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Now you see me. Evaluating visual and auditory brand placement disclosures in music videos

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Now you see me. Evaluating visual and auditory brand placement disclosures in music videos

This study investigates how different formats of brand placement disclosures influence brand recall and brand attitude in music videos. Four formats of disclosures presenting different visual characteristics (textual and pictorial vs textual only) and auditory features (brand melody vs silent) are tested. The research adopts a multimethod approach combining eye-tracking, electrodermal activity, and self-reports. Results show that disclosures including higher visual information content positively influence the awareness of embedded advertising in music videos and the attention paid to the disclosure. Brand melodies prove to be effective to increase attention to the disclosure only when paired with textual and pictorial disclosures. Further empirical evidence demonstrates the positive indirect effect of disclosures on brand recall and brand attitude. Brand placement disclosures are shown to function as primes that can enhance brand attitudes and recall. Implications for marketing communication managers and policymakers in terms of advertising fees, contractual requirements, disclosures' design, and policy recommendations are discussed.

Keywords: product placement; sponsor disclosure; brand attitude; brand memory; consumer neuroscience; physiological measure

Introduction

Brand placement, as a form of embedded advertising, is an extensively used technique to purposefully integrate sponsored products or brands into media content (Balasubramanian 1994). As a promotional format, brand placement¹ has been considerably examined across several media including movies (Gupta and Lord 1998),

¹ Conforming with (Karrh 1998), we adopt the term “brand placement” rather than “product placement” because marketing practitioners tend to embed “branded products” rather than generic items.

live sports (Kretchmer 2004), advergames (Peters and Leshner 2013), blogs and social media (Liu, Chou, and Liao 2015), as well as music videos (Schemer et al. 2008).

Music videos represent a thriving media for brand placements, which are shown to yield a significant return on investment in the entertainment marketing industry (Davtyan, Cunningham, and Tashchian 2021). Brands placed in music videos are also associated with more favorable evaluations in terms of authenticity compared to placements in scripted movies or TV programs featuring fictional characters (Burkhalter et al. 2017). Moreover, music videos including placements prove to be less dependent on the broadcasting time than placements aired in movies on television. As a matter of fact, view rates of music videos appear to be prolonged over time (Cheng, Liu, and Dale 2013). The advent of online video sharing platforms such as YouTube and Vimeo has provided further upswing to brand placements into music videos (PQ Media 2018). Through those platforms viewers are provided with greater access and easiness to share content among peers, resulting in higher exposures.

Since brand placement embodies a form of advertising, disclosing the commercial intent is also mandated by international regulatory bodies. The European Union has introduced regulations that oblige to explicitly inform audiences when brand placements are integrated into editorial content (Audiovisual Media Services Directive 2018). Similarly, the American Federal Communications Commission has discussed the disclosure of placements to enhance media transparency (Federal Trade Commission 2015). Placement disclosures are intended to openly inform audiences when brand placements are integrated into editorial content (Cain 2011; Boerman and van Reijmersdal 2016).

Although previous research has consistently shown that disclosing brand placements can affect watchers' behavior across different media (Babin et al. 2021), the

effect of placement disclosures on variables such as brand recall, or brand attitude appear to be inconclusive. This happens to be especially the case in the evaluation of disclosures in music videos. For instance, Matthes and Naderer (2016) show that placement disclosures introduced before a music video positively influence brand recall but did not affect brand attitudes. Van Reijmersdal et al. (2021) demonstrate quite the opposite effects, namely that disclosing brand placements before the music video did not affect brand recall but led to positive brand attitudes. Such an incongruence might be attributable to the format of disclosures. Indeed, while EU regulations mandate the use of brand placement disclosures to guarantee fair communication, their format remains subjective to the member states. For example, hidden product placement is prohibited in Italy (Gazzetta Ufficiale 2007), but there are no specific guidelines on disclosures' characteristics, timing, and duration. France and Belgium tend to adopt logos to inform of the presence of embedded advertising, whereas the Netherlands and Poland employ textual descriptions (e.g., "This program contains product placement").

The present research seeks to provide an answer to such inconsistency. In line with EU requirements demanding the introduction of placement disclosures, we explore the indirect effects of four formats of disclosures on brand recall and brand attitude. We evaluate disclosures with different visual characteristics and auditory features presented before music videos. To ascertain the end effects of disclosures on brand equity, this research explores the individual processing of disclosures through an experimental investigation employing eye-tracking technology and physiological responses to quantify individual responses elicited by placement disclosures. This work aims at advancing several contributions for marketing researchers, communication practitioners, and policymakers. First, this work is set to analyze the underlying processes that affect brand recall and attitude in music videos embedding product placements. To the best of

our knowledge, this is the first work that explores such processing through a multimethod approach. Second, the work intends to discuss implications for publishers and advertisers in terms of advertising fees and contractual requirements according to the format of the disclosure. Third, this research is intended to discuss implications in terms of disclosures' design considering the characteristics of information content as well as the congruence with the information provided. Fourth, based on the experimental evidence, implications for policymakers are advanced.

Theoretical background

The effects of brand placement disclosure on watchers' behavior represent a topic of actual interest for communication researchers (Babin et al. 2021; Eisend et al. 2020). The end effects of disclosures typically involve cognitive (e.g., brand memory), affective (e.g., brand attitude), and conative responses (e.g., purchase intention) (Balasubramanian, Karrh, and Patwardhan 2006). These final effects are generally conceptualized as the result of individual processing. As Van Reijmersdal et al. (2021) observe, brand attitude and recall appear to be mediated by the awareness of embedded advertising in a music video. Similarly, Boerman et al. (2015) prove that brand recall and attitudes are only indirectly affected by disclosure typologies, via the mediation of attention. The present research follows a similar process view. Namely, we first advance four hypotheses concerning the direct effects of disclosures' visual and auditory characteristics on the recognition of advertising as well as on processes such as attention and arousal. Direct effects are evaluated by distinguishing explicit from implicit responses. Explicit responses are intended as evaluations that are deliberately formed and measurable through self-reports such as surveys or interviews. These responses are intended to involve an individual's conscious acknowledgment about the subject matter (e.g., a thoughtful evaluation of the effectiveness of a disclosing message in terms of

advertising recognition). On the other hand, implicit responses involve reactions that are involuntarily formed and typically unknown to the individual. Implicit responses are intended as independent of higher cognitive resources and occur irrespective of their alignment with the individual's introspective assessment. In these terms, implicit responses are commonly assessed through tools that do not directly inquire the users about their opinions, but track behavioral or physiological reactions (e.g., ocular search patterns during a video displaying advertising or cortical activations during advertising exposure (Guo et al. 2018)). Observing both explicit and implicit responses is intended to support the evaluation of the effectiveness of placement disclosures on consumer behaviors and attitudes (Plassmann et al. 2015; Dimofte 2010). After evaluating the direct effects of disclosures, our research assesses the indirect effects of disclosure formats on brand recall and brand attitude through two last hypotheses.

Direct effects of disclosures' visual characteristics

Disclosures can be seen as information prime for the brand embedded in the video content (Bennett, Pecotich, and Putrevu 1999). This prime tends to stimulate viewers to pay greater attention to the upcoming brand placement (Eisend et al. 2020). Hence, placement disclosures have been shown to increase viewers' advertising recognition (Boerman and van Reijmersdal 2016). Previous studies have also examined the effects of different disclosure formats on explicit recognition of advertising. For example, Boerman et al. (2015) has demonstrated that disclosures containing only textual elements are less effective to enhance the self-reported recognition of advertisements relative to disclosures including textual and graphic components. Chan (2020) showed that disclosing the source and intent of a placement enhanced the self-reported brand recall with respect to simple disclosure claiming that “The following program contains product placements”. Increasing the visual information content of a placement

disclosure may lead to higher processing fluency, thus offering further incentives for explicitly recognizing embedded advertising (Lee and Labroo 2004; Chan 2020). In other terms, the increase in visual information provided in the disclosure improves the ease with which information is processed during content watching. Along these lines, we expect that including additional visual information in the placement disclosure such as pictorial cues disclosing the sponsor can induce higher advertisement recognition.

That is, more formally:

H1: Textual disclosures paired with brand logos elicit higher explicit recognition of advertising than simple textual disclosures.

The visual characteristics of a placement disclosure do not affect only the explicit recognition of advertising. Previous studies investigated how the visual characteristics of a disclosure influence viewers' attention. For instance, studies on warning labels show that icons alone are less helpful in communicating information, and they need supporting text to increase their potential to attract attention (Haramundanis 1996; Wiedenbeck 1999). Prior research on brand placement also indicates that the comprehensibility of a "PP" (Product Placement) logo can be enhanced by providing a textual label explaining its meaning (Tessitore and Geuens 2013). Along these lines, Boerman et al., (2015) demonstrated that pairing textual descriptions with logos attracts more attention to the disclosing message than disclosures including only pictorial or textual information. These attentional processes have been previously quantified through implicit measures based on behavioral observation, which has been identified as more reliable than explicit self-reports (Krugman 1965). Based on this rationale, previous studies have investigated implicit attention through methods such as eye-tracking (Boerman, Van Reijmersdal, and

Neijens 2015; Guo et al. 2018; Smink, van Reijmersdal, and Boerman 2017). For example, Smink et al. (2017) measured the ocular fixation time to placement disclosures displayed in overlay during the video content to quantify the individual attention allocated to such disclosures. These studies have shown that attentional processes are positively affected by disclosures with greater information content displayed during the video content. We expect that a similar phenomenon can be observed when disclosures are presented as primes before the video content. Therefore, we posit:

H2: Textual disclosures paired with brand logos elicit higher implicit attention to the disclosure than simple textual disclosures

Direct effects of disclosures' auditory characteristics

Previous literature has underlined the relevance of sound stimuli as peripheral cues in persuasive communication (Park and Young 1986). Music and brand melodies have been employed as a tool for marketing purposes (Yalch 1991). In particular, brand jingles represent widely used musical techniques for aiding brand recognition (Huron 1989). Music creates meaning when it becomes linked to the brand (Zhu and Meyers-Levy 2005), thus increasing the likelihood that consumers will think of the brand whenever they hear the associated tone (Craton and Lantos 2011). If a sound can convey the meaning of a brand, it serves as an information medium. Therefore, a brand melody creates an extrinsic, non-verbal connection between the brand and the sounds (Graakjær and Bonde 2018). Brand melodies can be then conceptualized as the auditory equivalent of a brand logo (Krishnan, Kellaris, and Aurand 2012). Under these assumptions, we expect that listening to a famous brand melody during a product disclosure may improve the self-reported recognition of advertising. Indeed, the sound-brand association generated by the brand melody may cause viewers to seek the

promotional content, consequently increasing the explicit recognition of the advertising.

Formally:

H3: Disclosures paired with brand melodies elicit higher explicit recognition of advertising than silent disclosures.

Sounds may also induce a range of affective responses, including arousal (Bradley and Lang 2000; Cuadrado et al. 2020). Arousal is defined as the degree of physical and psychological activation elicited by sound stimuli (Sloboda and Juslin 2001). At the individual level, listening to music was shown to affect arousal, which in turn influences cognitive and attentive processes (Husain, Thompson, and Schellenberg 2002; Schellenberg 2005). In particular, high levels of arousal lead to increased vigilance and facilitate information retention (Phelps 2006; LeDoux 2012). Arousal has been often assessed as an implicit response due to a lack of direct voluntary control over such an automatic process (Venkatraman et al. 2015). Previous studies have hence relied on physiological measures related to the sympathetic branch of the autonomic nervous system, including dermal-related responses (Groeppe-Klein 2005). Electrodermal activity has been commonly used in marketing studies assessing the individual arousal elicited by a visual or auditory stimulus (Ohme et al. 2009; Peacock, Purvis, and Hazlett 2011). In sum, we expect that disclosures including auditory cues in form of brand melodies would elicit an increase in physiological arousal. Namely:

H4: Disclosures paired with brand melodies elicit higher implicit arousal than silent disclosures.

Indirect effects of disclosure formats on brand recall

Brand placement disclosures have also indirect effects on brand equity. Extant literature suggests that consumers' recall of a brand placement disclosure is central to its

effectiveness (Boerman, van Reijmersdal, and Neijens 2012). Boerman et al., (2015) also showed that brand recall is influenced both by implicit and explicit responses. Indeed, the more information available in the disclosure, the greater the attention to the disclosure and consequently to the advertised brand. Greater attention on the embedded brand has been shown to affect advertisement recognition and, in turn, brand recall (Boerman, Van Reijmersdal, and Neijens 2015). This chain-relationship can be explained through the limited capacity model of motivated mediated message processing (LC4MP). According to this model, individuals have limited capacity for information processing, and mental representations of the media message are constructed in working memory when limited cognitive resources are allocated to them (Lang 2006). If more information is provided during the disclosure (and this information is noticed), viewers tend to allocate more processing resources to the encoding, storage, and retrieval of brand placement, which become more active in memory. Because of this increase in elaboration complexity, we can expect that the higher the information content and the consequent attention toward the disclosure, the higher the attention toward the advertised brand. This processing of brand placement may finally lead to higher brand recall since the advertised brand is inevitably an intrinsic component of brand placement. This effect has been observed in TV shows with dialogues. A recent study has investigated the effect of familiar songs on brand placement (Clayton 2021). The research showed that familiar songs may activate reminiscing, a cognitive process that may reduce the cognitive resources allocated to the encoding of the message content. This result suggests that not only visual elements but also auditory content may influence the relation between disclosure typologies and brand recall. Along these lines, we expect that the chain-relationship explained by LC4MP holds in music videos. Formally, we posit:

H5: Brand placement disclosure formats have a positive indirect effect on brand recall. This effect is mediated by implicit attention to disclosure, implicit attention to the embedded product, and explicit advertising recognition.

Indirect effects of disclosure formats on brand attitude

Different formats of disclosures can also influence brand attitude. Chan (2020) showed that programs disclosing more information about the embedded brand not only enhanced brand recall but also improved brand attitude via the mediating effect of program liking. The author stated that the presence of a disclosure containing more information about the advertised brand and the scope of the placement stimulates higher processing fluency, which in turn affects video liking. Assuming the presence of this mediation effect, we posit the existence of a processing mechanism influencing content liking. That is, we assume the existence of sequential processing where disclosure formats influence implicit attention, which has an indirect effect on brand attitude mediated by content liking. While the relationship between stimuli characteristics and attention is supported by the evidence advanced by Boerman et al. (2015), we expect the existence of a mediation of content liking due to mere exposure. Indeed, repeated exposure to a previously unknown stimulus without offering any positive or negative reinforcement tends to increase the liking of the stimulus (Moreland and Zajonc 1976). Research suggest also that this effect is unmediated, namely the explicit recognition of a stimulus does not necessarily increase its liking (Zajonc 2004; Matthes, Schemer, and Wirth 2007). Since music videos often repeatedly expose embedded products, we expect that such a repeated exposure positively affects brand attitude via the mediation of content liking. Formally, we offer our last hypothesis:

H6: Brand placement disclosures have a positive indirect effect on brand attitude. This effect is mediated by implicit attention to disclosure, implicit attention to the embedded product, and explicit liking of the video content.

Materials and Methods

Research design

We designed an experimental investigation with a 2 (visual disclosure: branded text vs text only) x 2 (auditory disclosure: brand melody vs silent) factor design. The branded visual disclosure reported “the following video contains product placements sponsored by” paired with the brand name and logo. The simple visual disclosure reported only “the following video contains product placements”. This format mirrored previous disclosure designs (Chan 2020; Boerman, Van Reijmersdal, and Neijens 2015). In the auditory disclosure, the brand melody was played simultaneously with the visual disclosure. The silent disclosure lacked any background sound played during the visual disclosure. All disclosures were displayed for 6 seconds, following several previous studies (Boerman, van Reijmersdal, and Neijens 2012; Boerman, Van Reijmersdal, and Neijens 2015; Boerman, Tessitore, and Müller 2021). The disclosures were displayed on a black background before the music video, in line with Chan (2020). An example of the disclosures used is reported in Videos S1-S4 in Appendix.

We tested four music videos, two of which represented the main stimuli. The remaining two music videos embodied distractors. The brand disclosures were displayed before the two main stimuli, while no disclosure preceded the distractors. The main stimuli included “The alphabeat” by David Guetta (in the following, “Video A”) and “Blinding lights” by The Weeknd (in the following, “Video B”). The branded product embedded in each video was a car, a Renault-branded and a Mercedes-branded

respectively. Both products were visually depicted in the music video, while no verbal placements (i.e., mentions of the brand in the lyrics) were employed. Two researchers selected independently the two videos from a pool of twelve pop music videos and assessed their comparability in terms of music genre, typology of branded product, plot of the video (i.e., protagonists driving a car), and number of scenes displaying the branded product. Both videos were adapted to last 3:00 minutes and displayed the embedded products for a total of 20 and 22 seconds respectively. The two main stimuli were also selected due to their comparability with music videos employed in previous research on placement disclosures (Matthes and Naderer 2016; Van Reijmersdal, Oprea, and Cartwright 2021). The two distractor videos included “The Giver” by Duke Dumont and “Wake me up” by Avicii. These videos were comparable to the main stimuli in terms of music genre and presence of an embedded product (i.e., a smartphone). Distractors were adapted to last 3:00 minutes as the main stimuli.

Participants

The experimental investigation involved 60 participants (43% women, $M_{age}=23.55$, $SD = 1.82$, age range: 20-29). The sample size was chosen to mirror samples of previous studies assessing the effectiveness of brand placement disclosures using eye-tracking (Guo et al. 2018). Participants were recruited from the database of the experimental facility belonging to a large university in the north of Italy, where the laboratory activity took place. The recruitment phase first excluded participants with acute visual problems and squint. Second, participants with an educational background in communication or advertising were filtered out. Individuals who previously participated in experimental activities involving advertising were also excluded from the invitation. Overall, 220 invitations were sent. All participants had a normal or corrected-to-normal vision. Most of the participants were Italian (68%), followed by participants from other European

countries (21%) and Asian participants (11%). Among the participants, 13% achieved secondary education, 72% obtained a bachelor's degree, and the remaining part had a master's degree.

Procedure

Upon arrival at the experimental facility, the participants were first briefed about the purpose of the study (i.e., “this study aims at collecting insights about the enjoyment of four different music videos”). Such a statement was intended to reduce any risk of priming. Next, the informed consent was presented to illustrate the participant's right to withdraw as well as data gathering and storing procedures. All participants signed the informed consent. Participants were then randomly assigned to one of the four experimental groups. We adopted forced randomization to ensure that the number of participants in each group was equal. Participants were then asked to sit at a workstation, while the instrumentation was set up. The absence of artifacts in the physiological signal was then checked and the eye-tracker was calibrated. Next, participants were exposed to a grey static image for one minute to acquire a physiological baseline at rest. Distractor videos and main stimuli were then presented in a randomized fashion, as shown in Figure 1. Before each video, a 3-second blank screen with a black cross was presented. A dedicated survey was presented after each video. After watching each video, in line with Chan (2020), the participants had to answer factual questions about the content of the video to ensure effective watching in full. The survey included questions related to the familiarity of the video, the liking of the content, the recognition of advertising, the brand recall, the awareness of the placement prominence, the brand familiarity, the brand attitude, the recall of the disclosure and the brand melody, and the evaluation of the disclosure. Two additional distracting questions were included in each survey to cover the end objective of the investigation (e.g.,

“When I was a child, I dreamt about becoming a DJ”). Lastly, a closing survey investigated product placement attitudes and psychological reactance.

[FIGURE 1 NEAR HERE]

Instrumentation

During each session, the electrodermal activity (EDA), and the eye-tracking signal were gathered. The EDA was acquired through a pair of finger electrodes (ProComp-2-FlexComp, Thought Technology) placed on the distal phalanges of the left hand and recording at a sampling rate of 256 Hz. Room temperature was held constant between 20 and 22 °C to avoid artefacts due to warmth variance. The eye-tracking signal was measured through an eye-tracking bar (SMI REDn Scientific) attached to the 24” computer monitor, recording at a sampling rate of 30 Hz. We used a 13-point gaze calibration and a 4-point validation to achieve 0.4° gaze position accuracy. Each participant was sat in a range of 60-80 cm from the monitor to assure the validity of the signal acquisition.

Measures

Implicit responses were measured through EDA and the eye-tracking signal. Physiological arousal was computed from EDA, a common procedure to assess physiological responses related to the sympathetic activity (Boucsein 2012). The Integrated Skin Conductance Response was employed as a metric of implicit arousal, where higher scores indicate higher arousal. EDA signal processing methodology is reported in Appendix. The eye-tracking signal was processed to evaluate implicit attention to specific areas of interest (AOIs). We created AOIs for brand placement

disclosures and the branded products displayed in the music videos. The methodology to analyze eye-tracking signals as well as to draw the AOIs is reported in Appendix.

Explicit self-reports were adapted from previous literature and evaluated on 7-point Likert scales. These included, a 4-item construct investigating Content Liking (Chan 2020), a single-item construct assessing Video Familiarity (Boerman, Tessitore, and Müller 2021), a single-item (i.e. “the fragment I just watched contained advertising”) assessing Recognition of Advertising (Boerman, Tessitore, and Müller 2021), a 3-item construct assessing Awareness Placement Prominence (Cowley and Barron 2008), a 3-item construct quantifying Brand Familiarity (Chan 2020), a 5-item construct assessing Disclosure Evaluation (Van Reijmersdal, Tutaj, and Boerman 2013), a 5-item construct quantifying Psychological Trait Reactance (Chan 2020), a 4-item construct measuring Product Placement Attitudes (Homer 2009), a single-item evaluating Brand Melody recall and Disclosure recall (Boerman, Tessitore, and Müller 2021), and a 6-item construct measuring Brand Attitude (Chan 2020). Brand Recall was measured through two steps in line with Boerman et al. (2015). First, participants were presented the item “I have perceived that there is a brand advertised in the music video”. In case of a positive answer, they were then given the option to indicate the recognized brand. Brand recall was coded as 1 (i.e., correct recall) or 0 (i.e., lack of recall or incorrect brand recall). A full copy of the items investigated with the relative reliability scores is provided in Table S1 in Appendix.

Results

Video A and Video B did not differ in terms of Awareness Placement Prominence ($U = 1130$, $z = -0.923$, $p = .356$). This indicates that the contents of the two videos were comparable concerning the degree of subtlety of the brand placement, a notable variable affecting placement recognition (Homer 2009). No further differences were observed

concerning Advertising Recognition ($U = 1495$, $z = -1.760$, $p = .078$) and Content Liking ($U = 1538$, $z = -0.642$, $p = .521$), indicating that the videos were perceived as comparable in terms of content. Overall, 75% of the participants correctly recalled the Renault brand in Video A and 73.3% recalled the Mercedes brand in Video B. These frequencies mirror the empirical evidence gathered by Chan (2020). No differences in terms of Brand Recall ($\chi^2(1) = 0.835$, $p > .05$) and Brand Attitude ($U = 1562$, $z = -0.354$, $p = .723$) were observed between the two main stimuli. Hence, the two music videos were deemed comparable.

The four experimental groups did not show significant differences in terms of gender ($\chi^2(3) = 0.543$, $p = .909$), age ($F(3, 116) = 0.029$, $p = .993$), Product Placement Attitudes ($F(3, 116) = 1.601$, $p = .193$), Psychological Trait Reactance ($F(3, 116) = 0.606$, $p = .612$), and Video Familiarity ($\chi^2(3) = 2.132$, $p = .546$). This means that the randomization between conditions was successful, and random noise caused by individual-related differences was minimal. Overall, 93.3% participants correctly recalled the presence of the placement disclosure, and 30.0% correctly recalled the presence of the brand melody played during the disclosure. Disclosure Evaluation ($M = 4.02$, $SD = .65$) proved to be comparable with previous studies (Van Reijmersdal, Tutaj, and Boerman 2013) and did not differ among the four typologies of disclosures ($F(3, 116) = .314$, $p = .815$).

To test H1, a Mann-Whitney U test was first run to determine the existence of differences in explicit recognition of advertising elicited by disclosures' visual characteristics. In both videos, watchers primed with disclosures containing text and brand logos showed significantly higher advertising recognition than simple textual disclosures ($U = 1185$, $z = -3.549$, $p < .001$). This effect appeared to be robust and independent from the content of the video as it was observable also when the two videos

were considered separate. Namely, watchers primed with disclosures containing text and brand logos reported higher advertising recognition in both Video A ($M_{\text{text\&brand}} = 6.60$, $M_{\text{text}} = 6.03$, $p < .05$) and Video B ($M_{\text{text\&brand}} = 6.43$, $M_{\text{text}} = 5.47$, $p < .05$).

Overall, this result validates H1.

To test H2, we compared the implicit attention paid to the brand placement disclosure between watchers subject to different visual formats of disclosures. As ocular dwell time (i.e., the measure of implicit attention) appeared not to follow a normal distribution ($W = .838$, $p < .001$), we run nonparametric tests. Results showed that watchers primed with disclosures containing text and brand logos showed significantly higher attention to disclosures than individuals primed with simple textual disclosures ($U = 1241$, $z = -2.931$, $p = .003$). The same effect was observable also when the two videos were considered separate. Specifically, individual watching disclosures containing text and brand logos reported higher implicit attention in both Video A ($M_{\text{text\&brand}} = 4.94$, $M_{\text{text}} = 4.48$, $p < .05$) and Video B ($M_{\text{text\&brand}} = 5.09$, $M_{\text{text}} = 4.57$, $p < .05$). Taken together, this result validates H2.

Third, we tested the effect of disclosures' auditory characteristics on explicit recognition of advertising. Priming watchers with disclosures embedding brand melodies did not affect recognition of advertising, as no significant difference was observed when comparing self-reports of watchers exposed to silent disclosures ($U = 1774$, $z = -0.150$, $p = .881$). This lack of effect was confirmed also when the two videos were considered separate ($p > .05$), thus ruling out any effect of the video content. Together these results indicate that advertising recognition appears to be unaffected by the presence of brand melodies played concurrently with the disclosures. This evidence rejects H3. Nevertheless, a notable effect of auditory cues emerges when brand melody recall is considered. That is, a further comparison highlighted that participants who

recalled hearing brand melodies showed significantly higher advertising recognition ($U = 644, z = -2.210, p = .027$) than watchers who did not recall it ($M_{\text{melody}} = 6.61, M_{\text{silent}} = 6.05$). This further comparison resulted to be robust in terms of individual traits.

Namely, individuals recalling hearing brand melodies did not differ from participants who did not recall it with reference to product placement attitudes ($U = 834, z = -0.622, p = .534$) and psychological trait reactance ($U = 745, z = -1.304, p = .192$).

To test H4, we compared the implicit arousal experienced during the disclosure presentation between participants subject to different auditory formats of disclosures. Results showed that watchers primed with disclosures containing brand melodies did not experience higher arousal than participants exposed to silent disclosures ($U = 1560, z = -0.366, p = .715$). This lack of effect was confirmed also when the two videos are considered separated ($p > .05$), thus rejecting H4. Overall statistics describing the effects of disclosures' characteristics on explicit advertising recognition, implicit attention, and implicit arousal are summarized in Table 1.

[TABLE 1 NEAR HERE]

Next, we examined the interaction effects of visual and auditory characteristics of disclosures. We ran a MANOVA including visual characteristics (text & brand vs text only) and auditory characteristics (brand melody vs silent) as fixed factors; advertising recognition and attention to disclosure as dependent variables; and product placement attitudes and psychological trait reactance as covariates. In terms of advertising recognition, results indicated the existence of a main effect related to the presence of brand logos ($F(1, 114) = 12.745, p < .001, \text{partial } \eta^2 = .106$), whereas no main effects were attributable to the presence of brand melodies ($F(1, 114) = 0.069, p =$

.794). These results are in line with H1 and H3. The interaction effect between visual and auditory characteristics was not statistically significant in terms of explicit advertising recognition ($F(1, 114) = 0.340, p = .561$). These results indicate that textual disclosures paired with brand logos appear to be more effective than simple textual disclosures to elicit explicit advertising recognition regardless of the presence of brand melodies. No further effect due to product placement attitudes ($F(1, 114) = 0.694, p = .407$). and psychological trait reactance ($F(1, 114) = 1.070, p = .303$) was observed.

In terms of implicit attention to the disclosure, we confirmed the existence of a main effect related to the presence of brand logos ($F(1, 114) = 6.343, p = .013, \text{partial } \eta^2 = .055$) and no further main effects related to the presence of brand melodies ($F(1, 114) = 0.002, p = .961$). This result proves to be in line with H2. Only a marginal interaction effect was observed in terms of implicit attention to the disclosure ($F(1, 114) = 3.754, p = .055, \text{partial } \eta^2 = .034$), where the presence of brand melodies barely increased the attention paid to the disclosing message. Overall, these results indicate that the implicit attention towards the textual disclosure is primarily affected by the presence of brand logos, whereas brand melodies do not exert a significant influence. These results appeared also unaffected by product placement attitudes ($F(1, 114) = 0.467, p = .496$). and psychological trait reactance ($F(1, 114) = 0.400, p = .528$), hence supporting the robustness of the results to individual characteristics. The interaction effects discussed are displayed in Figure 2 and Figure 3.

[FIGURE 2 NEAR HERE]

[FIGURE 3 NEAR HERE]

To test the indirect effects of disclosure formats on brand equity, we employed Hayes' PROCESS macro (Hayes 2017). This macro proposes a path analysis to estimate the effects in mediation models and represents an established methodology to evaluate the effects of placement disclosures on watchers' behaviors (Boerman, Tessitore, and Müller 2021; Guo et al. 2018; Van Reijmersdal, Oprea, and Cartwright 2021). We run model 6 with three mediators in PROCESS v4.0 with 10,000 bootstrap samples to test H5. We included the disclosure format as the independent variable (we created dummy variables for each format); attention to disclosure, attention to the embedded brand, and advertising recognition as sequential mediators; and brand recall as the dependent variable. This model considered both videos and was structured according to Boerman et al. (2015). Four separate analyses were conducted with one of the disclosure formats as the independent variable and two another as covariates, thus making the excluded variable the reference format.

The results show no significant direct effect of disclosure format on brand recall, as expected (direct effect = 0.873, SE = 0.761, $z = 1.148$, $p = .251$). A positive indirect effect was observed (indirect total effect = 0.881, BootSE = 0.504, 95% BCBCI [0.11, 2.07]) via the three mediators. We considered as reference the disclosure format including text, brand logo, and brand melody and compared it to simple textual disclosures. Positive effects were observed for all the three mediators. Namely, a full disclosure increased attention to the disclosing message ($b = 0.52$, SE = 0.25, $t = 2.087$, $p = .039$), greater attention to the disclosing message increased attention towards the brand embedded in the video ($b = 0.01$, SE = 0.00, $t = 2.298$, $p = .023$), greater attention to the brand embedded in the video increased advertising recognition ($b = 0.02$, SE = 0.00, $t = -1.99$, $p = .049$), and higher advertising recognition increased brand recall ($b = 1.19$, SE = 0.27, $z = 4.342$, $p < .001$). These results mirror the evidence

advanced by Boerman et al. (2015) and confirm H5. The path analysis also showed the existence of a direct effect of brand disclosure on advertising recognition ($b = 0.87$, $SE = 0.30$, $t = 2.91$, $p = .004$), thus confirming H1. Also in line with Boerman et al. (2015), no further significant mediation effects were observed. The outcome of the path model is summarized in Figure 4.

[FIGURE 4 NEAR HERE]

To test H6, we run a further model 6 with three mediators in PROCESS v4.0 with 10,000 bootstrap samples. The model was specular to the previous with the disclosure format as independent variable; attention to disclosure, attention to the embedded brand, and content liking as sequential mediators; and brand attitude as the dependent variable. As expected, no significant direct effect of disclosure format on brand attitude was observed (direct effect = 0.848, $SE = .264$, $t = 0.321$, $p = .749$). Whereas the results showed a positive indirect effect via the three mediators (indirect total effect = 0.062, $BootSE = 0.246$, 95% BCBCI [-0.41, 0.54]). In particular, we observed that a full disclosure increased attention to the disclosing message ($b = 0.99$, $SE = 0.28$, $t = 3.535$, $p < .001$), greater attention to the disclosing message increased attention towards the brand embedded in the video ($b = 0.01$, $SE = 0.00$, $t = 1.964$, $p = .052$), greater attention to the brand embedded in the video increased content liking ($b = 0.02$, $SE = 0.00$, $t = 4.395$, $p < .001$), and higher content liking increased brand attitude ($b = 0.29$, $SE = 0.08$, $t = 3.735$, $p < .001$). Also, greater attention to the embedded brand was shown to trigger higher brand attitude ($b = 0.01$, $SE = 0.00$, $t = 5.947$, $p < .001$). Thus, content liking was shown to embody a partial mediator between attention to the embedded brand and brand attitude. No further significant effects were observed. The

outcome of the path model is summarized in Figure 5, while the empirical evidence related to all the testing hypotheses is summarized in Table 2.

[FIGURE 5 NEAR HERE]

[TABLE 2 NEAR HERE]

Discussion

The present study set out with the aim of assessing the indirect effects of different formats of brand placement disclosures on brand recall and brand attitude. With this purpose we first explored the direct effects that disclosures have on the underlying processing in terms of attention to the disclosure, arousal during the disclosure, and advertising recognition. The experimental results showed that the format of the disclosure directly affects the recognition of advertising and the attention to the disclosure. We evaluated the effects of visual and auditory characteristics of the disclosure format. On the one hand, the inclusion of visual and textual information disclosing the sponsoring brand was shown to increase the awareness of embedded advertising in the video and the attention paid to the disclosure. On the other hand, the presence of auditory information as brand melodies did not directly change the recognition of advertising. No further significant effect in terms of arousal was attributable to brand melodies played during the disclosure, thus rejecting the possibility of higher vigilance triggered by acoustic cues. This could be explained by the fact that brand melodies were played for a limited time, triggering no discernible arousing effects. Still, brand melodies appeared to have a positive effect to increase the attention to the disclosure when melodies were paired with textual and pictorial disclosures.

These results indicate that the recognition of advertising is directly influenced by the amount of information presented in the disclosure. Higher informational content (i.e., disclosing not only the existence of sponsored content but also the sponsor) appears to increase the processing fluency of the brand embedded in the music video. In other words, disclosing the sponsor in advance contributes to conveying an experience of familiarity towards the later shown brand and thus higher recognition of advertising.

Our results support previous evidence showing that placement disclosures act as primes influencing the perceptual processing of subsequent stimuli (Eisend et al. 2020) and this effect can be strengthened by increasing the information content of the disclosure. Interestingly, this priming appears to be mainly due to the visual information included in the disclosure. The introduction of brand melodies seems to strengthen such effect only when the sponsoring brand is disclosed. This may be explained by the congruence between auditory and visual information. Congruent (as opposed to incongruent) information has been often observed to increase the ease with which these informational elements are processed (van Rompay, de Vries, and van Venrooij 2010). Hence, it could conceivably be hypothesized that disclosures might increase their effectiveness when visual and auditory stimuli are concordant (i.e., disclosures reporting not only the name of the sponsor but also its brand melody). That is, a further increase of the information content combining congruent visual and auditory cues can further enhance the processing fluency. These findings contribute to the extant literature investigating brand placement disclosures (Eisend et al. 2020) by suggesting that positive effects in terms of advertising recognition and attention to the disclosure can be achieved by increasing the disclosures' information content through a combination of consonant visual and auditory information.

Our results showed also that brand placement disclosures have a positive indirect effect on brand recall and brand attitude. Through a process view, we first demonstrated that heightened attentiveness to disclosures has a positive effect on the attention paid to the branded product embedded in the music video. Also, greater attention to embedded brands positively influences advertising recognition and, in turn, brand recall. This behavioral mechanism finds a strong parallel with the outcome observed by Boerman et al. (2015). Namely, we showed that the recall of embedded advertising goes through an elaborate process that involves implicit and explicit responses. Through eye-tracking data, we demonstrated that attention to the disclosure and the embedded product represent significant implicit responses, whereas explicit responses proved to be related to advertising recognition. Our results hence confirm that brand recall can originate as the outcome of a chain-relationship, and it is indirectly influenced by the format of the disclosure. These results contribute to the extant literature in at least three major respects. First, the proposed model integrates relevant effects for both policymakers and advertisers. On the one hand, a notable contribution to policy literature is related to the identification of antecedents of advertising recognition, which embodies a key variable for political decision-makers and legislators. Our proposed model underscores that advertising recognition is directly influenced both by implicit attention to brand placement and the disclosure format. This outcome complements previous observations related to disclosure typologies and their effects in terms of advertising recognition (Van Reijmersdal 2016). On the other hand, our model includes a key effect sought by advertisers, namely brand recall. Our results indicate that brand recall is related to advertising recognition, thus linking desired effects to policymakers (i.e., affecting advertising recognition) with desired effects to advertisers (i.e., affecting brand recall). Second, our empirical activity contributes to the

methodological discussion in advertising research by advancing an investigation approach that combines explicit self-reports with implicit behavioral metrics. Our results extend the body of literature in favor of the application of a multimethod approach to delve into advertising processing (Guo et al. 2018; Boerman, Van Reijmersdal, and Neijens 2015). Such a multimodal perspective allowed us to discern the existence of temporal evolution in the processing of advertising, which would have not been possible without employing both typologies of metrics. Implicit metrics of attention first allowed us to track the attentive behavior of an individual during the exposure to advertising without interrupting the watching experience. Real-time attention was then evaluated in relation to explicit metrics of advertising recognition and recall, assessed after the watching experience. Overall, the combination of implicit and explicit metrics enabled us to explain the relationship between reactions that are involuntarily formed with the individual's conscious evaluations. Third, the empirical findings in this study expand previous evidence observed in TV shows by showing that this processing mechanism can be observed also during exposure to music videos. That is, the processing mechanism of brand placements appears to be robust across media typologies, despite their differences in terms of length and placement repetition (Sung and de Gregorio 2008).

A further process model showed that the disclosure format also indirectly affects brand attitudes through three mediators. Our results pointed out that greater attention to disclosures and embedded products positively influences content liking and, in turn, brand attitudes. We interpret the mediation of content liking between attention to the brand and brand recall as a consequence of mere exposure. Namely, watchers might have developed preferences for brands merely because of previous longer exposure to them during the music video. These results also corroborate the findings of Chan

(2020), who demonstrate that placement disclosures have a positive indirect effect on the evaluation of the embedded brand, mediated by the liking of the video content. This result expands previous theorizations of the impacts of brand disclosures on content liking (Cowley and Barron 2008) by demonstrating the existence of a processing mechanism that bridges the implicit effects of the disclosure format in terms of attention with explicit responses in terms of liking a brand attitude. In these terms, the empirical results are the first to show that brand attitudes are indirectly influenced by disclosure formats through both implicit and explicit responses.

Practical implications

These findings have noteworthy implications for communication practitioners and policymakers. First, we advance evidence against the paradox of product placements according to which “if you notice, it's bad. But if you don't notice, it's worthless” (Ephron, 2003, p. 20). Our results show that appropriately constructed placement disclosures can indeed enhance the possibility of noticing embedded products in music videos and this, in turn, bears positive externalities in terms of brand equity.

Specifically, introducing brand placement disclosures can enhance brand recall and prompt positive attitudes towards the brand. Publishers and advertisers are encouraged to thoroughly leverage this outcome. Publishers (i.e., organizations broadcasting the music videos) might differentiate their advertising fees based on the format of disclosure introduced before the broadcasted video. That is, including disclosures with textual, pictorial, and auditory information about the sponsor can demand higher fees due to their expected positive influence on brand equity. Publishers can otherwise request lower fees for standard textual disclosures. Meanwhile, advertisers (i.e., organizations that pay to have their ads and video displayed) are suggested to demand greater control over the format of disclosure. Advertisers should scrupulously

understand the context where their video is displayed, including the features of the disclosure, to maximize their results in terms of brand equity.

Second, professionals may structure their disclosing messages to maximize processing fluency related to the disclosing message. Based on the evidence that placement disclosures can be employed to increase brand recall and attitude, professionals might want to design their disclosures including high information content (e.g., disclosing the sponsor through visual and auditory information). Still, designing the disclosing message should meticulously ponder the congruence of the information provided. Indeed, our results show that the effectiveness of disclosing messages is not only a matter of information quantity but also of congruence between the different information provided.

Lastly, the findings of the present study indicate that disclosing not only the existence of sponsored content but also the brand of the sponsor increases advertising recognition. With the purpose of helping watchers to critically discern brand placement and defend consumers against persuasion, policymakers are encouraged to promote disclosing both the sponsoring source and the persuasive intent of brand placement in music videos. Increasing information content is expected to raise watchers' awareness of the commercial nature of sponsored content and help discriminate between commercial and actual video content. Such an increased understanding of the persuasive intent of the video content is then intended to activate watchers' cognitive defenses or evaluations.

Limitations and future research

Despite the contributions of this research, its limitations need to be acknowledged. First, our research focused only on the short-term effects of disclosures formats with no

repetition of disclosures. Parallel research has shown the effects of visual disclosures over time (Boerman, Tessitore, and Müller 2021), demonstrating that disclosures can enhance brand recall also in the long term. Given the capacity of auditory cues to affect mnemonic processes, future investigations might find fruitful avenues in testing the long-term effects of repeated auditory disclosures. Of particular interest can be the potential habituation effects towards specific disclosures. Second, our empirical results were observed in a controlled laboratory setting, where participants were invited to watch four full-length music videos without external distractions. To discern the effects of the external context, we encourage replicating the empirical investigation in an ecological setting where participants might be exposed to external distractions, multi-screen interactions or could independently determine which scenes of the video content to watch. Third, the present research proved the effectiveness of higher information content within the disclosing message. Still, only a few combinations of information cues were considered (i.e., textual, pictorial, and auditory). There is abundant room for further progress in determining additional effective mixtures of information typologies (e.g., sound alarms or haptic feedback). Future research would be then needed to determine the existence of an upper boundary of the information content. Namely, that threshold of information amount beyond which negative effects in terms of brand equity might surge. This might contribute to understanding the psychological processing that brand placement disclosures can induce, support, or break.

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Disclosure characteristics	Effect	Disclosure typology	Video A		Video B		Overall	
			M	SD	M	SD	M	SD
<i>Visual</i>	Explicit advertising recognition	Text & brand	6.60	0.89	6.43	0.90	6.52	0.89
		Text only	6.03	1.25	5.47	1.50	5.75	1.39
	Implicit attention to disclosure	Text & brand	4.94	0.86	5.09	0.72	5.02	0.80
		Text only	4.48	1.17	4.57	1.08	4.52	1.10
<i>Auditory</i>	Explicit advertising recognition	Brand melody	6.43	0.97	5.70	1.58	6.07	1.35
		Silent	6.20	1.25	6.20	0.96	6.20	1.10
	Implicit arousal to disclosure	Brand melody	6.35	7.23	11.17	19.63	8.80	14.97
		Silent	11.61	19.19	6.73	9.63	9.21	15.33

Table 1. Descriptive statistics

Hypothesis	Formulation	Empirical evidence
<i>H1</i>	Textual disclosures paired with brand logos elicit higher explicit recognition of advertising than simple textual disclosures	Supported
<i>H2</i>	Textual disclosures paired with brand logos elicit higher implicit attention to the disclosure than simple textual disclosures	Supported
<i>H3</i>	Disclosures paired with brand melodies elicit higher explicit recognition of advertising than silent disclosures	Rejected
<i>H4</i>	Disclosures paired with brand melodies elicit higher implicit arousal than silent disclosures	Rejected
<i>H5</i>	Brand placement disclosure formats have a positive indirect effect on brand recall. This effect is mediated by implicit attention to disclosure, implicit attention to the embedded product, and explicit advertising recognition.	Supported
<i>H6</i>	Brand placement disclosures have a positive indirect effect on brand attitude. This effect is mediated by implicit attention to disclosure, implicit attention to the embedded product, and explicit liking of the video content	Supported

Table 2. Research hypothesis summary and empirical evidence

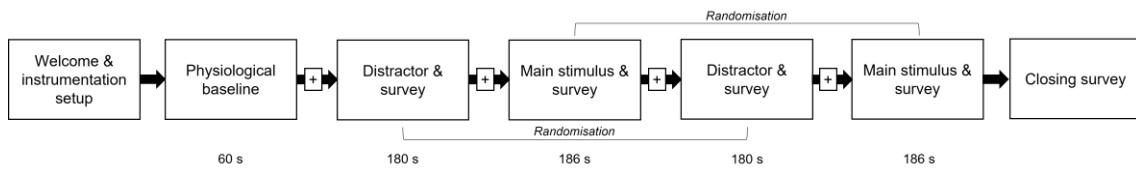
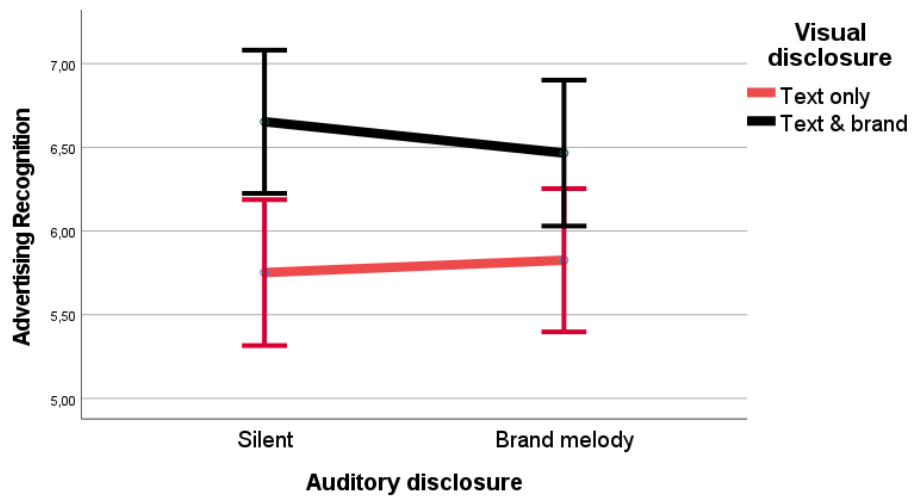
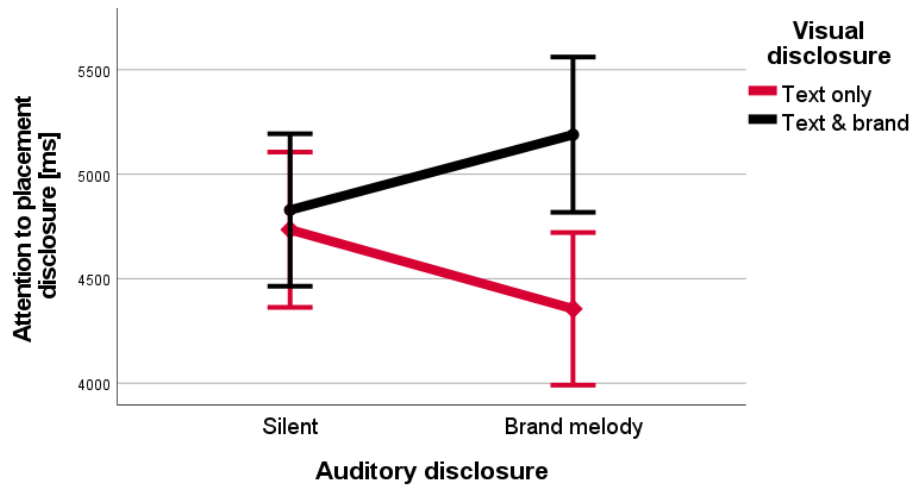


Figure 1. Experimental flow



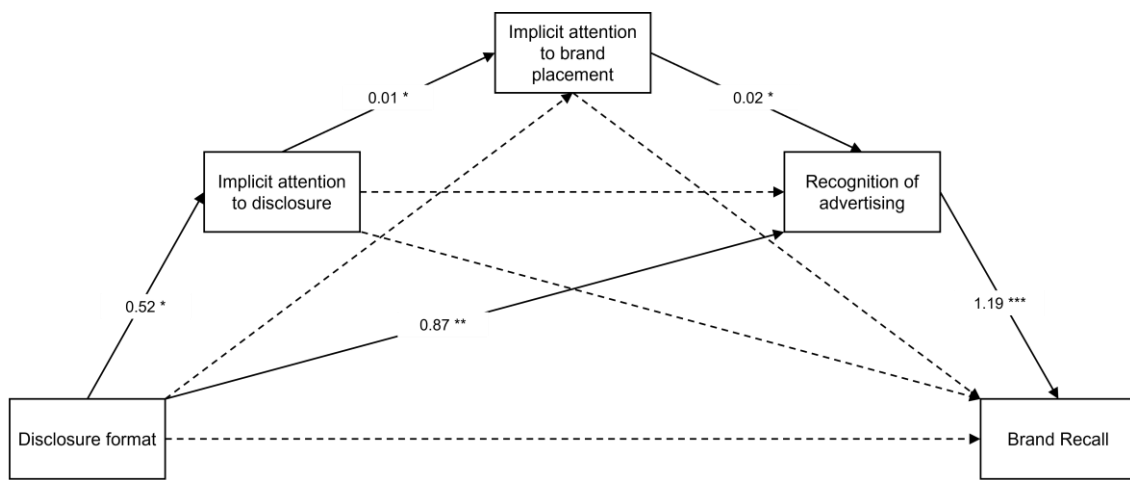
Covariates appearing in the model are evaluated at the following values: Product Placement Attitudes = 5,26, Psychological Trait Reactance = 2,95. Error bars: 95% CI

Figure 2. Interaction effects: advertising recognition



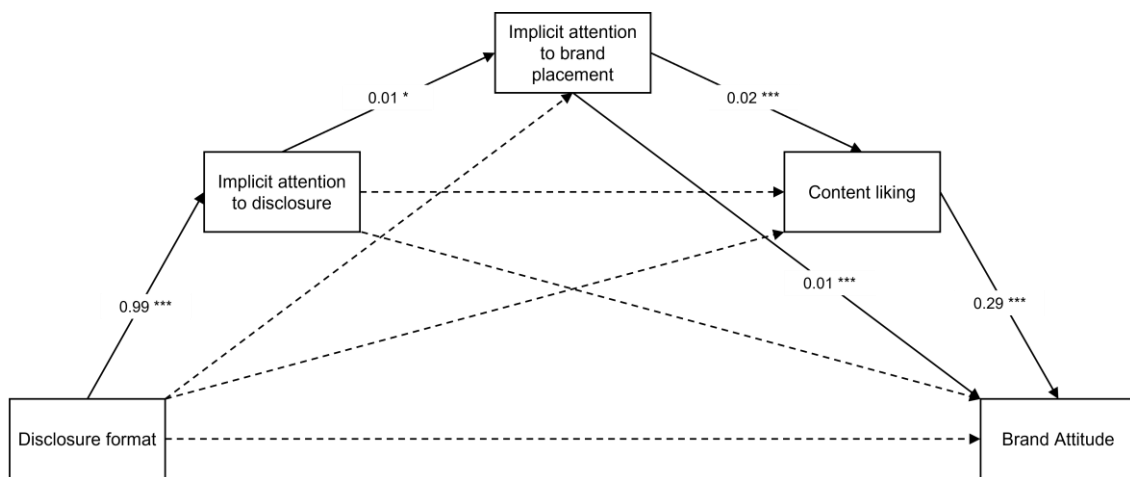
Covariates appearing in the model are evaluated at the following values: Product Placement Attitudes = 5,26, Psychological Trait Reactance = 2,95. Error bars: 95% CI

Figure 3. Interaction effects: attention to disclosure



Note: * $p \leq .05$; ** $p < .01$; *** $p < .001$

Figure 4. Path model testing the effects of brand placement disclosures on brand recall



Note: * $p \leq .05$; ** $p < .01$; *** $p < .001$

Figure 5. Interaction effects: Path model testing the effects of brand placement disclosures on brand attitude