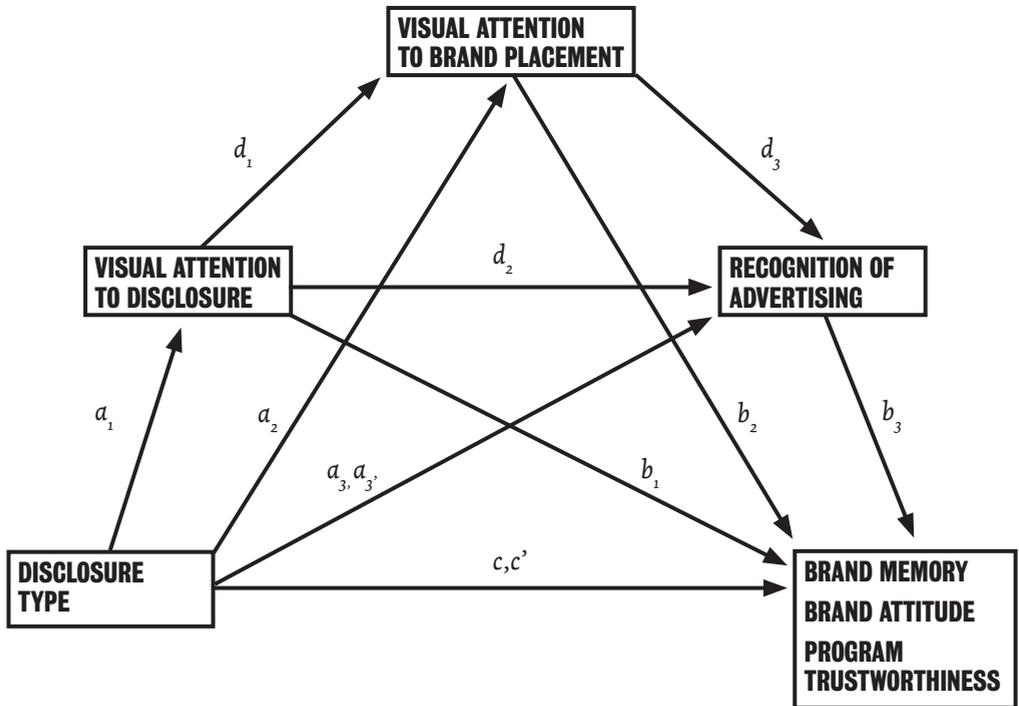
Disclosure (Reference)	<i>Indirect Effect</i> [95% BCBCI]	a_1	a_2	a_3 (total)	a_3 (direct)	d_1	d_2	d_3
Text (Logo)	.26 (.14) [.033, .597]	.83 (.10)***	.06 (.24)	1.19 (.46)*	.97 (.47)*	.40 (.22)†	-.10 (.29)	.79 (.15)***
Text+Logo (Logo)	.37 (.18) [.065, .766]	1.19 (.15)***	-.23 (.32)	.83 (.48)†	.76 (.60)	...	...	...
Text+Logo (Text)	.11 (.06) [.025, .304]	.36 (.17)*	-.29 (.26)	-.36 (.44)	-.20 (.45)	...	...	...

Note Unstandardized b-coefficients (with boot SE between parentheses) corresponding to the paths in Figure 1; controlled for sex, brand use, product interest, and attention paid to program; ... = the scores are the same as the scores above; BCBCI = Bias corrected 10,000 bootstrap confidence interval; $N = 149$.

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.



Figure 1 Indirect effect of brand placement disclosure type on brand memory, brand attitude, and program trustworthiness, via visual attention to the disclosure, visual attention to the brand placement, and the recognition of advertising



Brand and program responses

To test the effects of the disclosures on brand memory, brand attitude, and program trustworthiness (hypothesis 3), we ran three separate serial multiple mediation analyses comparing the three disclosure types for each dependent variable. In these analyses, the attention to the disclosure functioned as the first mediator, the attention to the brand placement as the second mediator, and the recognition of advertising as the third mediator. Again, gender, brand use, product interest, and attention to the program were included as covariates. The results from these analyses are shown in Table 3, also corresponding to the model in Figure 1.

Brand memory

Regarding brand memory, the results demonstrate no significant direct effect (c'), but significant indirect effects for all comparisons. Compared to the logo, the text gained more attention, which led to greater attention to the brand placement and consequently to better recognition of advertising, which subsequently resulted in greater brand memory (Indirect effect = 0.24, boot SE = 0.16, 95% BCBCI [.00, .60]). The same indirect effect appeared for the

text+logo condition compared to the logo only (Indirect effect = 0.34, boot SE = 0.21, 95% BCBCI [.01, .81]). Compared to the text, the text+logo indirectly resulted in better brand memory (Indirect effect = 0.10, boot SE = 0.07, 95% BCBCI [.01, .32]). This means that the combination of text and logo had the strongest positive effect on brand memory, followed by the text only. Hence, viewers' advertising recognition increased brand memory, which supports hypothesis 3a.

Table 3 *Indirect effects of brand placement disclosure type on brand memory, brand attitude, and program trustworthiness*

Disclosure (Reference)	<i>Indirect Effect</i> [95% BCBCI]	b_1	b_2	b_3	<i>c</i> (total)	<i>c'</i> (direct)
<i>Brand Memory</i>						
Text (Logo)	.24 (.16) [.004, .595]	-.60 (.38)	.43 (.26)†	.91 (.17)***	.77 (.42)†	.66 (.68)
Text+Logo (Logo)	.34 (.21) [.009, .806]	...	...	...	.20 (.42)	.32 (.76)
Text+Logo (Text)	.10 (.07) [.009, .324]	...	...	...	-.57 (.42)	-.35 (.58)
<i>Brand Attitude</i>						
Text (Logo)	-.03 (.02) [-.080, -.003]	-.11 (.13)	.15 (.09)†	-.10 (.04)*	.28 (.19)	.44 (.22)*
Text+Logo (Logo)	-.04 (.02) [-.106, -.006]	...	...	...	.46 (.22)*	.64 (.26)*
Text+Logo (Text)	-.01 (.01) [-.042, -.002]	...	...	...	.17 (.22)	.20 (.22)
<i>Program Trustworthiness</i>						
Text (Logo)	-.01 (.01) [-.054, .004]	.08 (.12)	-.09 (.08)	-.04 (.04)	-.03 (.17)	-.01 (.20)
Text+Logo (Logo)	-.02 (.02) [-.072, .006]	...	...	...	-.27 (.19)	-.31 (.22)
Text+Logo (Text)	-.00 (.01) [-.027, .001]	...	...	...	-.24 (.19)	-.30 (.19)

Note Unstandardized b-coefficients (with boot SE between parentheses) corresponding to the paths in Figure 1; controlled for sex, brand use, product interest, and attention paid to program; coefficients for a^1 , a^2 , a^3 , d^1 , d^2 , and d^3 are presented in Table 1; ... = the scores are the same as the scores above; BCBCI = Bias corrected 10,000 bootstrap confidence interval; $N = 149$.

† $p < .10$, * $p < .05$, *** $p < .001$.



Brand attitude

The analyses with brand attitude as the dependent variable revealed significant negative, though small, indirect effects for all comparisons. The text (Indirect effect = -0.03 , boot SE = 0.02 , 95% BCBCI [-0.08 , -0.00]) and text+logo (Indirect effect = -0.04 , boot SE = 0.02 , 95% BCBCI [-0.11 , -0.01]) both indirectly resulted in slightly less favorable brand attitudes compared to a logo only. The text+logo appears to have a small significant indirect effect on brand attitude compared to the text (Indirect effect = -0.01 , boot SE = 0.01 , 95% BCBCI [-0.04 , -0.00]), indicating that a disclosure indirectly influences brand attitude when viewers recognize the advertising. Hence, the results support hypothesis 3b.

Program trustworthiness

With regard to program trustworthiness, the results show no direct or indirect effects of disclosure types. Compared to the logo, neither the text (Indirect effect = -0.01 , boot SE = 0.01 , 95% BCBCI [-0.05 , $.00$]) nor the text+logo (Indirect effect = -0.02 , boot SE = 0.02 , 95% BCBCI [-0.07 , $.01$]) resulted in lower program trustworthiness. The text+logo did not change program trustworthiness compared to the text (Indirect effect = -0.00 , boot SE = 0.01 , 95% BCBCI [-0.03 , $.00$]). Therefore, hypothesis 3c is not supported.

DISCUSSION

This study examined the effects of brand placement disclosure types on viewers' visual attention while watching a program containing brand placement, their use of persuasion knowledge (i.e., the recognition of brand placement as advertising), and brand and program responses. Our first aim was to test which type of disclosure is most effective in enhancing the recognition of advertising in a program. The results demonstrated that a combination of text and a PP logo is most effective in increasing the recognition of advertising, followed by text only. The logo alone is least effective.

The second aim of this study was to test the processes that precede the recognition of advertising by investigating what viewers attend to while watching a TV program containing a disclosure and brand placement. By using eye tracking, we were able to directly measure the focus of viewers' eyes while watching the program. These data demonstrated large differences in visual attention to the various disclosure types. Only 8% of the participants fixated on the logo compared to 88% on the text and 94% on a combination of a text and a logo. Thus, the combination of text and logo attracts the most attention. Additionally, our findings demonstrate that the effects of a disclosure on the recognition of advertising are mediated by viewers' attention to the disclosure and the brand placement. Because we found no direct effect of the disclosure types, a disclosure only influences the recognition of advertising when viewers attend to it and consequently pay greater attention to the brand placement. These findings explain the difference in the effectiveness of the three types of disclosure: The combination of text and logo has the greatest effect on the recognition of advertising because it attracts the most visual

attention, whereas a logo alone is least effective because it attracts very little attention.

The current study is one of the first to provide evidence for this mediating role of attention in the activation of persuasion knowledge. Our findings support processing and persuasion knowledge theories that state that the retrieval and application of persuasion knowledge requires elaborate processing (Buijzen et al., 2010) and that people should have the cognitive capacity to do so (Campbell & Kirmani, 2000). This eye tracking study demonstrates that visual attention to the disclosure and the brand placement are important underlying mechanisms of the effect of a disclosure on the recognition of advertising, which need to be taken into account when studying the effects of disclosures. In this way, this study provides an important contribution to the Persuasion Knowledge Model (Friestad & Wright, 1994) by providing evidence that attention to the persuasive message is an important precondition for the activation of persuasion knowledge.

The importance of attention indicates why certain disclosure types are more effective than others: The effects of a disclosure on viewers' use of persuasion knowledge depend on the amount of attention paid to the disclosure. However, future research is needed to investigate the mechanisms that might explain why a combination of text and a PP logo attracts more attention than either text or a PP logo alone. Although we used a PP logo that is very similar to the logos that are actually used, the reduced attention may have been due to the logo's lack of appeal. Further research may explain whether viewers' attention to a disclosure is driven by its size, font or color, the amount of information provided, or a combination of textual and visual information. Research may also identify whether viewers' attention to disclosures could be attributed to the ease of comprehension or processing fluency (Schwarz, 2004).

Our third aim was to investigate how brand placement disclosure types affect viewers' brand and program responses. Replicating the findings of prior research (e.g., Bennett et al., 1999; Boerman et al., 2012b; Van Reijmersdal et al., 2013), the current study shows that a brand placement disclosure increases the recognition of advertising and consequently indirectly affects both brand memory and brand attitudes. Again, a combination of text and a logo is most effective in altering viewers' brand responses. These findings show that the effects of brand placement disclosures follow three stages: a disclosure first needs to attract (visual) attention; subsequently, it activates the viewers' persuasion knowledge, and as a result, it influences the persuasive effects of the brand placement. Because these stages are similar to the stages of information processing consumers engage in when exposed to warnings on products (e.g., Wogalter & Laughery, 1996), our findings indicate that this model of processing also applies to brand placement disclosures.

The positive effect on brand memory is mediated by viewers' visual attention to the disclosure, visual attention to the brand placement and recognition of advertising. This means that to increase brand memory, attention to the brand placement is not enough; viewers also need to recognize it as advertising. These findings agree with processing and persuasion knowledge theories that argue that the activation of persuasion knowledge requires elaborate processing of the content (Buijzen et al., 2010). Hence, as viewers'



recognition of advertising in the program enhances, so does their memory of the brand incorporated in the program. Prior studies have found direct effects of disclosure on brand memory. However, an important difference within these studies is that the brand placement disclosures mentioned the brands (e.g., Bennett et al., 1999; Boerman et al., 2012b), which was not the case of the disclosures tested in this study, indicating that the disclosure in these studies also functioned as an additional brand exposure. Moreover, these studies used different types of sponsored content, such as more prominent brand placements or forms of brand integration (Boerman et al., 2012b; Van Reijmersdal et al., 2013). Our findings are contrary to those of Campbell et al. (2013), who found a negative effect of sponsorship disclosure on the top-of-mind awareness of the brand and argue that this effect is caused by viewers correcting their answers for the persuasive impact of the brand placement. Campbell et al. (2013) state that this correction is a consequence of the activation of persuasion knowledge. However, they did not measure this activation directly. This study indicates that a disclosure can activate persuasion knowledge but that this leads to greater brand memory and not necessarily to a correction of brand recall. Future research is needed to compare the effects of different disclosure content for different types of sponsored content and should examine this possible correction of brand memory in more detail.

The current study demonstrated a small negative effect on brand attitude. The recognition of advertising stimulated by a brand placement disclosure makes viewers evaluate the brand less positively. Thus, with regard to the brand, the change of meaning described in the Persuasion Knowledge Model (Campbell & Kirmani, 2000; Friestad & Wright, 1994) can be induced by a brand placement disclosure. These findings are in line with prior forewarning (e.g., Chen et al., 1992; Quinn & Wood, 2004) and advertising disclosure research (e.g., Boerman et al. 2012b; Wei et al. 2008) that demonstrated that disclosing the persuasive intent of a message can diminish persuasion. In accordance with the reactance theory (Brehm, 1966), this study shows that viewers will try to resist persuasion when they recognize the advertising in a program (Sagarin et al., 2002; Wei et al., 2008). This means that brand placement disclosure indirectly reduces viewers' susceptibility to advertising (Buijzen et al., 2010; Greenwald & Leavitt, 1984; Petty et al., 1981) and mitigates the persuasive effects of the brand placement. Hence, our findings provide valuable insights into how brand placement disclosure influences the persuasion process.

Differently than expected, this reactance mechanism does not apply to for the perceived program trustworthiness. The results provide no evidence of an effect of brand placement disclosure and viewers' recognition of advertising on program trustworthiness. In other words, the change of meaning principle (Friestad & Wright, 1994) does not apply to the program, and a disclosure does not appear to lead to a sense of betrayal. This is a positive outcome for advertisers and broadcasters, demonstrating that brand placement disclosure does not harm viewers' trust in the program. This finding may be explained by the genre of the program, as we used a drama series. Research has shown that viewers think

that familiar brand names can add to the realism of movies (Gupta & Gould, 1997; Sung, de Gregorio, & Jung, 2009). Hence, despite its effects on the brand itself, the appearance of a brand in a TV series might not influence the perceived trustworthiness of the program because viewers might think that using real brands makes the program more realistic. More research is needed to better understand how viewers' evaluation of brand placement in general relates to their responses to different programs, program genres, and brand placements.

Moreover, further research is needed to examine alternative explanations for our findings, by looking into factors that may moderate the effects of brand placement disclosures. Although participants' gender, self-reported attention to the program, brand use, and product interest did not appear to confound any of the effects found in this study, they may be important moderators. For instance, prior research has shown that brand placement had a negative effect on brand attitude when persuasion knowledge was high and involvement was low (Matthes, Schemer, & Wirth, 2007). However, one might also argue that viewers who are highly involved with the program are more likely to react against persuasion attempts. Future research could examine how involvement may moderate disclosure effects. Moreover, research on advertising embedded in a radio show demonstrated that the activation of persuasion knowledge had little effect on brand evaluations when brand familiarity was high (Wei et al., 2008). Hence, a disclosure may have less impact on people who are very familiar with the brand. Because 98% of the participants in the current study were familiar with the brand, brand familiarity did not influence our findings. However, further research is needed to clarify whether brand familiarity moderates the effects of brand placement disclosures.

Because brand placement disclosure regulations are still being developed and modified (for instance, in the US), this study has some important practical implications and could contribute to the development of effective disclosures. Our study compared the different types of disclosures used in the EU and demonstrated that the use of text stating "This program contains product placement" combined with a PP logo is most effective at enhancing the recognition of advertising. Regulators could use this knowledge to create useful guidelines for more effective brand placement disclosures. For advertisers, there are two sides to brand placement disclosure. On the one hand, disclosures increase the attention to the brand placement and enhance viewers' brand memory and thus can be beneficial for creating brand awareness. On the other hand, disclosures indirectly result in less favorable brand attitudes, which is a negative outcome for advertisers. One of the advantages of brand placement is that viewers are not always aware of it, and therefore, it has the potential to overcome consumers' skepticism (Bhatnagar, Aksoy, & Malkoc, 2004). Brand placement disclosures take away this advantage by making viewers more aware of the persuasive intent of the brand placement. Thus, brand placement disclosures are able to achieve their goal and may result in more fair communication because consumers know when they are being subjected to advertising. However, advertisers should be aware that an informed audience may become more skeptical toward the brands placed in television programs.



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