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How audience and disclosure characteristics influence memory of sponsorship disclosures

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The proliferation of sponsored content (e.g., product placement) in television programmes has been a cause of concern as it may violate the right of consumers to know that a message is sponsored. Therefore, new regulations obligate broadcasters to disclose sponsored content. To achieve its goal of informing the consumer, a sponsorship disclosure must be effectively communicated. This study explores how audience and disclosure characteristics influence memory of sponsorship disclosures. Results show that a disclosure at the beginning of a programme results in less disclosure memory compared to a disclosure in the middle or at the end of a programme. The duration of the disclosure does not directly influence disclosure memory, but a disclosure is best remembered when it is displayed longer and viewers are familiar with the programme. Additionally, viewers' programme and disclosure familiarity increase the chance that a disclosure is remembered, while programme involvement decreases disclosure memory. These results contribute to advertising theory and may be useful in the development of effective sponsorship disclosures, as they indicate several conditions under which disclosures are more likely to be remembered.

Keywords: sponsorship; disclosure; memory; recall; recognition; involvement; brand placement

1. Introduction

Television programmes are increasingly integrating sponsored content into editorial content (Smit, Van Reijmersdal, and Neijens 2009; Sung, de Gregorio, and Jung 2009). This use of sponsored content ranges from the simple placement of a brand into a television programme (i.e., brand placement) to programmes in which the brand plays a key role in plotlines and the creative development (i.e., brand integration; Hudson and Hudson 2006). The growing implementation of sponsored content is not remarkable, as it has proven to effectively influence consumers' reactions, such as brand attitudes and evaluations, brand memory, and brand-related behaviours (e.g., Balasubramanian, Karrh, and Patwardhan 2006; Kamleitner and Jyote 2013; Matthes, Schemer, and Wirth 2007; Van Reijmersdal, Smit, and Neijens 2010). Therefore, its effectiveness and expanding possibilities are still of growing importance to both practitioners and researchers (Hackley and Hackley née Tiwsakul 2012).

One of the reasons for the effectiveness of sponsored content is that it is integrated in editorial content, and hence has the ability to persuade in an unobtrusive manner (Avery and Ferraro 2000; Bhatnagar, Aksoy, and Malkoc 2004). However, the disguised nature of sponsored content has also been a cause of concern for policy makers, consumer organizations, and academics. By blurring the boundaries between editorial and commercial

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content, viewers may not recognize sponsored programme content as commercial because its source and intent are unclear (Nebenzahl and Jaffe 1998). Therefore, it has been argued that sponsored content violates the right of consumers to know that a message is sponsored, and hence is unethical and deceptive (e.g., Cain 2011; Kuhn, Hume, and Love 2010; Nebenzahl and Jaffe 1998).

To avoid any confusion on the part of the viewer, the EU decided to make sponsorship disclosure on television obligatory (Audiovisual Media Services Directive 2010). Similarly, in the US, sponsorship regulations are being reconsidered (Cain 2011; Federal Communications Commission 2008). Although the application and use of sponsorship disclosure differ between countries, the purpose is always to explicitly inform the audience when commercial content is integrated into editorial content, to guarantee fair communication and avoid persuasion without audience awareness (Cain 2011; Woods 2008).

Despite the European regulations and American law-proposals, little scholarly research has been conducted on sponsorship disclosures on television. However, it is important to know which audience responses these disclosures may evoke. The few studies that did investigate this subject focused on the effects of disclosures on brand responses (i.e., brand memory and brand attitude) and different forms of persuasion knowledge (Boerman, Van Reijmersdal, and Neijens 2012a, 2012b; Campbell, Mohr, and Verlegh 2013; Tessitore and Geuens 2013; Van Reijmersdal, Tutaj, and Boerman 2013). These studies showed that sponsorship disclosures can change audience responses to sponsored content, and influence its effectiveness. Remarkably, two of these studies found that a large number of participants did not recall the sponsorship disclosure (i.e., 52% in Boerman, Van Reijmersdal, and Neijens [2012b] and 24% in Campbell, Mohr, and Verlegh [2013]).

Sponsorship disclosures aim to inform audiences so they can guard themselves and use their persuasion knowledge to cope with the persuasive attempt (Cain 2011; Woods 2008). Prior research emphasized the importance of sponsorship disclosure memory in achieving its goal of activating persuasion knowledge, as it showed that a sponsorship disclosure only had an effect on persuasion knowledge when the viewer recalled seeing a disclosure (Boerman, Van Reijmersdal, and Neijens 2012a). Hence, when a sponsorship disclosure is not remembered, it most likely does not have its intended effect and may be futile. Despite the importance of disclosure memory, no research has looked into the antecedents of sponsorship disclosure memory. Therefore, this study takes one step back in the hierarchy of effects and aims to explore under which circumstances viewers remember sponsorship disclosures. By doing so, we hope to contribute to the creation and implementation of more effective and 'sound' disclosures (see also Kozup, Taylor, Capella, and Kees 2012). In addition, as sponsorship disclosures can also influence viewers' brand attitudes, brand memory, and purchase intentions (e.g., Boerman, Van Reijmersdal, and Neijens 2012b; Campbell, Mohr, and Verlegh 2013; Van Reijmersdal, Tutaj, and Boerman 2013), advertisers may or may not benefit from these disclosures. Therefore, it is also of importance for advertisers to know when disclosures are most effectively communicated and thus may alter the outcomes of their brand placements.

Thus, to achieve its goal of informing the consumer, a sponsorship disclosure must be effectively communicated. If consumers do not notice sponsorship disclosures, the disclosures cannot produce the positive benefits that they seek (Goldman 2006). This study explores the antecedents of memory of sponsorship disclosures by focusing on both the viewers (i.e., audience characteristics) and on the characteristics of the disclosure (i.e., disclosure characteristics). With an experiment ($N = 179$), we specifically investigate the effects of the audience's disclosure familiarity, programme familiarity, and programme

involvement, and disclosure timing (beginning, middle, or end of programme) and duration (3 or 6 seconds).

2. Attention to and processing of disclosures

Disclosures and warnings directed at consumers are not new phenomena. Although most studies have focused on disclosures on products and *in* advertising, as opposed to disclosures *of* advertising, they do provide some valuable insights into audience attention to disclosures. Interestingly, various studies have demonstrated that different types of disclosures (i.e., fine-print disclosures in TV commercials, and risk and health disclosures) appear to go largely unnoticed (e.g., Morgan and Stoltman 2002; Popper and Murray 1989; Stewart and Martin 1994). Likewise, the few studies that have focused on disclosures *of* advertising, such as labels of advertorials in magazines, also demonstrate low levels of disclosure memory (Cameron and Curtin 1995; Kim, Pasadeos, and Barban 2001).

The extent to which viewers process and hence remember a message can be explained by audiences' ability, motivation, and opportunity to process that message (MacInnis, Moorman, and Jaworski 1991). *Ability* refers to viewers' skills and proficiencies that are necessary to process a message (MacInnis, Moorman, and Jaworski 1991). Viewers may require prior knowledge about the information given in the message to be able to process and comprehend the message (Petty et al. 2005). *Motivation* is defined as the desire or readiness to process a message (MacInnis, Moorman, and Jaworski 1991). Motivation is related to involvement with the message and is usually high when a message is of personal relevance (Andrews 1988; Petty et al. 2005). *Opportunity* reflects the extent to which the message itself and the circumstances during message exposure affect viewers' attention to the message. A lack of opportunity may be caused by distractions by, for instance, other messages or limited exposure time (MacInnis, Moorman, and Jaworski 1991).

People have to be both able and motivated to process a message (Petty et al. 2005). The levels of ability and motivation differ among individuals (Petty et al. 2005), and, hence, largely depend on the viewer. The opportunity to process a message is not in the respondent's control and relies on the message itself and the exposure circumstances (Batra and Ray 1986). This means that the level of processing, and consequently the memory of sponsorship disclosure, depends on both the audience and the disclosure. Therefore, we focus on the effects of both audience and disclosure characteristics on disclosure memory.

Andrews (1988) provides a list of factors that influence the motivation, ability, and opportunity to process information. Based on Andrews' (1988) list and Petty et al. (2005), we test the effects of five audience and disclosure characteristics, which are depicted in Table 1. In our study, ability is operationalized through the audience's familiarity with sponsorship disclosures in general, and the programme that incorporates the

Table 1. Audience and disclosure characteristics influencing the ability, motivation, and opportunity to process sponsorship disclosures.

Audience characteristics		Disclosure characteristics
Ability	Motivation	Opportunity
Programme familiarity	Programme involvement	Disclosure timing
Disclosure familiarity		Disclosure duration

Note: Based on Andrews (1988) and Petty et al. (2005).

disclosure. Motivation is operationalized through viewers' involvement with the programme. Viewers' opportunity to process a sponsorship disclosure is studied by testing the effects of the timing and duration of the disclosure.

3. Audience characteristics

Whether viewers are *able* to process information can be explained by information processing theories such as the limited capacity model of motivated mediated message processing (LC4MP; Lang 2006) and the processing of commercial media content (PCMC) model (Buijzen, Van Reijmersdal, and Owen 2010). These models claim that the human ability to process mediated messages is limited. Because people's cognitive resources to process a mediated message are limited, people are not capable of processing all available information at once (Buijzen, Van Reijmersdal, and Owen 2010; Lang 2000). For instance, when people watch a television programme, they can allocate cognitive resources from a fixed pool of limited resources. When a viewer allocates a large amount of resources to the programme, there will be few resources left to process other information, such as a disclosure. Consequently, viewers may not process a sponsorship disclosure, or may process it with low levels of elaboration and effort, decreasing the chance a disclosure is stored and remembered.

In addition, the ability to process a message relies on knowledge of and familiarity with the information in the message (Andrews 1988). Novel stimuli in an environment can elicit an orienting response, also called the 'what is it?' response, which is an automatic attention response (Lang 2006). Therefore, new information gains attention and requires more cognitive resources than familiar information (Johnston et al. 1990; Lang 2000; Lang, Potter, and Bolls 1999). The ability to process a disclosure and the television programme it is displayed in, and consequently disclosure remembrance, may thus be affected by viewers' familiarity with both the programme and disclosure.

3.1 Programme familiarity

For viewers who are familiar with a television programme, not everything shown in the programme is new. Although the content of an episode can be new to viewers who are familiar with the programme, programme characteristics such as the presenters or characters, the format, story, and content are not all new information. As new and unexpected information requires more cognitive resources (Johnston et al. 1990; Lang 2000; Lang, Potter, and Bolls 1999), a familiar programme requires fewer resources to process compared to a programme viewers are unfamiliar with. Viewers that are familiar with the programme may thus have more resources available to process the disclosure, making it more likely they are able to notice and store the disclosure, leading to better disclosure memory. Therefore, based on the effect of new and unexpected information, we hypothesize:

H1: Programme familiarity has a positive effect on sponsorship disclosure memory.

3.2 Disclosure familiarity

Since sponsorship disclosures are a fairly new development, chances are high that not all television viewers are familiar with them. Viewers' familiarity with sponsorship disclosures in general may also influence the ability to process and remember a specific

disclosure. The effect of disclosure familiarity on disclosure memory can be explained by the novelty of disclosures, but also by associations in memory. Therefore, we propose two competing hypotheses: the novelty hypothesis and the association hypothesis.

The novelty hypothesis proposes a negative effect of disclosure familiarity on sponsorship disclosure memory, and attributes this influence to the extent to which sponsorship disclosure is new to the viewer. When viewers are not familiar with sponsorship disclosures, a disclosure stands out and is unexpected. As new and unexpected information gains attention (Johnston et al. 1990; Lang 2000; Lang, Potter, and Bolls 1999), a sponsorship disclosure may attract attention due to its novelty, which is likely to increase processing and enhance memory. Additionally, when viewers are familiar with sponsorship disclosures, they may not expend the effort required to attend to the disclosure, because its content is already known (Stewart and Martin 1994). As a result, viewers who are familiar with sponsorship disclosures may not be triggered to pay attention to the disclosure, leading to less disclosure memory.

On the contrary, the association hypothesis proposes a positive effect of disclosure familiarity on disclosure memory because of associative memory networks (Anderson and Bower 1973). When people already have memory networks associated with a topic, few resources are required to activate this network and to add new information, making it easier to retrieve this information (Lang 2000). Hence, the ability to process information largely depends on the knowledge that is already acquired about that topic (Celsi and Olson 1988; MacInnis, Moorman, and Jaworski 1991). With regard to sponsorship disclosures, this means that for viewers who are familiar with disclosures, it is easier to process and remember a disclosure. Hence, viewers who are not familiar with disclosures do not have associations with sponsorship disclosure in memory, making it harder to process, store, and remember the disclosure. As a result, disclosure familiarity would have a positive influence on disclosure memory.

To investigate the two competing hypotheses, we formulate the following research question:

RQ1: What is the effect of disclosure familiarity on sponsorship disclosure memory?

3.3 Programme involvement

While watching television, the television programme and sponsorship disclosure both compete for viewers' attention. Because a sponsorship disclosure is displayed during a television programme, the chance is high that viewers do not notice the disclosure because they are focusing on the programme content (Buijzen, Van Reijmersdal, and Owen 2010). Therefore, sponsorship disclosure memory also depends on viewers' *motivation* to process it, which could be due to their involvement with the programme. Involvement is defined as the perceived personal relevance of information (Celsi and Olson 1988; Zaichkowsky 1994). When the message is perceived as personally relevant and, hence, involvement is high, a person is more motivated to process the information. Hence, viewers who are highly involved with the programme pay more attention to the programme, and put more effort into processing it, than do viewers who are not involved with the programme (Moorman, Neijens, and Smit 2007; Moyer-Gusé and Nabi 2010; Slater and Rouner 2002). This elaborate processing requires more cognitive resources (Buijzen, Van Reijmersdal, and Owen 2010), leaving few available resources to process the sponsorship disclosure. Thus, high programme involvement results in more elaborate processing of the programme, which may lead to less attention to and processing of the

disclosure. Therefore, we hypothesize that programme involvement decreases the chance that the disclosure is remembered:

H2: Programme involvement has a negative effect on sponsorship disclosure memory.

4. Disclosure characteristics

The circumstances in which a sponsorship disclosure is presented and the characteristics of the disclosure influence the *opportunity* to process the disclosure and consequently remember it. Whether viewers are distracted or whether the exposure time is too limited may depend on the moment in the programme that the disclosure is shown (i.e., timing) and the time it is displayed (i.e., duration). Earlier disclosure research has shown that both the timing (Campbell, Mohr, and Verlegh 2013; Van Reijmersdal, Tutaj, and Boerman 2013) and the duration (Boerman, Van Reijmersdal, and Neijens 2012b) of sponsorship disclosures influence its effectiveness. This may be due to differences in whether people actually noticed the disclosure.

4.1 Disclosure timing

Sponsorship disclosures can be displayed at various moments in the programme. The new EU regulations require broadcasters to display a disclosure at the beginning and end of the programme, and after each commercial break (Audiovisual Media Services Directive 2010). In the US, broadcasters often disclose sponsored content in the end-of-show credits, which are, according to Goldman (2006), effectively invisible to most consumers, or not looked at at all (Neijens and Smit 2003). Therefore, law proposals have been made to show disclosures at the beginning and during the programme (Cain 2011; Federal Communications Commission 2008).

Although no research has yet examined the effect of disclosure timing on disclosure memory, Campbell, Mohr, and Verlegh (2013) did find that a disclosure after the sponsored content had a negative effect on brand attitude and the top-of-mind awareness of the brand, while a disclosure before the sponsored content decreased top-of-mind awareness. Additionally, Van Reijmersdal, Tutaj, and Boerman (2013) found that brand memory was highest when a sponsorship disclosure was presented during the sponsored content, compared to disclosures at the beginning or at the end of the programme. The different effects of disclosure timing, and, more specifically, the effect of timing on disclosure memory, can be explained by two mechanisms both related to attention: conventional practices and information density.

First, the timing of a disclosure may determine whether the disclosure stands out and, hence, attracts attention. At the beginning of a programme, it is common practice to display (additional) textual information, such as programme titles, names, and television content ratings. Hence, viewers are used to texts at the beginning of a programme. Therefore, a sponsorship disclosure at the beginning of a programme may not stand out as much as disclosures at less conventional timings, such as in the middle or towards the end of a programme (before the end credits). Consequently, a disclosure at the beginning of a programme is possibly less remembered than a disclosure in the middle or at the end of the programme.

Second, one important explanation of inattention to disclosures is distraction (Hoy and Lwin 2007; Stewart and Martin 1994). At the beginning of the programme, viewers are exposed to a lot of new information. Viewers need to process various types of

information, such as the title of the programme, the persons that are introduced, and what the programme is about. In other words, there is high information density at the beginning of a programme, which may distract the viewers from the disclosure. Therefore, we propose that because of high information density, disclosure memory will be lower when the disclosure is displayed at the beginning of the programme, compared to in the middle or towards the end.

Thus, based on conventional practices and information density, we expect that disclosure timing could affect the memory of the disclosure:

H3: The timing of a sponsorship disclosure affects sponsorship disclosure memory: A disclosure at the beginning of the programme leads to less disclosure memory than does a disclosure in the middle or towards the end of the programme.

4.2 Disclosure duration

When viewers attend to a television programme, they are likely to be distracted by the programme and do not have the opportunity to process a sponsorship disclosure. In addition, there is less opportunity to process a message when the exposure time of the message is limited (MacInnis, Moorman, and Jaworski 1991). Hence, the exposure time of a sponsorship disclosure may influence the remembrance of the disclosure. Previous research has shown that extending the message duration provides more opportunities to attend to a message (Janiszewski 1993) and to cognitively process it (Buijzen, Van Reijmersdal, and Owen 2010; Mackworth 1963). Consequently, when information stays on screen longer, this increases message recognition (provided there is not too much information; Gao and Lang 2009). In line with this reasoning, prior research on sponsorship disclosure demonstrated that the effects of disclosure increased when its duration was extended (Boerman, Van Reijmersdal, and Neijens 2012b). Additionally, a study comparing a slow disclaimer in a radio commercial (read in six seconds) and a fast disclaimer (read in three seconds) showed that the effectiveness of a disclaimer depended on its speed (Herbst and Allan 2006). Moreover, advertisement studies demonstrate that longer commercials facilitate the learning of the message content and consequently increase recall (Singh and Cole 1993), and that the exposure time of brand placement boosts its recognition (Brennan, Dubas, and Babin 1999). Therefore, we propose that extending the exposure duration of the disclosure increases disclosure memory:

H4: Disclosure duration has a positive effect on sponsorship disclosure memory.

4.3 Interaction effects

The duration and timing of a disclosure may also interact with each other in affecting disclosure memory. Due to the distraction at the beginning of the programme (as explained earlier), viewers may need a disclosure that is displayed longer, whereas a shorter disclosure may be sufficient in the middle or end of the programme. Because it is unclear how the two disclosure characteristics will interact, we include a research question:

RQ2: Do the duration and timing of the disclosure interact to predict sponsorship disclosure memory?

Furthermore, the extent to which viewers are familiar and involved with the programme may interact with the disclosure characteristics. For instance, viewers that are familiar with the programme may be more likely to remember a disclosure, and a longer

disclosure duration may increase this effect. In addition, viewers who are very involved with the programme may remember a disclosure at the beginning or end of a programme better than a disclosure in the middle. To test these possible interaction effects, we pose a third research question:

RQ3: Do the duration and timing of the disclosure interact with programme familiarity and programme involvement to predict sponsorship disclosure memory?

5 Method

5.1 Participants and procedure

To examine our hypotheses and research questions, we conducted an experiment with a 2 (disclosure duration: 3 or 6 seconds) \times 3 (timing: beginning, middle or end of programme) between-subjects design. The audience characteristics were measured through a questionnaire. As the programme used in the experiment is targeted at students, our sample included 179 students ($M_{\text{age}} = 22.23$, $SD_{\text{age}} = 3.49$; 78% female) of a large European university that were recruited through posters and flyers distributed throughout the university building. They were randomly assigned to one of the six conditions, resulting in approximately 30 participants per condition (Min = 29, Max = 31).

On arrival, participants were asked to take a seat in an isolated cubicle and watch a television programme on a computer. The instruction implied that the study was about watching television online. After watching the programme, participants filled out an online questionnaire, which first measured programme familiarity, followed by programme involvement, disclosure recall, and disclosure recognition, and, finally, disclosure familiarity. Participation took about half an hour and participants received eight Euros for their participation.

5.2 Materials

The television programme used in this experiment was *MTV was here*, a programme about music, fashion, and lifestyle. The episode was approximately 14 minutes long and was edited for this study. The episode consisted of three items, stemming from three different original episodes. The first and last items were fillers and included a report of a dance improvisation festival and an interview with a DJ. The middle item contained sponsored content about a new brand of shoes (Alive Shoes) which links sneakers to social networking. In the item, the presenter visits the Alive Shoes store, talks to the maker about the concept of the shoes, buys the shoes, and links them to social network sites. The sponsored item lasted about 4 minutes, of which the shoes and/or the brand were visible (either in the background of very prominently) for a total of 1.5 minutes. The brand was mentioned seven times.

The sponsorship disclosure inserted in the programme stated 'This programme contains advertising by Alive Shoes', and was displayed at the upper right corner of the screen. The disclosure was clearly readable and its size was comparable with the size of common subtitles. In accordance with new regulation proposals in the US (Cain 2011), the disclosure mentioned both the brand and the fact this brand is advertised in the programme. With respect to the disclosure characteristics, we included 2 (duration) \times 3 (timing) variations of the disclosure. In the EU, disclosures are to be shown for 3 seconds at the beginning of the programme, during the programme after each commercial break, and towards the end of the programme just before the credits (Audiovisual Media Services Directive 2010). In

accordance with these regulations, the disclosure was displayed for either 3 or 6 seconds and was shown either at the beginning of the programme just after the introduction ('Today on *MTV was here...*') and leader, in the middle of the programme concurrent with the sponsored item, or 30 seconds before the end of the programme.

5.3 Measures

5.3.1 Programme and disclosure familiarity

To measure programme familiarity, participants were asked whether they were familiar with the television programme *MTV was here* (0 = no, 1 = yes). Most participants (68%) did not know the programme.

To measure disclosure familiarity, participants were introduced to the use of sponsorship disclosure on television in general by stating: 'Since recently, sponsorship disclosures are shown on television. For instance, in [PROGRAMME] they show a product placement (PP) logo, and in [PROGRAMME] they state "This programme contains product placement."' We then asked whether they had ever noticed such disclosures (0 = no, 1 = yes). Although sponsorship disclosures are fairly new, 43% of the respondents were familiar with sponsorship disclosures. Programme and disclosure familiarity were both measured with one item, as a single item indicator is sufficient to measure a concrete, singular object (Rossiter 2011).

5.3.2 Programme involvement

Programme involvement was measured using Zaichkowsky's (1994) personal involvement inventory. The mean score of the 10 7-point semantic differential scales is used as a measure of programme involvement (Eigenvalue = 5.14; explained variance = 51.39%; $\alpha = 0.89$, $M = 4.41$, $SD = 0.85$).

5.3.3 Disclosure memory

The dependent variable 'disclosure memory' was measured by both disclosure recall and recognition. 'Disclosure recall' was measured by directly asking the participants whether they recalled a disclosure for advertising in the episode of *MTV was here* (0 = no, 1 = yes). Almost half of the respondents (48%) recalled the disclosure.

To indicate whether participants recognized the disclosure (disclosure recognition), we presented the participants with four disclosures and asked them which of the four disclosures they had seen. The answers also included a fifth option stating 'none of the above'. Recognition was then recoded into 0 (checked wrong disclosure or 'none of the above') and 1 (checked the correct disclosure). Almost half of the respondents (48%) recognized the disclosure correctly. The two memory measures are strongly related ($\chi^2(1) = 134.51$, $p < 0.001$, $\varphi = 0.886$).

6 Results

6.1 Randomization

To test for any differences between the experimental groups, we ran separate logistic regression analyses with sex, programme familiarity, or disclosure familiarity as dependent variables and the six experimental groups as the independent variable. In addition, we ran separate analyses of variance (ANOVAs) with age and programme involvement

as dependent variables and experimental group as the independent variable. The results demonstrated that the experimental groups did not differ with respect to sex ($\chi^2(5) = 6.72, p = 0.243$), programme familiarity ($\chi^2(5) = 3.77, p = 0.582$), disclosure familiarity ($\chi^2(5) = 4.90, p = 0.428$, age, $F(5, 173) = 0.948, p = 0.452$), or programme involvement ($F(5, 173) = 0.648, p = 0.664$).

6.2 Effects of audience characteristics

To test our hypotheses and research questions, we conducted two logistic regression analyses. Table 2 presents the results for both disclosure recall ($-2 \text{ Log Likelihood} = 215.06$, Nagelkerke $R^2 = 0.22$, $\chi^2(6) = 32.82, p < 0.001$) and recognition ($-2 \text{ Log Likelihood} = 216.56$, Nagelkerke $R^2 = 0.21$, $\chi^2(6) = 31.31, p < 0.001$).

In agreement with H1, the results showed that programme familiarity has a significant positive effect on disclosure recall and recognition. Participants who were familiar with the programme were almost three times more likely to recall ($b = 1.07, OR = 2.90, p = 0.003$) and recognize ($b = 0.98, OR = 2.66, p = 0.007$) the disclosure than participants who were not familiar with the programme.

The results regarding disclosure familiarity demonstrated a positive effect on both disclosure recall and recognition. Being familiar with the use of sponsorship disclosures on television significantly increased the odds that the disclosure was recognized ($b = 0.67, OR = 1.96, p = 0.048$). As the effect of disclosure familiarity on disclosure recall was not significant ($b = 0.55, OR = 1.73, p = 0.107$), results did not indicate that disclosure familiarity also increased the chance that people would recall seeing a disclosure. Given the significant effect on recognition, our results partly support the association hypothesis, and do not support the novelty hypothesis.

With respect to programme involvement, the results demonstrated significant, negative effects on disclosure recall ($b = -0.68, OR = 0.51, p = 0.001$) and recognition ($b = -0.67, OR = 0.51, p = 0.002$). H2 is thus supported: as programme involvement increases, participants are less likely to recall and recognize the disclosure.

Table 2. Summary of logistic regression analyses for audience and disclosure characteristics predicting disclosure memory.

Predictor	Disclosure recall			Disclosure recognition		
	<i>B</i>	<i>SE B</i>	<i>OR</i>	<i>B</i>	<i>SE B</i>	<i>OR</i>
Programme familiarity	1.07**	0.36	2.90	0.98**	0.36	2.66
Disclosure familiarity	0.55	0.34	1.73	0.67*	0.34	1.96
Programme involvement	-0.68***	0.21	0.51	-0.67**	0.21	0.51
Timing						
Beginning vs. middle	1.02*	0.41	2.76	0.84*	0.41	2.31
Beginning vs. end	1.00*	0.40	2.73	1.16**	0.40	3.17
Duration (3 sec vs. 6 sec)	-0.37	0.33	0.69	-0.15	0.33	0.86
Constant	0.24	1.10	1.27	0.02	1.09	1.02

Note: Programme involvement ranges from 1 (low involvement) to 7 (high involvement); Programme familiarity and disclosure familiarity are dichotomous variables with 0 (no) and 1 (yes). Timing is recoded into two dummy variables; duration is a dichotomous variable with 0 (3 seconds) and 1 (6 seconds).

B = unstandardized regression coefficient, *SE B* = standard error associated with the *b*-coefficient, and *OR* = odds ratio.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

6.3 Effects of disclosure characteristics

Regarding disclosure timing, the results in Table 2 demonstrate significant differences for both disclosure recall and recognition. Since we expected a difference between a disclosure at the beginning of the programme compared to a disclosure in the middle of the programme and towards the end, we created two dummy variables comparing the beginning condition to the middle and end conditions. Both comparisons were significant and demonstrated an increase of the odds the disclosure is recalled and recognized. This means that when a disclosure was displayed in the middle ($b = 1.02$, $OR = 2.76$, $p = 0.014$) or at the end ($b = 1.00$, $OR = 2.73$, $p = 0.013$) of the programme, participants were more likely to recall the disclosure, compared to when the disclosure is shown at the beginning of the programme. In addition, when a disclosure was displayed in the middle ($b = 0.84$, $OR = 2.31$, $p = 0.040$) or at the end ($b = 1.16$, $OR = 3.17$, $p = 0.004$) of the programme, participants were at least two times more likely to recognize the disclosure, compared to a disclosure shown at the beginning of the programme. H3 is therefore confirmed.

To check for differences in disclosure memory between the disclosure at the end of the programme and the disclosure in the middle of the programme, we conducted additional logistic regression analyses with two dummy variables comparing the end condition to the other timing conditions. The results demonstrate there is no significant difference between the middle and end condition for both disclosure recall ($b = 0.01$, $OR = 1.01$, $p = 0.978$) and recognition ($b = -0.32$, $OR = 0.73$, $p = 0.431$). This provides extra support for H3; there is only a difference between the beginning condition and the two other timing conditions.

The results show no significant effect of the duration of the disclosure on disclosure recall ($b = -0.37$, $OR = 0.69$, $p = 0.268$) and recognition ($b = -0.15$, $OR = 0.86$, $p = 0.657$). Displaying the disclosure for 6 seconds instead of 3 seconds did not increase the chance people would recall or recognize the disclosure. Hence, H4 is not supported.

To examine RQ2, we ran the same logistic regressions but included several interaction terms. Table 3 presents the results of the analyses for disclosure recall (-2 Log Likelihood = 206.24, Nagelkerke $R^2 = 0.28$, $\chi^2(12) = 41.63$, $p < 0.001$) and recognition (-2 Log Likelihood = 207.19, Nagelkerke $R^2 = 0.27$, $\chi^2(12) = 40.69$, $p < 0.001$). The results show no significant interaction effects of duration and timing on disclosure recall ($b = 0.23$, $OR = 1.25$, $p = 0.595$) and recognition ($b = 0.19$, $OR = 1.21$, $p = 0.647$). This means that duration and timing do not significantly interact to predict sponsorship disclosure memory.

With regard to RQ3, the analyses showed insignificant interaction effects except for a significant interaction of programme familiarity and disclosure duration on both disclosure recall ($b = 1.80$, $OR = 6.03$, $p = 0.017$) and recognition ($b = 1.76$, $OR = 5.79$, $p = 0.023$). This positive interaction effect indicates that the effect of programme familiarity on disclosure recall and recognition is even stronger for the 6-second disclosure compared to the 3-second disclosure.

7 Discussion

To protect the consumer from being persuaded without being aware, broadcasters are now obligated to disclose sponsored programme content. In order to achieve its goal of informing the viewer, a sponsorship disclosure must be effectively communicated. The first step of effective communication is to be noticed and remembered. The present study

Table 3. Summary of logistic regression analyses for audience and disclosure characteristics predicting disclosure memory including interaction effects.

Predictor	Disclosure recall			Disclosure recognition		
	<i>B</i>	<i>SE B</i>	<i>OR</i>	<i>B</i>	<i>SE B</i>	<i>OR</i>
Programme familiarity	1.31	3.17	3.69	1.78	3.23	5.90
Disclosure familiarity	0.83*	0.49	2.30	0.97**	0.49	2.65
Programme involvement	-1.71	1.06	0.18	-1.84*	1.06	0.16
Timing						
Beginning vs. middle	0.74	1.31	1.08	-0.95	1.29	0.39
Beginning vs. end	1.00	2.50	0.35	-2.53	2.47	0.08
Duration (3 sec vs. 6 sec)	-2.61	2.05	0.07	-2.08	2.06	0.12
Duration × Timing	0.23	0.42	1.25	0.19	0.42	1.21
Timing × Programme familiarity	-0.46	0.49	0.63	-0.21	0.51	0.82
Timing × Programme involvement	0.26	0.28	1.30	0.43	0.28	1.53
Duration × Programme familiarity	1.80**	0.76	6.03	1.76**	0.78	5.79
Duration × Programme involvement	-0.59	0.70	0.56	-0.64	0.70	0.53
Programme familiarity × Programme involvement	0.10	0.54	1.10	-1.19	0.56	0.83
Constant	3.61	1.75	36.90	3.88	1.74	48.58

Note: Programme involvement ranges from 1 (low involvement) to 7 (high involvement); Programme familiarity and disclosure familiarity are dichotomous variables with 0 (no) and 1 (yes). Timing is recoded into two dummy variables; duration is a dichotomous variable with 0 (3 seconds) and 1 (6 seconds).

B = unstandardized regression coefficient, *SE B* = standard error associated with the *b*-coefficient, and *OR* = odds ratio.

* $p < .10$; ** $p < .05$.

explores the antecedents of viewers' memory of sponsorship disclosure. Our results show that both audience and disclosure characteristics influence disclosure memory (i.e., recall and recognition). Based on our results, we can draw five important conclusions.

First, regarding the audience characteristics, the extent to which viewers are familiar with the programme increases disclosure recall and recognition. This means that viewers are more likely to remember the disclosure when they are familiar with the programme. This could be because a familiar programme requires fewer resources to process, compared to a programme viewers are unfamiliar with, or because the disclosure attracted attention because it was new and unexpected for viewers who are familiar with the programme.

Second, with respect to the positive effect of disclosure familiarity, our results provide support for the association hypothesis: viewers who are familiar with sponsorship disclosures have acquired associations with sponsorship disclosure, leading to greater disclosure recognition. This is in agreement with studies arguing that familiar information requires fewer cognitive resources than new information (Gao and Lang 2009; Johnston et al. 1990; Lang 2000). The results do not support the alternative novelty hypothesis that predicts that disclosure memory is higher if the disclosure is new to viewers.

Third, our study shows that programme involvement has a negative effect on disclosure memory. This finding confirms the notion that viewers who are involved with the programme most likely attend to the programme and consequently have less cognitive capacity available to process the disclosure. Consequently, as programme involvement increases, participants are less likely to recall and recognize the disclosure.

Fourth, with regard to the disclosure characteristics, the results demonstrate that a disclosure displayed at the beginning of a programme results in lower disclosure recall and recognition, compared to a disclosure displayed in the middle or at the end of a programme. This provides support for the idea that a disclosure at the beginning does not stand out, as it is common practice to provide additional textual information at the beginning of a programme. At the beginning of the programme, viewers are probably distracted by other information. This distraction does not take place for disclosures in the middle or at the end of the programme, making it more likely that the disclosure is remembered.

Fifth, although the limited cognitive capacity theory and earlier research suggest a positive effect of disclosure duration, the results demonstrate no significant influence of duration on disclosure memory. This means that the opportunity to remember a sponsorship disclosure depends on the moment the disclosure is displayed within the programme and not on the exposure duration. This finding indicates that an exposure time of 6 seconds – compared to 3 seconds – is too limited to increase disclosure memory. However, we did find a positive interaction effect of programme familiarity and disclosure duration, indicating that a disclosure is best remembered when it is shown for 6 seconds and when the viewer is familiar with the programme. This means that being familiar with the programme seems to leave enough resources available to notice and store the disclosure, and this is even more likely when the disclosure is displayed longer. Further research should investigate whether extending the duration more would lead to main effects of duration on disclosure memory and how this is related to the interaction with programme familiarity. Furthermore, despite some plausible mechanisms that may indicate that the other disclosure and audience characteristics may also interact, we found no evidence for such interaction effects.

The effects of disclosure timing are ascribed to conventional practices and high information density. However, there are other mechanisms that could also explain the different effects on disclosure memory. For instance, due to the manipulation of disclosure timing, the time between the disclosure and the memory measures (taken after the programme) differ between conditions. The time lag increases as the disclosure is placed closer to the beginning of the programme, which may lead to a recency effect: disclosures at the end or in the middle of the programme are better remembered than disclosures at the beginning of the programme. In addition, the amount of information viewers are exposed to after the disclosure increases as more time between disclosure and the measurement of disclosure memory elapses. Since mental storage capacity is limited (Cowan 2000), this increase in time and the amount of information between disclosure and memory measurement could lead to a decay of disclosure memory. This could explain the lower scores of disclosure recall and recognition for the viewers exposed to a disclosure at the beginning of the programme, compared to disclosures in the middle or at the end of the programme. Further research may explore the different levels of processing during the disclosure timings and investigate a possible recency effect.

Our findings have important theoretical implications. This study is the first to provide insight into the antecedents of disclosure memory. Our results are in line with the LC4MP (Lang 2006) and PCMC models (Buijzen, Van Reijmersdal, and Owen 2010), and show that information-processing theories also apply to the phenomenon of sponsorship disclosure. Cognitive resources are limited and as sponsorship disclosures are additional, textual information displayed during a television programme, the disclosure and the television programme compete for viewers' resources. Based on Andrews (1988), we tested five audience and message characteristics that influence disclosure memory. Our results support the notion of MacInnis, Moorman, and Jaworski (1991) that viewers must

have the ability, motivation, and opportunity to process and consequently remember a message. Viewers are more likely to allocate resources to the disclosure when they are uninformed with the programme (motivation variable), and familiar with the programme and sponsorship disclosure (ability variable). Moreover, a disclosure in the middle or the end of a television programme enables viewers to allocate resources to the disclosure and remember it (i.e., due to opportunity), than a disclosure at the beginning of the programme. However, although our findings are in line with the notion that cognitive load, and the motivation, opportunity, and ability to process the disclosure explain viewers' disclosure memory, we did not directly measure these constructs. Further research is needed to directly examine these concepts and unravel the mechanisms behind the effects found in our study.

Furthermore, this study has important practical implications. Sponsorship disclosure legislation is fairly new and still in development in both the US and the EU. Prior research highlighted the importance of disclosure memory, as it demonstrated that disclosure only activated persuasion knowledge when it is recalled (Boerman, Van Reijmersdal, and Neijens 2012a). To achieve its goal of informing the consumers about sponsored content, it is vital to communicate the disclosure successfully. Our results may therefore be useful in the development of effective and sound sponsorship disclosures, as they indicate several conditions under which disclosures are more likely to be remembered. Drawing on the ability, motivation, and opportunity framework, we can identify some concrete guidelines.

Our results indicate that to increase the ability to process and recognize sponsorship disclosure, viewers should be familiar with sponsorship disclosures. This implies that the ability to process a sponsorship disclosure may be increased by making the knowledge that is required to interpret the disclosure available (MacInnis, Moorman, and Jaworski 1991). Hence, interventions that address the audience's familiarity with disclosures, such as commercials informing the audience about sponsorship disclosures, may help make disclosures better known and, hence, more effective. Additionally, to enhance sponsorship disclosure memory, the disclosure should be displayed in the middle or at the end of the programme. Furthermore, although the effects of programme familiarity and involvement are interesting, they are less manageable in practice. Also, the exposure duration of a disclosure does not appear to alter disclosure memory.

By focusing on viewers' memory of the disclosure, this study provides an important contribution to prior studies on the effectiveness of sponsorship disclosures. Earlier research demonstrated that sponsorship disclosures can activate persuasion knowledge and influence the effectiveness of the sponsored content (e.g., Boerman, Van Reijmersdal, and Neijens 2012b; Campbell, Mohr, and Verlegh 2013; Tessitore and Geuens 2013; Van Reijmersdal, Tutaj, and Boerman 2013). Because these effects are dependent upon viewers' memory of the disclosure (Boerman, Van Reijmersdal, and Neijens 2012a), this study focuses on and shows how to make disclosures better remembered and hence more effective. Therefore, our findings may be useful for policymakers in the development of effective disclosures.

However, because the inclusion of a sponsorship disclosure can have negative effects on viewers' brand responses and thus can mitigate the persuasive outcomes of sponsored content, more effective disclosures may be a disadvantage for advertisers. This means that advertisers can benefit from choosing to integrate their brands or products into programmes in which a sponsorship disclosure is shown only at the beginning of the programme. However, a disclosure characteristic such as the timing is decided by regulators and broadcasters and not by the advertiser. Advertisers can anticipate the audience characteristics. Based on our findings, disclosures are less likely to be remembered when

viewers are not familiar with the television programme but are involved with it. Thus, advertisers may benefit from placing their brands into unfamiliar but involving programmes, as these are the programme in which a disclosure is least likely remembered and therefore probably less likely to influence brand responses.

Although our findings are valuable for theory and practice, we acknowledge that only one type of disclosure was investigated in the study. This type of disclosure mentions both the fact that the programme includes advertising and the brand that is incorporated. Because different types of sponsorship disclosures are being used within and between countries, we have to be careful generalizing the results, especially since prior disclosure research demonstrated that the type of disclosures affects the recall of the disclosure (Stewart and Martin 1994), and influences its effectiveness (Tessitore and Geuens 2013). Therefore, more research is needed to explore the antecedents of memory of other types of disclosures, such as PP logos and disclosures that do not mention the brand.

In sum, this study explored how audience and disclosure characteristics influence sponsorship disclosure memory. Sponsorship disclosures aim to inform audiences about sponsored content so they can guard themselves and use their persuasion knowledge to cope with the persuasive attempt. Although a disclosure may have implicit effects when viewers do not recall or recognize it, it is unlikely it has its intended effect (Boerman, Van Reijmersdal, and Neijens 2012a). Consequently, sponsorship disclosures may be futile when viewers do not remember them. Our findings show that viewers often do not remember seeing a disclosure, and, hence, that the current disclosures are probably not adequate and are often shown at the wrong moment in the programme. As this study provides insight into when and why viewers do remember sponsorship disclosure, it can be seen as a valuable contribution to sponsorship disclosure research, and to memorable and possibly more effective sponsorship disclosures.

Disclosure statement

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