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# The Positive Effect of Green versus Conventional Brand Placement: The Roles of Brand Warmth and Persuasion Knowledge

*Marijn H. C. Meijers, Eva A. van Reijmersdal, and Anja Krafczyk*

## 1 Introduction

Brand placement is the placement of a brand in non-commercial content such as a television series or movie (Karrh, 1998) which is used by marketers to advertise brands in a less obtrusive and more natural fashion (Karrh, 1998; Russel, 2002). Although brand placement is around for decades now and a significant body of research has investigated its effects (for reviews see, Balasubramanian, 1994; Van Reijmersdal, Neijens and Smit, 2009), little is known about the role of brand types (e.g., green, conventional).

However, with the recent introduction of green brand placement (Green Product Placement, 2013), the question arises whether brand placement effects differ for conventional brands versus green brands. As compared to conventional brands, green brands have a connection to environmental friendliness and sustainability (Hartmann and Apaolaza-Ibáñez, 2009) which may enhance green brand placement effects. Yet, no studies have focused on the effects of green versus conventional brand placements so far. The necessity to study the effects of green brand placement besides conventional brand placement is supported by Van Reijmersdal, Neijens, and Smit (2007). The authors emphasize that the results concerning brand placement are always related to the specific brand used, which indicates that green brand placement may elicit different effects than conventional brand placement. Therefore, the first aim of this study is to provide insights into the effects of green brand placement (versus conventional brand placement) on brand attitudes and subsequently purchase intentions.

In addition, insights into the theoretical mechanisms that explain a differential impact of green versus conventional brand placement are lacking. It may be theorized that the placement of green brands works better (i.e., is more persuasive) than the placement of conventional brands for two reasons. First, research suggests that people perceive green brands as warmer than conventional brands due to their association with goodwill (Chernev and Blair, 2015; Schuhwerk and Lefkoff-Hagius, 1995; Kong and Zhang, 2013). This brand warmth may consequently lead to more positive brand attitudes which positively affect purchase intentions.

Second, green brand placement is a rather novel practice. Therefore, a green brand in a movie or series may not be associated with brand placement, and may not activate associations with advertising and persuasion to the same extent as conventional advertising would (Friestad and Wright, 1994). The Persuasion Knowledge Model postulates that activation of advertising knowledge may result in more resistance and therefore decreased persuasion (Friestad and Wright, 1994). As a result, since green brand placement may be less likely to activate persuasion knowledge it may be argued that people show less resistance towards green brand placement than towards conventional brand placement which benefits subsequent evaluations (Friestad and Wright, 1994; Campbell and Kirmani, 2008). In sum, the aim of this study is to unravel how perceived brand warmth and the activation of persuasion knowledge explain effects of green versus conventional brand placement on brand attitudes and purchase intentions.

The contribution of our study is fourfold. First, to our knowledge, our study is the first to focus on the practice of green brand placement and to show that green brand placement leads to more positive brand attitudes than conventional brand placement, subsequently influencing purchase intentions. Second, we add to the theoretical understanding of green advertising literature in general and green brand placement specifically by uncovering brand warmth as an important underlying mechanism for the positive effects of green versus conventional brand placement. Third, we reveal a second explanatory mechanisms by showing that lower levels of activation of consumers' persuasion knowledge explain positive effects of green brand placement as well. Fourth, our paper has an important societal contribution by showing that green brand placement can increase green brand attitudes and subsequently purchase intentions. Purchasing green rather than conventional products can counter the negative effects of consumption behavior on climate change and the environment (Weber and Matthews, 2008). Green brand placement can thus be an important step in stimulating green consumption

## **2 Theoretical Background**

### *2.1 Brand Placement of Green versus Conventional Brands*

Brand placement is a more unobtrusive form of advertising brands and its products than traditional print and television advertising (Balasubramanian, 1994; Hackley, Tiwsakul and Preuss, 2008). More and more companies use brand placement instead of traditional forms of advertising (Hackley et al., 2008). The popularity of brand placement is based on the idea that it is harder to avoid than traditional ads and is less often perceived as advertising, because the brand is embedded in non-advertising content (Hackley et al., 2008). With this

advantage, companies try to increase the awareness of their brands while breaking through the clutter of traditional advertising and overcoming consumers' avoidance behavior towards advertising (Rotfeld, 2006).

Researchers have paid attention to brand placement for more than two decades and have studied its effects on factors such as memory and evaluations of the brand placed (for reviews see, Balasubramanian, 1994; Van Reijmersdal, et al., 2009). The brands that were investigated in these studies belong to the category conventional brands, which may be explained by the fact that conventional brands are commonly used in brand placement (Nelson and McLeod, 2005).

Next to the category of conventional brands, another type of brands exists: green brands. These are brands that consumers associate with environmental concerns and practice (Chen, 2010). Due to the upsurge in green brands, green advertising (defined as persuasive communication which emphasizes the environmentally friendly attributes of the brand, product, organization and/or service; Banerjee, Gulas and Iyer, 1995; Schuhwerk and Lefkoff-Hagius, 1995) is also on a rise. However, whereas traditional green advertising is becoming more and more common, green brand placement is a rather novel phenomenon. Only since 2012, green brands have professionally been integrated (Green Product Placement, 2013) and green brand placement is still rather the exception than the rule. Due to the novelty of green brand placement, there is a lack of research regarding this practice. There is some research on traditional green advertising and green branding though, allowing us to draw parallels between findings in traditional green advertising literature and expected effects of green versus conventional brand placement.

Most research on green advertising investigates what kind of green appeals consumers prefer (for example, environmental versus financial appeals, consumer versus societal benefits appeals; e.g., Kareklas, Carlson and Muehling, 2014; Schuhwerk and Lefkoff-Hagius, 1995). However, there is also some research investigating the effects of green versus conventional advertising (although for the studies investigating this, the actual comparison between green versus conventional advertising is mostly not the main focus of the research; Bickart and Ruth, 2012; Kong and Zhang, 2013; 2014; Matthes, Wonneberger and Schmuck, 2014). The results of the studies into traditional green advertising suggest that advertising effectiveness is higher for green rather than conventional ads (e.g., Kong and Zhang, 2013; Matthes et al., 2014; Schuhwerk and Lefkoff-Hagius, 1995). An important factor explaining this preference for brands advertised in green advertising is the idea that people feel that they are doing the right thing when liking or purchasing such a brand (Mazar and Zhong, 2010). We therefore expect that people have higher brand attitudes for brands featured in green rather than conventional brand placement.

In contrast to the research that shows positive effects of green versus conventional traditional advertising, there is also research showing no differences between the effectiveness of green versus conventional traditional ads (e.g., Bickart and Ruth, 2012; Kong and Zhang, 2014). These null-findings may be explained by the following: Whereas people may prefer green brands, because of the positive associations with the environment, they in contrast also seem to be skeptical towards green marketing and advertising (e.g., Bickart and Ruth, 2012 - but see Matthes and Wonneberger, 2014) - for example, because of greenwashing practices such as deceptive claims (Kangun, Carlson and Grove, 1991). When being confronted with green traditional advertising people may thus recognize the persuasion attempt which often results in negative attitudes and skepticism (Speck and Elliot, 1997). Brand placement is however less likely to result in negative attitudes and skepticism as the brand is embedded in non-advertising content (Hackley et al., 2008). We therefore expect that people have higher brand attitudes for brands featured in green rather than conventional brand placement. Following several behavioral change theories and hierarchy of effects models, we expect that brand attitudes will consequently influence purchase intentions (Fishbein and Ajzen, 1975; Lavidge and Steiner, 1961). Therefore, we hypothesize the following:

**H1:** Green brand placement leads to a.) more positive brand attitudes than conventional brand placement which consequently influences b.) purchase intentions.

We thus expect that green brands will be more positively evaluated than conventional brands when used in brand placement. We assume that this effect is driven by two different underlying mechanisms, discussed below: an increase in brand warmth and a decrease in persuasion knowledge, see Figure 1.

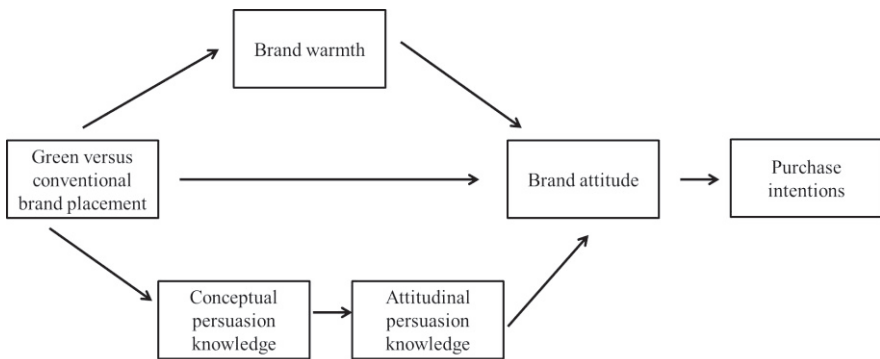


Figure 1: Conceptual model

## 2.2 *Brand Warmth*

Warmth is defined as a positive, mild, volatile emotion that is often used to describe people (Fiske et al., 2002). The Brands as Intentional Agents Framework (BIAF; Kervyn, Fiske and Malone, 2012), however, proposes that brands may also be perceived as warm, since people may relate to brands quite similar as they do to people. When consumers perceive a brand to be well-intentioned, they perceive such a brand as warm, whereas when consumers perceive a brand to be less well-intentioned (or even ill-intentioned) they perceive such a brand as less warm (Kervyn et al., 2012). Brands are thus more likely to be categorized as warm when consumers perceive them as being good intentioned, such as protecting the environment, than when consumers perceive them as being less well intentioned, such as making profit. In line with this, research shows that non-profit brands (that are seen as well-intentioned) are often perceived as warmer than profit brands (that are seen as less well-intentioned; Aaker, Vohs and Mogilner, 2010) and that brands engaging in Corporate Social Responsibility (CSR) are evaluated more positively in the sense of being more trustworthy, more ethical, and warmer than brands not engaging in CSR (Chernev and Blair, 2015). Although green brands may be profit brands, we expect that they are more likely to be perceived as well-intentioned than conventional brands as they try to contribute to a better environment. Therefore, we expect green brands to be perceived as warmer by consumers.

Another reason why we expect green brands specifically to be seen as warmer brands, is the relation between environmentally friendliness and warmth. Green behaviors are often seen as moral and warm because these behaviors are in general altruistic (Mazar and Zhong, 2010). Being green may therefore provide people with a warm glow, similar to behaving altruistically in other ways (Andreoni, 1990). In fact, people might actually feel warmer when behaving green. That is, research shows that people acting green perceive the temperature of the room they are in to be higher than those not acting green (Taufik, Bolderdijk and Steg, 2015). This second link between environmentally friendliness and warmth, strengthens our expectation that green brands will be seen as warmer than conventional brands.

Subsequently, we expect that the perception of brand warmth has a positive effect on brand attitudes, as brand warmth depicts a positive evaluation of a brand. Research has indeed shown that people are more likely to be loyal towards warm brands and have higher purchase intentions (Kervyn et al., 2012). Furthermore, research shows that people are more likely to endorse a brand on social media when it concerns a warm brand (Bernritter, Verlegh and Smit, 2016). In line with these findings, we expect that because brands in green brand placement are seen as warmer than brands in conventional brand placement, this

consequently increases brand attitudes and purchase intentions in sequence for green brands. This leads to the following hypothesis:

**H2:** Green brand placement leads to more brand warmth, resulting in more positive brand attitudes, which consequently influences purchase intentions.

After discussing the mediating role of brand warmth in the positive effects of green versus conventional brand placement, in the next section we discuss the mediating role of a lowered persuasion knowledge.

### 2.3 *Persuasion Knowledge*

Persuasion knowledge comprises of consumers' knowledge and attitudes about persuasion attempts. People use this knowledge to cope with persuasion attempts, meaning that this knowledge guides them in deciding whether they want to resist the attempt or be persuaded by it (Friestad and Wright, 1994). Recent theory proposes a distinction between conceptual and attitudinal persuasion knowledge (Rozendaal, et al., 2011). Conceptual persuasion knowledge is defined as consumers' knowledge about persuasion and includes the ability to recognize advertising as such, and the understanding of the persuasive intent of advertising (Rozendaal et al., 2011). Attitudinal persuasion knowledge is defined as consumers' critical attitudes towards advertising and includes critical beliefs about advertising's honesty, trustworthiness, and credibility (Rozendaal et al., 2011; Van Reijmersdal et al., 2017). Both conceptual and attitudinal persuasion knowledge are less likely to be activated when confronted with green brand placement than when confronted with conventional brand placement or traditional advertising for two reasons.

First, compared to traditional advertising, brand placement (green or conventional) is a rather unobtrusive form of advertising as the brand is embedded in a non-advertising context. As such not only the source of the information (i.e., the advertiser) is masked as being the program or movie, but also the intent (i.e., to persuade) is masked as being entertainment or information (Cain, 2011). Therefore, conceptual persuasion knowledge is less likely to be activated when consumers are confronted with brand placement compared to more traditional forms of advertising (Van Reijmersdal, 2011).

Second, the activation of conceptual persuasion knowledge is expected to be further hindered when green brand placement is concerned. Consumers' persuasion knowledge develops over time and the more experience people have with a certain persuasion attempt, the better their persuasion knowledge will be developed (Friestad and Wright, 1994). Green brand placement is a rather novel application. Only since 2012, green brands have professionally been integrated (Green Product Placement, 2013) and green brand placement is still rather the exception than the rule. Therefore, green brands are unlikely to be associated with brand placement. This subsequently lowers the chance that people actually

perceive green brand placement as a persuasion attempt. Therefore, we expect that people will be less likely to classify green brand placement as advertising than conventional brand placement. In other words, conceptual persuasion knowledge will be lower for green brand placement than for conventional brand placement.

Next to whether people classify a persuasion attempt as advertising (i.e., conceptual persuasion knowledge), it is also of importance how people view such a persuasion attempt (i.e., attitudinal persuasion knowledge). When people experience feelings such as skepticism and dislike during the persuasion attempt this will differentially impact the effects of the persuasion attempt than when experiencing feelings such as warmth, honesty, and trustworthiness (Boerman, Van Reijmersdal and Neijens, 2012).

The Persuasion Knowledge Model argues that the activation of conceptual persuasion knowledge consequently elicits a reaction towards the persuasion attempt which can be critical (Friestad and Wright, 1994; Campbell and Kirmani, 2008), especially when the persuasion attempt is seen as less honest and trustworthy. Research on brand placement has indeed shown that the activation of conceptual persuasion knowledge can result in the activation of attitudinal persuasion knowledge (Boerman et al., 2012; Van Reijmersdal et al., 2017). Once consumers realize that a brand placement is actually a persuasion attempt, they may think of it as being less honest and less trustworthy because of the ulterior motive (Campbell and Kirmani, 2008). Thus, when conceptual persuasion knowledge is activated the chances of activating attitudinal persuasion knowledge increase. As such, we expect green brand placement to activate less conceptual persuasion knowledge than conventional brand placement, which in turn leads to less critical evaluations of the brand placement, that is less activation of attitudinal persuasion knowledge.

Research has shown that increased activation of conceptual and attitudinal persuasion knowledge results in more resistance, thus less persuasion (Boerman et al., 2012; Van Reijmersdal et al., 2017). This (negative) reaction is a behavior that helps consumers deal with the persuasion attempt (i.e., coping behavior) (Friestad and Wright, 1994; Campbell and Kirmani, 2008). Reactance Theory argues that people respond negatively when they perceive a threat of freedom. A persuasion attempt tries to influence consumers' thoughts and behaviors and thus limits consumers' freedom of choice. To restore their freedom, consumers can resist the persuasion attempt and prevent persuasion (Brehm and Brehm, 1981). This implies that compared to conventional brand placement, green brand placement leads to more persuasion (e.g., more positive brand attitudes) because of lower levels of conceptual and attitudinal persuasion knowledge activation. This leads to the following hypothesis:



**H3:** Green brand placement leads to less activation of conceptual persuasion knowledge, and consequently to less activation of attitudinal persuasion knowledge than conventional brand placement, resulting in more positive brand attitudes which consequently positively influences purchase intentions.

### 3 Method

#### 3.1 Pretest

In order to create the stimulus material for our two conditions (green versus conventional brand placement) two brands needed to be selected that had to fulfill three basic requirements to be suitable. Firstly, both brands had to be equally and highly familiar to a certain population that serves as a target group in this experiment as research showed that brand familiarity affected the results in prior brand placement studies (Verhellen, Dens and De Pelsmacker, 2015). Secondly, both brands needed to be equally and highly liked (Dens et al., 2012). Thirdly, the green brand had to be perceived as green (i.e., environmentally friendly) and the conventional brand had to be perceived as significantly less green. To find two brands that meet these requirements, a pretest was executed.

Twenty one participants ( $M_{age} = 33.24$ ,  $SD = 14.63$ , 66.7% female) completed the pre-test with a within-subjects design. Participants saw a selection of ten brands (five refreshment drink brands and five grocery store brands) and were asked to answer the following three questions regarding every brand: “Do you like the brand?”, “Is the brand familiar to you?” and “Do you perceive the brand as green (environmentally friendly)?” on a 7-point Likert-scale (1 = strongly disagree; 7 = strongly agree). The results of a paired-sample t-test indicated that the brands Coca Cola and Bionade provided the best match concerning the requirements. Coca Cola ( $M = 5.19$ ,  $SD = 1.60$ ) and Bionade ( $M = 5.67$ ,  $SD = 0.86$ ) were equally liked,  $t(20) = 1.39$ ,  $p = .180$ . Furthermore, Coca Cola ( $M = 6.19$ ,  $SD = 1.33$ ) and Bionade ( $M = 6.19$ ,  $SD = 0.93$ ) were equally familiar,  $t(20) < .01$ ,  $p = 1.000$ . Lastly, Coca Cola ( $M = 2.67$ ,  $SD = 1.28$ ) was seen as significantly less green than Bionade ( $M = 5.57$ ,  $SD = 0.93$ ),  $t(20) = 7.23$ ,  $p < .001$ ,  $d = 2.60$ . Therefore, it was decided to use the brand Coca Cola for the conventional brand placement condition and Bionade for the green brand placement condition.

## 3.2 Main Experiment

### 3.2.1 Participants and Design

Participants were recruited via e-mail or Facebook to take part in the online experiment on the website Qualtrics. Participants were randomly assigned to one of the two conditions (green versus conventional brand placement)<sup>1</sup> of a between-subject design. In total, 232 participants ( $M_{age} = 40.76$ ,  $SD = 15.15 - 4$  missing, 55.6% female – 1 missing) completed the questionnaire.

### 3.2.2 Procedure

Firstly, we measured participants' prior brand liking of the green (Bionade) and conventional (Coca Cola) brand. This would enable us to take prior brand liking into account in case there was a difference between the two brands. To disguise the intent of the measure, we asked participants to rate their brand liking for 15 food brands (e.g., Haribo, Bionade) on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Thereupon, the participants were shown the green brand placement or the conventional brand placement scene. We developed the two brand placement conditions by editing an existing scene with brand placement. By using this method, the factors modality, plot connection, and displaying frequency stayed equal in all conditions, which is of importance as previous research has shown that these influence the effects of brand placement (Russel, 2002; Verhellen et al., 2015). For the purpose of developing the two brand placement conditions (green versus conventional), a short scene (2 minutes 14 seconds) of the German movie *Vaterfreuden* was chosen. In the scene a discussion takes place while some people are sitting around a table. We asked a professional to edit the scene such that in the green condition one of the beer bottles standing on the table was replaced by a Bionade bottle and in the conventional condition by a Coca Cola bottle. Directly after seeing the movie scene, participants were directed to the questionnaire. The questionnaire started with some control variables (i.e., brand recall and recognition), then we measured our dependent variables (i.e., brand attitude and purchase intention), followed by items measuring the mediating variables (i.e., brand warmth, conceptual and attitudinal persuasion knowledge), the manipulation check (i.e., greenness of the brand) and

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<sup>1</sup>Next to green versus conventional brand placement, we also manipulated whether people saw a brand placement disclosure or not as in some countries such a disclosure is obligatory. The presence or absence of a disclosure did not affect the results. There was no main, nor interaction effect of disclosure. Therefore we collapsed the conditions into one green and one conventional brand placement condition.

demographics measures. At the very end, participants received a debriefing in which the purpose of the study was explained.

### 3.2.3 Measures

**Brand warmth.** The mediator brand warmth was measured by using three items: *I find the brand Coca Cola [Bionade] warm / generous / kind* on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*), Cronbach's alpha = .88 (Aaker et al., 2010). The average of the three items formed the index measure for brand warmth ( $M = 3.48$ ,  $SD = 1.38$ ).

**Persuasion knowledge.** The concept persuasion knowledge consists of two dimensions: conceptual persuasion knowledge and attitudinal persuasion knowledge (Boerman et al., 2012; Rozendaal et al., 2011). Following previous research, we measured conceptual persuasion knowledge with one item: *"To what extent was the scene about Coca Cola [Bionade] in the movie Vaterfreuden advertising?"* on a 7-point Likert-scale (1 = *strongly disagree*; 7 = *strongly agree*;  $M = 5.61$ ,  $SD = 1.62$ ; Boerman et al., 2012). The latter dimension, attitudinal persuasion knowledge was measured with five items: *"I think the scene about Coca Cola [Bionade] in the movie Vaterfreuden is honest (reversed), trustworthy (reversed), convincing (reversed), biased, and not credible.* The items were rated on a 7-point Likert-scale (1 = *strongly disagree*; 7 = *strongly agree*; Boerman et al., 2012; Cronbach's alpha = .69). Participants who reported a high score on attitudinal persuasion knowledge felt more critical towards the brand placement ( $M = 4.24$ ;  $SD = 1.87$ ).

**Brand attitude.** The dependent variable brand attitude was measured with six 7-point differential scales: *unpleasant/ pleasant, bad/ good, negative/ positive, unfavorable/ favorable, poor quality/ high quality and dislike/ like* (Cronbach's alpha = .96; Boerman et al., 2012). The average score of the six items was used to measure brand attitude ( $M = 4.45$ ;  $SD = 1.59$ ).

**Purchase intentions.** The dependent measure purchase intention was measured with a single item: *How likely are you to purchase Coca Cola [Bionade] in the future?* on a scale from 1 (*highly unlikely*) to 7 (*highly likely*; cf., Kareklas et al., 2014).

**Manipulation checks and control variables.** In order to check if participants saw the brand placed in the movie scene, brand recall was measured by asking participants to list every brand that they remembered seeing in the movie scene of *Vaterfreuden* (Russel, 2002). The item was coded with 0 (*not recalled*) and 1 (*correctly recalled*) and 83.6% of the participants recalled the brand correctly. Secondly, brand recognition was measured to check if participants recognized the placed brand in the case they were not able to recall it (Russel, 2002). For this purpose participants were exposed to a list of 10 brands (Bionade, Coca Cola and eight filler items) and asked to check the brands they remembered

seeing in the movie scene *Vaterfreuden* (0 = *no*; 1 = *yes*), 85.7% of the participants recognized the brand correctly. Lastly, to check whether the brand in the green brand placement condition (Bionade) is perceived as greener than the brand in the conventional brand placement (Coca Cola), participants rated the greenness of the brands on a scale from 1 (*not green*) to 7 (*green*).

## 4 Results and Discussion

### 4.1 Manipulation Checks and Control Variables

We wanted to check whether participants were just as likely to recall and recognize the brand in the green as in the conventional brand placement conditions, such that our findings could not be attributed to less brand recall or recognition in either one of the conditions. A chi-square analysis showed that there was no difference between the green and the conventional brand placement conditions on brand recall  $\chi^2 = 0.22$ ,  $p = 0.638$  or brand recognition  $\chi^2 = 1.04$ ,  $p = 0.307$ .

As a manipulation check, we analyzed whether the brand in the green brand placement (Bionade) was seen as greener than the brand in the conventional brand placement (Coca Cola). An independent samples t-test showed that participants in the green brand placement conditions were more likely to perceive the brand as green ( $M = 4.91$ ,  $SD = 1.47$ ) than participants in the conventional brand placement conditions ( $M = 2.57$ ,  $SD = 1.49$ ),  $t(225) = 11.94$   $p < .001$ . Thus the manipulation of the brand type was successful.

Lastly, we checked whether prior brand liking differed for Bionade (green brand) and Coca Cola (conventional brand). Despite equal liking scores in the pre-test, a paired-samples t-test showed that prior brand liking differed in the main experiment, such that participants in general liked Bionade better ( $M = 4.76$ ,  $SD = 1.52$ ) than Coca Cola ( $M = 4.09$ ,  $SD = 1.95$ ),  $t(231) = 4.19$   $p < .001$ . Therefore, we took prior brand liking into account as a covariate in our main analyses, such that we can ascribe our findings to the nature of the placement (green versus conventional) rather than to prior brand liking. Please note that we find similar, albeit stronger results, when not taking prior brand liking into account as a covariate.

### 4.2 Randomization Check

A randomization check was executed to test whether randomization was successful. An independent samples t-test showed that age did not differ across the green brand placement, ( $M = 39.75$ ,  $SD = 15.21$ ) and conventional brand placement condition ( $M = 41.75$ ,  $SD = 15.11$ ),  $t(226) = 0.99$   $p = .321$ . Furthermore,

there was also no difference in participants' gender across the conditions,  $\chi^2(2) = 1.24, p = .537$ . The randomization was thus successful.

### 4.3 Main Analyses

First, we investigated hypothesis 1a by testing whether green brand placement leads to higher brand attitudes than conventional brand placement. The ANCOVA with prior brand liking as a covariate showed that participants had more positive brand attitudes towards the brand in the green brand placement ( $M = 5.04, SD = 1.29$ ) than in the conventional brand placement ( $M = 3.88, SD = 1.65$ ),  $F(1, 231) = 26.54, p < .001, \eta^2 = 0.10$ . Green brand placement thus leads to more positive brand attitudes than conventional brand placement, thereby supporting hypothesis 1a.

Hereafter, we tested hypothesis 1b that green versus conventional brand placement leads to more positive brand attitudes and subsequently to higher purchase intentions. We firstly performed a mediation analysis with purchase intentions as the dependent variable and computed three regression equations to test the effect of brand attitudes. A bootstrapping analysis with 5000 samples (using Model 4; Hayes, 2013) confirmed mediation of green versus conventional brand placement through heightened brand attitude on purchase intentions (indirect effect = 0.3950, SE = 0.1244, 95% confidence interval [0.1951; 0.6952]). Green versus conventional brand placement thus indirectly influences purchase intentions via brand attitudes. The analysis showed that green versus conventional brand placement, controlled for prior brand liking, lead to more positive brand attitudes ( $b = 0.631, se = 0.123, t = 8.25, p < .001$ ), which subsequently lead to higher purchase intentions ( $b = 0.626, se = 0.101, t = 6.22, p < .001$ ). Thereby supporting hypothesis 1b.

The direct effect showed that participants had actually higher purchase intentions towards the brand in the conventional brand placement than in the green brand placement condition (direct effect = -1.2327, SE = 0.1971, 95% confidence interval [-1.6210; -0.8444]). This may be due to the widespread availability of the conventional brand (Coca Cola) and the price premium for the green brand (Bionade; Jamieson and Bass, 1989; Winer, 1986).

#### 4.3.1 The Mediating Role of Brand Warmth

In hypothesis 2, we proposed that brand warmth and brand attitude would mediate the effect of green versus conventional brand placement on purchase intentions. A bootstrapping analysis with 5000 samples confirmed mediation of green versus conventional brand placement through heightened brand warmth and brand attitudes on purchase intentions (indirect effect = 0.0634, SE = 0.0381, 95% confidence interval [0.0097; 0.1658]; calculated using Model 6,

Hayes, 2013). The analysis showed that green versus conventional brand placement, controlled for prior brand liking, lead to more brand warmth ( $b = 0.353$ ,  $se = 0.159$ ,  $t = 2.22$ ,  $p = .027$ ), which subsequently lead to more positive brand attitudes ( $b = 0.304$ ,  $se = 0.047$ ,  $t = 6.47$ ,  $p < .001$ ), and ultimately to higher purchase intentions ( $b = 0.591$ ,  $se = 0.110$ ,  $t = 5.40$ ,  $p < .001$ ). Green versus conventional brand placement thus indirectly influences purchase intentions via brand warmth and brand attitudes.

#### 4.3.2 *The Mediating Role of Persuasion Knowledge*

In hypothesis 3, we proposed that conceptual and attitudinal persuasion knowledge and brand attitudes would mediate the positive effect of green versus conventional brand placement on purchase intentions. A bootstrapping analysis with 5000 samples (using Model 6 Hayes, 2013) confirmed sequential mediation of green versus conventional brand placement through conceptual and attitudinal persuasion knowledge and brand attitudes on purchase intentions (indirect effect = 0.0074,  $SE = 0.0057$ , 95% confidence interval [0.0005; 0.0253]). The analysis showed that green versus conventional brand placement, controlled for prior brand liking, lead to a marginally decreased conceptual persuasion knowledge ( $b = -0.3854$ ,  $se = 0.2181$ ,  $t = -1.77$ ,  $p = .079$ ), which subsequently had an effect on attitudinal persuasion knowledge ( $b = 0.1030$ ,  $se = 0.0391$ ,  $t = 2.64$ ,  $p = .009$ ), affecting brand attitudes ( $b = -.2826$ ,  $se = 0.0598$ ,  $t = -4.72$ ,  $p < .001$ ) and ultimately enhancing purchase intentions ( $b = 0.6552$ ,  $se = 0.1058$ ,  $t = 6.19$ ,  $p < .001$ ). Green versus conventional brand placement thus indirectly influences purchase intentions via conceptual and attitudinal persuasion knowledge and brand attitudes.

## 5 General Discussion

We investigated whether green brand placement leads to more positive brand attitudes and subsequently to higher purchase intentions than conventional brand placement. Furthermore, we tested two underlying mechanisms that may explain these findings. Our experiment is the first to show that green brand placement leads to more positive brand attitudes than conventional brand placement, which subsequently influences purchase intentions - even while controlling for prior brand liking. Brand placement is thus an effective advertising technique when it comes to green brands.

We also investigated mechanisms underlying the positive effect of green versus conventional brand placement. Firstly, we uncovered brand warmth as an important mediator that explains the positive influence of green brand placement. Our study shows that brands in green brand placement are seen as warmer than brands in conventional brand placement. This warmth consequently has a

positive influence on brand attitudes and subsequently purchase intentions. Whereas previous research on traditional green advertising stated that green advertising may be preferred over conventional advertising due to its link with warmth (e.g., Kong and Zhang, 2013) this study is the first to actually test and show that the positive effect of green advertising, in this case green brand placement, is due to an increase of brand warmth. That green advertising may have such beneficial effects because of brand warmth is an important addition to the literature on green advertising. Furthermore, our findings add to the literature on brand warmth by showing that next to the category of non-profit brands, the category of green brands are also likely to be seen as warmer (Aaker et al., 2010).

Our study also showed that a second mechanism that explains the positive effect of green versus conventional brand placement is the lowered activation of persuasion knowledge. We found that persuasion knowledge is less likely to be activated in case of green brand placement rather than conventional brand placement. That is, participants' conceptual persuasion knowledge is less likely to be activated, as a result less attitudinal persuasion knowledge is activated, which consequently results in more positive brand attitudes and ultimately influences purchase intentions. Participants were thus less likely to recognize the green brand placement as advertising than the conventional brand placement.

Importantly, however, it is not the case that participants recognized or recalled the brand less in the green than in the conventional brand placement condition. Participants were just as likely to recall and recognize the brand in the green as in the conventional brand placement condition and were thus just as aware of seeing the brand in the green as in the conventional brand placement condition. They, however, associated the green brand placement less with advertising. Since green brand placement is a rather novel practice, people's persuasion knowledge may thus be less likely to be activated than in the case of conventional brand placement.

### *5.1 Limitations and Suggestions for Future Research*

The present study showed that green brand placement activated less persuasion knowledge than conventional brand placement. This may be due to the fact that green brand placement is a relatively new phenomenon. It may therefore also be interesting to investigate green advertising via other recently introduced forms of native advertising, such as green blogs to see whether the same effects hold for these advertising formats.

Moreover, it will also be interesting to see whether the positive effect via a decreased persuasion knowledge lessens over time once green brand placement is becoming more common practice, or whether it will remain because of positive agent knowledge (Friestad and Wright, 1994). Since people in general are

more positive towards green brands due to their associations with sustainability and with being well-intentioned, their evaluation of the persuasion agent may be more positive. People might know that they are being persuaded, but they might mind it less, and therefore may show less resistance. Positive agent knowledge may thus influence persuasion coping behaviors in a positive way and subsequently also enhance brand attitudes and purchase intentions (see also Hibbert et al., 2007). This is an interesting avenue for future research.

The present study focused on brand warmth and persuasion knowledge as explanatory mechanisms for green versus conventional brand placement effects. For future research, it may be interesting to investigate other mechanisms that underlie people's preference for brands after being exposed to green rather than conventional brand placement. In traditional green advertising literature, the role of skepticism is widely investigated (e.g., Matthes et al., 2014). Whether skepticism also plays a role in green brand placement and how it relates to conceptual persuasion knowledge, agent knowledge, and resistance may be interesting to investigate for future research.

## 5.2 Implications

The present study has important implications for both theory and practice. Theoretically, this study provides new insights into the differential effects of different types of brands that are used in brand placement. This finding implies that brand placement effects depend on the type of brand that is placed, in this case green versus conventional branded products. Theoretical models on brand placement effects should incorporate brand types.

Importantly, this study provides insights into the explanatory mechanisms underlying these effects. Green brand placements are more effective because they are perceived as warmer and because they activate less persuasion knowledge than conventional brand placement. These conclusions enhance our theoretical understanding of the effects of brand placement and green brand placement in particular.

For green brands, the present study provides useful insights. Using brand placement is an effective technique to enhance brand attitudes and increase purchase intentions. Brand placement seems to be an even more persuasive tool for green brands than for conventional brands. Therefore, it is useful to consider using brand placement in the marketing mix of green brands.

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