

This item is the archived peer-reviewed author-version of:

Brand placement in text : the short- and long-term effects of placement modality and need for cognition

Reference:

Avramova Yana, De Pelsmacker Patrick, Dens Nathalie.- Brand placement in text : the short- and long-term effects of placement modality and need for cognition
International journal of advertising - ISSN 0265-0487 - 36:5(2017), p. 682-704
Full text (Publisher's DOI): <https://doi.org/10.1080/02650487.2017.1335041>
To cite this reference: <https://hdl.handle.net/10067/1451270151162165141>

Brand placement in text: The short- and long-term effects of placement modality and need for cognition

Yana R. Avramova (Corresponding author)
University of Antwerp
Faculty of Applied Economics, Marketing department
Prinsstraat 13
2000 Antwerp
Belgium
Tel: +32 3 265 44 88
Fax: +32 3 265 47 99
Yana.Avramova@uantwerpen.be

Patrick De Pelsmacker
University of Antwerp & Ghent University
Faculty of Applied Economics, Marketing department
Prinsstraat 13
2000 Antwerp
Belgium
Tel: +32 3 265 40 22
Fax: +32 3 265 47 99
patrick.depelsmacker@uantwerpen.be

Nathalie Dens
University of Antwerp & Antwerp Management School
Faculty of Applied Economics, Marketing department
Prinsstraat 13
2000 Antwerp
Belgium
Tel: +32 3 265 49 66
Fax: +32 3 265 47 99
nathalie.dens@uantwerpen.be

Yana R. Avramova (Ph.D., University of Tilburg) is doctoral researcher at the University of Antwerp, Faculty of Applied Economics, Marketing Department. Her research focuses on brand placement effectiveness in print and audiovisual media.

Patrick De Pelsmacker (Ph.D., Ghent University) is full professor of marketing at the University of Antwerp, Faculty of Applied Economics, Marketing Department and at Ghent University, Faculty of Economics and Business Administration, Marketing Department. His research interests include advertising effectiveness, advertising in new media, consumer behaviour, branding and ethical marketing.

Nathalie Dens (Ph.D., University of Antwerp) is associate professor of marketing at the University of Antwerp, Faculty of Applied Economics, Marketing Department. Her research focuses on advertising effectiveness for different marketing communication formats and branding strategies.

The authors gratefully acknowledge the financial support of the University of Antwerp Research Council.

Brand placement in text: The short- and long-term effects of placement modality and need for cognition

The present research explores how placing a brand name in the *dialogue* versus the *narration* of a fictional text (i.e., placement modality) affects brand attitude and purchase intention. Moreover, it studies the moderating role of need for cognition (NFC) and measures brand responses both immediately after exposure, as well as two weeks later. As predicted, encountering a brand name in the dialogue, as compared to in the narration of a story is associated with lower brand attitudes for readers with high NFC at both measurement points. Purchase intentions are similarly affected, but the effects are only significant at a delay. In contrast, brand evaluations of readers with low NFC are largely unaffected by placement modality.

Keywords: brand placement, written narrative, placement modality, need for cognition, brand attitude, purchase intention, delayed effects

Brand placement effectiveness has traditionally been studied in the context of *audiovisual* media, such as movies and TV programs (e.g., Dens et al. 2012; Matthes et al. 2007; Russell 2002), computer games (e.g., Cauberghe and De Pelsmacker 2010), and music videos (e.g., Schemer et al. 2008). Recently, however, interest within both academia and the industry has been shaken and stirred by placements in *books*. Brand names have populated novels for decades (Friedman 1985), and the marketing potential of this “low-tech” traditional medium, as well as its high-tech version (e-books), is increasingly recognized by advertisers, book publishers, and authors alike (e.g., Alter 2014a; Flood 2014; Orden 2011). Popular examples of (traditional) novels featuring paid placements include Fay Weldon’s “The Bulgari Connection” (2001; Bulgari) and Carole Matthews’ “The Sweetest Taboo” (2006; Ford Fiesta), while William Boyd’s short-story “The Vanishing Game” (2015; Land Rover) appears on a dedicated website providing (optional)

interactive, multisensory experiences. Similarly, the producer of the artificial sweetener Sweet'N Low invested about \$1.3 million in Hillary Carlip's e-book "Find Me, I'm Yours" (2014), with a series of websites, web TV shows, and paper cards (with individual download codes that allow tracking reading behavior and online activity) all in the package (Alter 2014a).

Albeit still scarce, empirical evidence has now also started accumulating to show that exposure to brand names within written narratives may indeed affect readers' responses to these brands. For instance, brand attitudes improve when a placed brand is closely connected to the story plot and readers are highly involved in the text (Olsen and Lanseng 2012; see also Bhatnagar and Wan 2011), and brand name repetition enhances transported readers' attitudes towards unfamiliar brands (Avramova, De Pelsmacker, and Dens 2016). An intriguing question with important theoretical and practical implications that has not yet been addressed, however, pertains to how the *stylistic devices* employed in the text where the brand is placed, affect placement effectiveness. Specifically, the present research investigates the consequences of embedding a brand name in the *narration* (i.e., as part of the narrator's description of a scene or character), as compared to the *dialogue* of a story (i.e., as part of characters' direct speech). Consider, for instance, the following references to Audi in E. L. James' bestselling trilogy *Fifty Shades of Grey* (2012-2015), which features the brand both within the narration (1) and the dialogue (2):

Parked outside is a red hatchback car, a two-door compact Audi. (1)

"So what sort of car is this?" she asks [...] "It's an Audi R8 Spyder." (2)

In the present research, we advance the idea that, although consumers would *read* the written text in both cases, the brand will be more prominent, or vivid, when placed in the dialogue than in the narration of a fictional text – a "modality effect" analogous to the one documented by prior placement research with regard to auditory and visual placements in the

context of audiovisual media (e.g., Homer 2009; Russell 2002). Critically, we propose that the impact of brand placements in dialogue, relative to narration, on *brand evaluations* will depend on readers' processing style, with modality effects being more likely to emerge for readers who process the text (and placements) more extensively. To test this idea, we study the moderating role of dispositional differences in *need for cognition* (NFC), which reflects a person's chronic propensity to engage in deep and effortful thought (Cacioppo and Petty 1982). Inspired by evidence showing that NFC interacts with prime prominence to determine the magnitude and direction of priming effects (Petty et al. 2008), we test the novel hypothesis that NFC will moderate placement modality effects in fiction.

In addition to making a theoretical contribution to the brand placement literature, several aspects of our study make the present work highly relevant for practice. First of all, we demonstrate that brand placement in books can be an effective marketing strategy, as long as brand names are integrated in the narration (rather than in the dialogue) of a text and readers are relatively high in NFC. The former condition is fairly easy to satisfy, while the latter arguably refers to the *prototypical* reader: Research has shown that people with high (vs. low) NFC tend to be more highly-educated, prefer more intellectually challenging activities, rely more on newspapers than on TV for news, and are more transported into books than into film (see e.g., Cacioppo et al., 1996; Green et al., 2008), all suggesting that high NFC people are more likely to be avid readers. Second, unlike prior work, which has mainly focused on brand recall and (less) on brand attitudes, we study the impact of placement modality in text on both brand attitudes and purchase intentions, the latter being a powerful predictor of consumer behavior, and thus a highly relevant outcome variable (e.g., Spears and Singh 2004). Finally, we test the interplay of placement modality and NFC on brand outcomes both directly after exposure, as well as at a two-week delay, thereby providing evidence for the *long-term* effects of the practice.

Literature review and hypotheses development

Modality in text: narration or dialogue

The present research introduces the concept of placement modality in written text by making the novel distinction between inserting brands in the *narration* (i.e., the narrator's description of a scene or character), as compared to the *dialogue* (i.e., characters' quoted speech) of a fictional text. Our key premise is that the narration and the dialogue of a fictional text will stimulate (predominantly) visual and auditory processing, respectively. As a result, a brand name placed in the text will also be processed within the correspondingly activated modality, approximating the experience of actually seeing or hearing the brand. This idea is supported by evidence from cognitive psychology, neuroscience, and linguistics. Most notably, embodied cognition theories (e.g., Barsalou 2008; Fischer and Zwaan 2008) posit that language comprehension is grounded in bodily perception and action. That is, during narrative processing readers engage in (unconscious) *perceptual simulation* of the objects, characters, and events depicted in the story – a process which gives rise to experiences that closely mirror those resulting from engaging with the real world (see e.g., Zwaan 2009, for a review). Critically, it has been shown that *modality-specific* brain areas are activated during language comprehension. For instance, reading about a character's actions activates the brain areas associated with perceiving or performing these actions (e.g., Pulvermüller 2005; Speer et al. 2009), and verbal descriptions of smells activate olfactory brain areas (González et al. 2006).

Behavioral evidence is consistent with these findings. For example, after reading a sentence describing a certain object, people respond faster to a picture when the pictured object's shape or orientation match those implied by the sentence than when there is a mismatch (e.g., Stanfield and Zwaan 2001). Likewise, readers categorize real sounds (e.g., a crackling campfire) faster when those sounds match a concept previously activated during reading a sentence (e.g.,

“The campfire crackled as the kids prepared for story time”; Brunyé et al. 2010). In line with this, a recent study demonstrated that sequential processing of stimuli that pertain to different modalities is associated with switching costs (Scerrati et al. 2015). Specifically, participants first read sentences describing a light or a sound's perceptual property (e.g., "The light is flickering", "The sound is echoing") and then performed a property-verification task on a target sentence that implied either the visual or the auditory modality (e.g., "Butter is yellowish", "Leaves rustle"). The results showed that responses were slower when the stimulus and target sentences referred to different (vs. the same) modalities, indicating that sensory modalities can be pre-activated by visual linguistic stimuli describing visual or acoustic perceptual properties.

With regard to the present research, these findings suggest that readers' mental representations of a placed brand may carry modality-specific perceptual information, such as how the brand (or product) looks, or what the brand name sounds like. Critically, we propose that certain *stylistic features* of a text, such as whether a brand is integrated in the narration or in the dialogue, may serve as subtle cues that determine which modality will be dominant in processing the placed brand. Support for this idea comes from research on auditory perceptual simulation. It has been argued that readers automatically generate an “inner voice” during silent reading of reported speech, which involves phonological representations and thus reflects some perceptual aspects of actual speech (e.g., Zhou and Christianson 2015). For instance, Kosslyn and Matt (1977) demonstrated that the words of a purported “slow speaker” were read more slowly than the words attributed to a purported “fast speaker” (see also Alexander and Nygaard 2008). Other research has found that *how* speech is reported is key, a fundamental distinction being whether the words are reported via *direct* speech (e.g., He said, ‘I’ll come back here to see you again tomorrow’) or *indirect* speech (e.g., He said that he would return there to see her the following day; e.g., Bortolussi and Dixon 2003). A number of studies show that *direct* – but not indirect – speech is

read faster when the character is described as talking fast (Stites, Luke, and Christianson 2013; Yao and Scheepers 2011), suggesting that exposure to dialogue, in particular, may facilitate auditory imagery.

Moreover, research by Klin and Drumm (2010; Drumm and Klin 2011) has demonstrated that readers encode the *modality* in which an interaction between the characters in a story takes place, just as they encode other aspects of the situation. That is, if character A is depicted as *reading* a note written by character B (i.e., visual modality), readers' mental representation of a phrase contained in the note involves visual imagery, whereas if A is described as *hearing* the same message being spoken by B (i.e., auditory modality), readers' representation of the same phrase recruits auditory imagery. Klin and Drumm's studies provided support for the idea that by engaging in visual and auditory simulation readers get to "see" what a character is described as seeing and "hear" what the character is described as hearing. Kuzmicova (2014) posits that a narrator's description of objects or characters typically evokes *description imagery*, whereby the reader takes the role of a visualizer. In contrast, characters' speech is more likely to elicit *speech imagery*, where the reader is a vicarious listener. This is consistent with the view that literary texts may prompt different types of mental imagery depending on the stylistic devices employed.

Taken together, these findings provide converging support for the notion that readers simulate linguistic content within the sensory modality implied in the text, and that different stylistic devices may prompt specific types of imagery (e.g., visual vs. auditory). They further imply that readers will be more likely to recruit visual imagery and thus "see" a branded product, if it is mentioned in the narration, whereas they will be more likely to employ auditory imagery and thus "hear" the brand name, when it is reportedly spoken by a character.

Modality and prominence

Crucially, we contend that the brand will be more vivid, or prominent, when placed in the dialogue than when placed in the narration of a fictional text. In line with our proposal, work in psycholinguistics suggests that stylistic devices, such as whether an utterance is reported using direct or indirect speech, may influence perceived text vividness. Specifically, characters' quoted speech has been argued to be more attention-grabbing and perceptually vivid than other parts of text. According to Clark and Gerrig (1990), direct speech serves the pragmatic function of *demonstration*, allowing readers to directly experience the speech act. In contrast, indirect speech only provides a *description* of what is said and the narrator thus plays a mediating role (Bortolussi and Dixon 2003).

Consistent with this, greater neural activity in voice-selective areas in the auditory cortex has been recorded during silent reading of direct, relative to indirect, speech (Yao et al. 2011). These findings suggest that direct speech is likely to activate perceptually richer, more vivid mental representations, as compared to other types of text. Subjective ratings of mental imagery have shown the same pattern, with auditory images being rated as more vivid than visual images (e.g., Tinti and Comoldi 1997). Finally, subtle changes in the wording of a sentence are more reliably detected by readers when they occur within direct, rather than indirect, speech, indicating superior verbatim memory and more extensive elaboration of direct speech (e.g., Eerland, Engelen, and Zwaan 2013), in line with evidence that vivid information is typically processed more extensively than pallid information (e.g., Kisielius and Sternthal, 1986).

Interestingly, research on brand placement in audiovisual media corroborates these findings. In line with the observation that auditory information is more intrusive and memorable than visual information (e.g., Cowan et al. 2002; Gathercole and Conway 1988), a number of studies have documented modality effects, such that placements containing an auditory

component (i.e., a verbal reference to a brand) exhibit higher recall and recognition than purely visual placements (i.e., a branded product or logo is shown on screen; e.g., Cowley and Barron 2008; Gupta and Lord 1998). Taken together, these findings lend strong support to the idea that a brand name will be more attention-grabbing when placed in the dialogue than in the narration of a story. If that is indeed the case, an important consequence which the present research directly tests is that dialogue and narration placements will have divergent effects on brand responses.

The impact of placement modality on evaluative brand outcomes

Past work on brand placement in audiovisual media has typically assumed, and sometimes found, a negative relationship between level of prominence and brand evaluations (e.g., Cowley and Barron 2008; Homer 2009; Russell 2002). This has been attributed to the fact that prominent placements are more likely to activate persuasion knowledge (Friestad and Wright 1994) and hence trigger counterarguing, whereas subtle placements are often processed more implicitly, thereby averting reactance. However, a closer look at the evidence reveals a more nuanced picture, with a number of studies showing that placement prominence is not detrimental across the board, but its effects rather depend on *processing style*. For instance, Homer (2009) found that brand attitudes were lower after exposure to auditory (prominent) than visual (subtle) placements in a TV program, but this difference only emerged at repeated exposure, whereas there was no effect of prominence at a single exposure. Homer argued that placement repetition provides more opportunities for brand *elaboration*, and an already vivid (auditory) placement is thus more likely to elicit thoughts of tactic inappropriateness and disrupt the viewing experience. Similarly, Cowley and Barron (2008) found that brand attitude was negatively influenced by prominent (but not by subtle) placements for *highly-involved* program viewers, who supposedly processed the program and the embedded placements more extensively, while prominence did not affect brand attitudes of low-involvement viewers. Finally, Matthes et al. (2007) demonstrated

that increasing placement frequency had a positive impact on brand attitudes of highly-involved viewers with low persuasion knowledge, but decreased brand attitudes of lowly-involved viewers with high persuasion knowledge. In sum, evidence suggests placement prominence may have opposite effects depending on the level of elaboration.

Building on these findings, the present research posits that modality effects in written narratives will not arise to the same extent for all readers, but will rather be contingent on one's processing style. Critically, we adopt an individual difference approach by investigating the moderating role of need for cognition (NFC), which reflects one's *chronic* propensity to engage in effortful cognitive activity (Cacioppo and Petty 1982).

Need for cognition

To describe the role of NFC, Cacioppo and colleagues used the metaphor of a magnetic field, where individuals can be seen as magnets, information from the environment as iron filings, and individual differences in NFC as the relative strength of the magnetic fields (Cacioppo et al. 1996). Thus, individuals high in NFC are characterized by having active, explorative minds, enjoying relatively complex and challenging tasks, and being highly motivated to acquire, scrutinize, and retain information. A vast body of work spanning more than three decades has garnered empirical evidence for a strong and reliable relationship between dispositional differences in NFC and processing style across a wide variety of domains, tasks, and participant samples (see Petty et al. 2009, for a review). For example, Cacioppo and Petty (1982) demonstrated that those high, compared to those low, in NFC found an extremely boring task more enjoyable when they had to use a more complex and effortful rule. Similarly, high (vs. low) NFC has also been associated with higher recall of message arguments and information from expository texts, and with higher self-reported effort (Cacioppo, Petty, and Morris 1983; Kardash and Noel 2000; Verplanken 1993). Finally, NFC has been shown to moderate a variety of

persuasion effects, with those high in NFC being more likely to distinguish between strong and weak arguments, compared to low NFC individuals (see e.g., Cacioppo et al. 1996; Petty et al. 2009, for reviews).

Most relevant for the present study, research in social psychology has found that NFC interacts with prime prominence to determine the magnitude and direction of priming effects (Petty et al. 2008). Specifically, Petty et al. (2008) showed that whereas *low*-NFC participants' judgments were not affected by prime prominence, *high*-NFC participants exhibited stronger assimilation effects after *subtle* primes (i.e., judgments become more consistent with the prime), and reverse, or contrast, effects after *blatant* primes (i.e., judgments move away from the implied semantic or affective content of the prime). These researchers argued that this can be attributed to high-NFC individuals' knowledge structures (i.e., network of associated constructs) being better developed, more integrated, and more frequently activated, as well as their tendency to engage in more judgment-relevant thought, once constructs are activated. Thus, a subtle prime can still activate related constructs and bias the content of thoughts for high (but not low)-NFC individuals, without making them aware of the source of the bias. In contrast, a salient prime is more likely to trigger *correction* processes, or discounting of the prime's biasing influence (e.g., Wilson and Brekke 1994). Since this typically requires effortful elaboration (e.g., Campbell and Kirmani 2000), those with high NFC are more likely to engage in correction. Hence, in the case of blatant primes, contrast effects become more likely as NFC increases.

These findings can be readily applied to the present setting, where dialogue and narration placements could be seen as analogous to prominent and subtle primes, respectively, and thoughts of tactic inappropriateness and counterarguing could be construed as correction mechanisms aimed at removing the persuasive influence of a brand placement. Therefore, we propose that dialogue and narration placements will exert divergent effects on brand evaluations

as a function of readers' NFC. Our reasoning is as follows: High (vs. low) NFC readers will tend to process brand placements more extensively in the first place, in keeping with their chronic tendency to engage in deeper and more effortful thought. If brand placements are relatively prominent when they feature in the dialogue, and relatively subtle when they feature in the narration, as we argue, high-NFC readers should be more likely to consider ulterior motives for the brand mentions and to correct for their potentially biasing impact in the former case, resulting in more negative brand evaluations (corresponding to a contrast effect). In contrast, high NFC should be associated with more positive brand responses after exposure to narration placements (i.e., an assimilation effect). For low-NFC readers, placement modality will have a weaker (if any) impact on brand evaluations, in line with the lack of priming effects in the studies of Petty et al. (2008). We thus formulate the following hypotheses:

H1: Placement modality and need for cognition (NFC) will interact to affect (a) brand attitudes and (b) purchase intentions for a brand placed in a written text, such that there will be no effect of modality for low-NFC readers, whereas for high-NFC readers brand attitudes will be more positive after exposure to placements in the narration than in the dialogue.

Long-term effects of placement modality

In the current research, we argue that the effect of placement modality (and its interaction with NFC) that we hypothesized above will have a long-lasting influence on readers' brand evaluations. In fact, if modality effects are driven by differences in prominence and extent of elaboration, and thus more likely to emerge for high- than for low-NFC readers, as we predict (H1a and H1b), it is also more likely that they persist over time. This is consistent with research showing that high-NFC individuals tend to form more persistent and resistant attitudes. Specifically, Haugtvedt and Petty (1992) found that – although initial attitudes toward a new product (immediately after exposure to an ad) were not affected by NFC – attitudes of high-NFC

consumers exhibited less decay and more resistance to a counter-attitudinal message two days later. These effects were attributed to high-NFC people's greater propensity to engage in message-relevant thought and to integrate new, message-consistent information. Thus, given that we expect dialogue (vs. narration) placements to have a negative impact on brand attitude and purchase intentions for high- (but not low-) NFC readers, it is reasonable to expect that modality effects will also manifest after a delay.

H2: Placement modality and NFC will interact to affect (a) brand attitudes and (b) purchase intentions *at a two-week delay*, such that there will be no effect of modality for low-NFC readers, whereas brand evaluations will be more positive after narration placements than after dialogue placements for high-NFC readers.

Interestingly, work in the field of communication has demonstrated that development of story-consistent attitudes after exposure to a fictional text may not only persist, but even *increase* over time (e.g., Appel and Richter 2007; Jensen et al. 2011). And yet, past research on the delayed effect of product placement (e.g., Storm and Stoller, 2015) and narrative persuasion (e.g., Appel and Richter, 2007) did not measure whether and how attitudes *changed* over time: Immediate and delayed effects of brand placement in text were tested in separate experiments or in different samples, where the measurement point was a between-subjects variable. In contrast, the present research investigates whether brand responses actually changed (or remained stable) over time by re-contacting the same participants and administering the same dependent measures two weeks after initial exposure to the brand placements. Notably, although some findings suggest that high (vs. low) NFC is associated with greater persistence and resistance of brand attitudes (Haugtvedt and Petty 1992), implying that modality effects will remain *stable* (i.e., no change from Time 1 to Time 2), other evidence indicates that the attitudes of high NFC individuals are more likely to polarize over time, as they tend to engage in more thought (e.g.,

Smith, Hugtvedt, and Petty 1994), implying *stronger* effects at Time 2. Therefore, with regard to *change* in brand evaluations, we formulate the following research question:

RQ1: Does the (interaction) effect of placement modality and NFC on (a) brand attitudes and (b) purchase intentions *change* over a two-week period?

Method

Study design and experimental manipulation

We conducted an experiment with a two-group between-subjects design, where we systematically manipulated *placement modality*, that is whether the target brand was mentioned in the narration or in the dialogue of a short-story. The text in which we inserted the brand placements was written in Dutch (about 2,900 words) by a professional writer for the purposes of our research. We used the clothing brand Esprit[®] as our target brand.

The story is set in a café, where several young people meet and chat about a party that had taken place several days earlier. One of the characters, Silke, shares her suspicions that her boyfriend is cheating on her and, in the course of the story, she gets more and more agitated, while her friends try to convince her she is wrong (the end of the story indeed reveals that her boyfriend is faithful and he even proposes to her at the café). At some point, a friend of theirs, Olivier, joins them and it becomes clear that he went shopping earlier. Depending on condition, Esprit was then mentioned four times either in the narration, or in the dialogue. Apart from this difference, the text of the story (including the placement scenes) was the same across conditions. For instance, in the last placement scene Olivier comes back from the bathroom, finding an awkward silence at the table, and the following exchange takes place:

“Don’t you also think it’s a bit cold in here? I will put on my new sweater”. He takes the Esprit bag from the chair, but stops halfway, as he sees Kevin’s expression [in response to Silke’s boyfriend entering the café]. (narration placement condition)

“Don’t you also think it’s a bit cold in here? I will put on my new Esprit sweater”. He takes his backpack [he had put the Esprit bag in it earlier], but stops halfway, as he sees Kevin’s expression. (dialogue placement condition)

Thus, the reader obtains the same information in both conditions, but the brand name is either mentioned by the narrator, or is reportedly uttered by the character himself. The story was written in the present tense and all direct speech in the story was reported in italics and enclosed by quotation marks. The brand was mentioned twice on page 3 and twice on page 4 in both versions of the story, which spanned across 5 consecutive pages (i.e., screens) in our online survey.

Participants and procedure

Participants were recruited through a professional online panel agency and data were collected at two waves (two weeks apart), henceforth Time 1 and Time 2. At Time 1, a random sample of Flemish men and women aged 18-30 were emailed with an invitation to fill in an online survey (programmed in Qualtrics®). This age group was deemed most suitable given the content of the story. The research was briefly introduced as ‘a series of separate, unrelated studies, including a study on perceptions of a short-story, a consumer behavior study, and a personality questionnaire. Upon clicking the survey link, participants were automatically and randomly assigned to one of the two experimental conditions, namely the story version with either the dialogue or the narration placements. Each ‘part’ of the experiment featured a different title, introduction, task instructions, and layout in order to reduce the chance that respondents will (immediately) see the link between the manipulation and the dependent measures. At Time 1, no mention was made

regarding the follow-up (Time 2) study. Participants were recontacted two weeks later, always counted from the moment when they had received the first invitation to participate at Time 1. They were invited to take part in a short follow-up study. At Time 2, only the dependent measures were administered (see below).

Given that we conducted the study online and thus had little control over the environment of our participants, we took some steps to ensure the quality of our data. First, the “next” button (which respondents used to proceed to the next page) only appeared after a certain time interval on the pages displaying the story (i.e., between 60 and 120 seconds for page, based on an initial reading by 4 students). Next, we explicitly asked participants if they read the whole text, and those who answered “no” were automatically excluded. In order to eliminate random clicking, we also embedded a “control question”, which asked participants to enter a specific number on the respective scale. Again, respondents who did not follow instructions were automatically redirected to the end of the survey. Finally, we added two multiple-choice content-related questions that aimed to check whether participants had a basic understanding of the story plot. Only participants who answered both questions correctly were retained (resulting in the elimination of 5 participants, who got either one or both questions wrong).

The final sample only included respondents who had satisfied all these criteria. In total, 93 respondents took part at Time 1 (61.3 % female, $M_{\text{age}} = 24.25$, $SD_{\text{age}} = 3.36$; $n = 49$ in the narration placement condition), 55 of whom also participated at Time 2 (58.2 % female, $M_{\text{age}} = 24.13$, $SD_{\text{age}} = 3.25$; $n = 29$ in the narration placement condition).

Measures

Our main dependent variables were brand attitude and purchase intention. The same brand measures were administered at both Time 1 and Time 2. First, *brand attitude* was measured using four 7-point bipolar scales (negative/positive, unattractive/attractive, don't like/like, low/high

quality; see e.g., Dens et al. 2012; Homer 2009). *Purchase intention* was measured with one item (How likely are you to consider Esprit next time you shop for clothing?) on a 7-point scale (not at all likely/very likely; e.g., Storm and Stoller 2015; see also Bergkvist and Rossiter 2009). In addition, we measured two other variables to use as covariates in our analyses. *Brand familiarity* (How familiar are you with Esprit?) was measured on a one item 7-point scale (not at all familiar/very familiar). Table 1 reports the descriptive statistics for all measures.

PLACE TABLE 1 ABOUT HERE

Brand attitude, purchase intention, and brand familiarity were also measured for two filler (competitor clothing) brands (i.e., Zara and WE) using the same items in order to make the link between the story (manipulation) and the measures less obvious. *Need for cognition* – our hypothesized moderator – was measured at Time 1 with the 18-item NFC scale (Cacioppo, Petty, and Cao 1984) on 7-point Likert scales (fully disagree-fully agree). Due to technical error, one of the items was omitted from the questionnaire, hence the average NFC scores were based on 17 items. The questionnaire for Time 1 started with demographic questions, followed by the text of the story and some filler items related to story and character liking. As part of an ostensibly different study, the brand attitude and purchase intention measures (for both target and filler brands) were then administered. Finally, NFC was measured. The questionnaire for Time 2 only contained the (same) dependent measures (again, for both target and filler brands).

Results

General analytical approach

The analyses pertaining to Time 1 were based on the full sample ($n = 93$), while the analyses with regard to Time 2 used the sub-sample of participants who also completed the follow-up

questionnaire ($n = 55$). A comparison of participants who only participated at Time 1 with those who completed the measures at both phases revealed no significant differences in terms of age, gender, NFC and distribution across experimental conditions (i.e., participants were not more likely to drop out from one of the conditions, all p 's $> .5$). Moreover, adding a variable coding for whether a respondent participated at Time 1 only vs. at both Time 1 and 2 as a covariate in the regression models (see below) did not affect the results. Further, although brand familiarity was a significant covariate, controlling for its influence did not influence the results. Therefore, we only report the analyses based on the model including placement modality, NFC, and their interaction. Finally, since we were also interested in whether brand responses *changed* over time (RQ1), we also performed a repeated measures analysis using the subsample of participants who completed the measures at both measurement points ($n = 55$).

To test H1 and H2, namely that the effect of placement modality on brand attitude and purchase intention is moderated by NFC, we estimated a series of regression models using Hayes' (2013) PROCESS macro for SPSS (Model 1). That is, we regressed our two dependent variables (brand attitude and purchase intention) on modality (coded 0 for the narration placement condition and 1 for the dialogue placement condition), NFC (mean-centered), and their interaction. Hayes's approach has become standard procedure in moderation analyses, and it grants the additional benefit of the Johnson-Neyman (J-N) technique (Hayes and Matthes 2009; Johnson and Neyman 1936). Instead of performing a "spotlight analysis", where the conditional effect of the focal predictor is tested at some arbitrary values (e.g., ± 1 SD away from the mean) of the moderating variable, this technique allows for a "floodlight analysis", where the effect of the focal variable is tested across the entire range of the moderator (Hayes and Matthes 2009; Spiller et al. 2013). Thus, in testing our hypotheses, the floodlight "shines" on the range of values of the continuous predictor (NFC) for which the group differences (exposure to different

placement modalities) are statistically significant. As a result, *regions of significance* (i.e., within which any spotlight test would be significant) and the specific *points* at which the effect becomes (non-) significant are identified.

Time 1

The first model accounted for a significant amount of variance in *brand attitude* immediately after exposure ($R^2 = .10$, $F(3, 89) = 3.12$, $p = .03$). The interaction between modality (narration = 0, dialogue = 1) and NFC (min = 2.94, max = 6.12) was significant ($b = -.81$, $t = -3.57$, $p = .011$). To probe this interaction, we used the J-N technique, which revealed a significant negative effect of modality for participants whose NFC scores were above 4.5 ($B_{JN} = -.41$, $SE = .21$, $p = .05$; 37.6% of the sample). Thus, as predicted, for readers who scored relatively *high* on NFC, brand attitudes were lower after exposure to dialogue than to narration placements, while modality did not significantly affect readers who scored relatively *low* on NFC (see Figure 1a). Therefore, H1a was supported. Moreover, looking at the simple slope of NFC within each modality condition revealed that this effect was mainly driven by a decrease in brand attitudes in the dialogue placement condition, where NFC and brand attitude were significantly and inversely related ($b = -.49$, $t = 2.34$, $p = .021$). The relationship, albeit positive, was not significant in the narration placement condition ($b = .32$, $t = 1.39$, $p = .169$).

We performed the same analysis with regard to *purchase intentions*, but the model was not significant ($R^2 = .05$, $F(3, 89) = 2.98$, $p = .241$), nor was the interaction between modality and NFC ($b = -.83$, $t = -1.5968$, $p = .116$). Therefore, H1b was rejected.

FIGURE 1a ABOUT HERE

Time 2

In order to test H2, which pertains to the impact of placement modality on brand outcomes *two weeks after* exposure to the placements, we conducted the same analyses using the sub-sample of participants who completed the measures at Time 2. The model accounted for a significant amount of variance in *brand attitude* ($R^2 = .22$, $F(3, 51) = 4.7$, $p = .006$) and revealed a significant interaction between modality and NFC emerged ($b = -1.34$, $t = -3.21$, $p = .002$). To probe the interaction, we used the J-N technique, which again revealed a significant negative effect of modality for participants whose NFC scores were above 4.38 ($B_{JN} = -.55$, $SE = .28$, $p = .05$; 38.18% of the sample). Thus, the negative effect of dialogue (vs. narration) placements on brand attitudes for readers who scored relatively high in NFC were still evident two weeks after exposure to the placed brands. As at Time 1, placement modality had no impact for readers *low* in NFC (see Figure 1b). These results support H2a. In addition, the simple slope of NFC was significant and negative in the dialogue placement condition ($b = -.67$, $t = -2.38$, $p = .021$), while it was significant and positive in the narration placement condition ($b = .67$, $t = 2.18$, $p = .034$).

FIGURE 1b ABOUT HERE

We performed the same analysis on *purchase intentions* to test H2b ($R^2 = .26$, $F(3, 51) = 6.09$, $p = .001$). The interaction between modality and NFC was significant ($b = -2.25$, $t = -3.98$, $p < .001$). The results from the J-N analysis showed that, as expected, exposure to dialogue (vs. narration) placements had a negative effect for readers who were relatively high in NFC. The effect was significant for NFC scores above 4.47 ($B_{JN} = -.76$, $SE = .38$, $p = .05$; 36.36% of the sample). In addition, an unpredicted positive effect of dialogue (vs. narration) placements on purchase intention emerged for participants with scores below 3.65 on the NFC scale ($B_{JN} = 1.1$,

SE = .55, $p = .05$; 12.73% of the sample). Hence, these findings provide partial support for H2b.

Further, simple slopes analysis showed that NFC was negatively related to purchase intentions in the dialogue placement condition ($b = -.1.21$, $t = -3.19$, $p = .002$) and positively related in the narration placement condition ($b = 1.04$, $t = 2.49$, $p = .016$).

Change in brand responses from Time 1 to Time 2

In order to address RQ1, namely whether the effect of placement modality on brand attitude and purchase intention actually *changed* in the course of the two weeks, we performed a repeated-measures analysis using the sub-sample of participants who took part in both waves ($n = 55$). Specifically, we conducted a 2 (dialogue vs. narration) X 2 (Time 1 vs. Time 2) mixed-design ANCOVA with modality as a *between-subjects* factor, time as a *within-subjects* factor, and (mean-centered) NFC as continuous predictor (covariate) on each of the dependent measures. This full-factorial ANCOVA included all interaction terms between modality, NFC, and time in order to test whether the relationship between modality and NFC, documented above, changed as a function of time (see Baguley 2012; Yzerbyt et al. 2004).

The results concerning *brand attitude* showed that neither the main effect of time, nor its interaction with modality and NFC, were significant (all F 's < 1, p 's > .341). There was only a marginal main effect of modality ($F(1,51) = 3.59$, $p = .064$), qualified by a significant modality*NFC interaction ($F(1,51) = 14.5$, $p < .001$), showing the same pattern as the results from the separate analyses reported above. The lack of a significant 3-way interaction (with time) implies that the interactive effect of modality and NFC on brand attitudes remained unchanged two weeks after exposure. With regard to *purchase intentions*, the results showed a main effect of time ($F(1,51) = 5.42$, $p = .024$), indicating that purchase intentions (of readers who took part in both waves) increased from Time 1 to Time 2, but that was the case in both modality conditions and the effect did not vary with NFC (all p 's > .2). The interaction between modality and NFC

(collapsed across time) was again significant ($F(1,51) = 13.38, p = .001$). Again, the lack of a 3-way interaction indicates that, at least for the sub-sample of respondents who took part in both waves, the interactive effects of placement modality and NFC on purchase intentions persisted (rather than increased or decreased) over a two-week delay.

Discussion

The present research demonstrates that brand placements in fictional narratives can affect brand responses both immediately after exposure to the text, as well as after a two week delay.

Moreover, the *direction* of placement effects is a function of something very *literary*, namely whether the brand is mentioned in the narration or in the dialogue of the story, and on something very *personal*, namely whether one finds thinking enjoyable. Most of our predictions were borne out in the data. Specifically, in line with our hypotheses, encountering a brand in the dialogue, as compared to the narration, of a story was associated with lower brand attitudes for readers with high NFC, both immediately and at a delay. With regard to purchase intentions, the same pattern was obtained, although the effect only reached significance at Time 2 (i.e., it was only significant for the sub-sample who took part in both waves). In contrast, brand responses of readers with relatively low NFC were generally unaffected by placement modality, although dialogue placements were found to enhance purchase intentions for participants with very low NFC at Time 2.

Our findings contribute to the extant literature in several important ways. First of all, they provide the first empirical evidence for placement modality effects in written text. Thus, we demonstrated that although readers encode the brand name *visually* (i.e., on the page or screen) in both cases, reading the brand name in the narration vs. in the dialogue produces divergent effects, analogous to the modality effects documented in the context of audiovisual media (e.g., Gupta

and Lord 1998; Homer 2009). The present experiment also identified an important moderator, namely individual differences in NFC, suggesting that one's *chronic* disposition to adopt a particular processing style is an important determinant of how placement execution will ultimately affect consumer responses to text placements. These findings corroborate and extend prior work on brand placement in text, where involvement was experimentally *manipulated* and the impact of placement plot connection (Olsen and Lanseng 2012) and self-character similarity (Bhatnagar and Wan 2012) were only obtained for high- (but not low-) involved readers.

Critically, the interaction between placement modality and NFC indicates that prominence in itself is *not* a reliable predictor of brand outcomes in response to placements in text. Instead, readers' (chronic) propensity to engage in placement elaboration is decisive for whether high prominence will be detrimental or irrelevant (cf. Homer 2009; Russell 2002). This is consistent with work in audiovisual media (e.g., Cowley and Barron 2009; Matthes et al. 2007), showing that variables like program involvement and persuasion knowledge – which are associated with *deeper* processing – moderate the effects of placement prominence on brand attitudes.

The interaction between modality and NFC could also be interpreted from another angle. That is, NFC was negatively related to brand evaluations in the dialogue placement condition (with attitudes at both Time 1 and Time 2; with purchase intentions at Time 2), while it was positively related to brand attitude and purchase intentions in the narration placement condition (for both measures at Time 2). This pattern is consistent with evidence for the moderating impact of NFC on priming effects, indicating that high NFC leads to contrast effects after prominent primes, but to assimilation effects after subtle primes (Petty et al. 2008). Thus, unlike what is typically assumed in the product placement literature, deeper processing is not always detrimental, and positive effects on brand evaluation need not necessarily be due to mere exposure (cf. Matthes et al. 2007). Instead, a narration (i.e., subtle) placement can have a *positive* influence on both

affective and conative outcomes for those likely to engage in *more*, rather than less, thought (see also Petty et al. 2008).

Interestingly, past work in persuasive communication has garnered somewhat conflicting findings regarding the role of NFC on *narrative persuasion* effects: While some studies have found no effect of NFC on attitude change (e.g., Appel and Richter 2007; Green and Brock 2000), others have demonstrated that it moderates the effect of medium on transportation (Green et al. 2008), and leads to greater persuasion in response to narrative appeals (Thompson and Haddock 2012; Zwarun and Hall 2012). The present research, consistent with the latter group of studies, shows that NFC may also guide brand placement effects in fictional narratives.

The present research also established that modality may exert an impact on both affective and conative outcomes. In fact, our study is among the few that have used behavioural intentions (see Van Reijmersdal et al. 2009) as measures of product placement effectiveness. This allowed us to tap into different facets of consumer preferences and gain insight into the proximal antecedents of actual behavior (Spears and Singh 2004). Finally, a key contribution of the present study lies in adopting a longitudinal approach: Unlike most previous studies, which have focused on the short-term impact of brand placement, we also investigated how the factors of interest influence responses of the *same* consumers both in the short-term *and* in the long-term, demonstrating that placement effects in books do not dissipate immediately after exposure. Specifically, we showed that the interactive impact of modality and NFC remained stable even after a two-week delay (cf. Appel and Richter 2007).

Managerial implications

Our results have a number of practical implications. First of all, they show that an ostensibly minor feature, such as whether a brand name is integrated in the narration or in the dialogue of a fictional text, may have a long-lasting impact on consumer responses to the placed brand. The

data suggest that, everything else being equal (or unknown), placing brands in the narration seems to be the safer option. However, knowledge of the target audience can aid marketers in choosing a more *effective* placement strategy. That is, we demonstrate that for readers high in NFC, integrating a brand in the narration actually *enhances* brand responses at a two-week delay, while dialogue placements have a *negative* effect on both affective and conative outcomes both immediately and in the long-term. These findings are particularly relevant in the context of fictional text, as past work has shown that high NFC individuals are more transported into written narratives than into a televised version of the same narrative (Green et al. 2008), and that personality factors influence entertainment media and genre preferences (Cacioppo et al. 1996; Rentfrow, Goldberg, and Zilca 2011). Thus, it is predictable that high-NFC consumers will be generally more attracted to books, and to particular genres within that medium (as opposed to mass entertainment in the form of mainstream TV shows and blockbusters), calling for an approach to product placement in books that considers this audience's profile.

Critically, research indicates that the thoughts of high (vs. low) NFC individuals are better predictors of their attitudes, and that high NFC is associated with greater attitude persistence and resistance to change (e.g., Haugtvedt and Petty 1992), as well as with higher attitude-behavior consistency (e.g., Cacioppo et al. 1986). In fact, the same extent of attitude change (in terms of extremity) has been found to lead to higher certainty and stronger impact on intentions when elicited under high (vs. low) thinking conditions (e.g., Shoots-Reinhard et al. 2014). Since our results show that both the positive effects of narration placements and the negative effects of dialogue placements are likely to be long-lasting and consequential for high-NFC readers, it is important that marketers take NFC into account when designing brand placements for text.

Notably, although the recommendation to take consumer personality into account is hardly new in the field of advertising (see e.g., Haugtvedt, Petty, and Cacioppo 1992), it is quite

novel in the area of product placement. To our knowledge, only one paper so far has looked at the role of stable individual differences (i.e., field-dependence/independence, Matthes et al. 2011). Fortunately, NFC happens to be one of the most widely researched personality traits (Petty et al. 2009), and a myriad of correlates of NFC have been documented ranging from demographics (e.g., educational level) to political perceptions, media preferences, and actual behaviors (see e.g., Fleischhauer et al. 2009; Martin, Sherrard and Wentzel 2005; Petty et al. 2009; Sohlberg 2015). Moreover, the unprecedented amount and richness of consumer (and, specifically, reader) data and advanced analytics techniques available nowadays (e.g., Alter 2012; Alter and Russell 2016) allow online retailers, (e-)book publishers, and marketers to more efficiently identify and segment a brand's potential target audience. In fact, the company Jellybooks recently developed software that can be embedded in e-books: By distributing Advance Reader Copies to a select (and consenting) group of readers, the company unobtrusively records (even offline) various aspects of reading behavior, such as pace, completion rate, and engagement, as well as a number of demographic and other variables. Thus, data on *who* is reading (e.g., also available through reader profiles and online activity, which can all be used to identify high-NFC readers, as described above) can be matched with *how* one is reading (including measures of progress, engagement, sentiment, and social media activity). With such insight, a book's reach and impact can be assessed much more accurately, and – as controversial as this may be – changes to the content can be made in light of pilot readers' responses, before it is even published (Alter and Russell 2016). Placing the “right” brand in the “right” book in the “right” way and reaching the “right” readers is thus anything but far-fetched.

Limitations and future research

The present study also has some limitations, which would hopefully inspire future work. First, although our results are consistent with the proposal that dialogue placements were more

prominent than narration placements, and that this difference was especially consequential for those high in NFC, additional data is necessary to make a strong claim about the process driving the observed effects. This task is challenging for a number of reasons. Measuring perceptions of the placement *before* the dependent variables (which would arguably be the preferable way of measuring the underlying process) always hides the risk of influencing those measures, and the very act of measurement may also obscure any differences in brand prominence (by drawing attention to what might have otherwise been a subtle, implicitly processed placement).

Furthermore, explicit self-report measures of a placement's relative prominence or its ability to evoke imagery within different modalities may not necessarily capture subtle differences between *mental representations* of brands appearing in the narration vs. the dialogue of a story. In fact, most previous research on processing of different types of speech (e.g., direct vs. indirect speech) during silent reading comes from cognitive science and linguistics and employs functional magnetic resonance imaging (fMRI) and eye-tracking techniques (e.g., Stites et al. 2013; Yao et al. 2011; Zhou and Christianson 2016). In fact, Yao and Scheepers (2015) note that, in contrast to studies that use such *on-line* methods and thus track the ongoing processing of speech, studies using *off-line* methods (e.g., probe-reaction after reading of target sentences; e.g., Eerland et al., 2013) have proven less sensitive in detecting differences between direct and indirect speech. This is not surprising, given recent evidence that readers are not aware of what they are perceptually simulating and even lose information from their simulations when asked to engage in conscious inspection. Specifically, Connell and Lynott (2016) demonstrated that people are unable to reliably rate the true extent to which a concept is based on sensory experience (i.e., the perceptual content of a simulation), and neglect and distort some sensory aspects of their simulation (e.g., auditory and haptic experience), supposedly as a result of the limited capacity of working memory. Critically, they argue that the lack of conscious awareness does not indicate a lack of

perceptual experience; it just precludes conscious introspection, although it may still have downstream consequences on other responses. Hence, finding a suitable and reliable method of measuring modality-specific mental imagery and perceived brand prominence in studying responses to narration vs. dialogue placements is in itself an important task for future research.

Another aspect of the present findings that deserves further attention pertains to the moderating role of NFC. We proposed that individual differences in NFC were associated with different processing styles during reading, which made people with high and low NFC differentially susceptible to modality effects. Yet, it is not entirely clear what thoughts or feelings mediated the observed differences in brand responses. One explanation, which is consistent with the findings of Petty et al. (2008) in the context of semantic priming, is based on the idea that exposure to subtle placements is sufficient to activate brand-related constructs for high-NFC individuals, without making them aware of the source of this increased accessibility, thereby enhancing brand evaluations. In contrast, a prominent mention (even if one doesn't consciously perceive it as such, as argued above) is more likely to draw attention to the placement itself and thus trigger thoughts of tactic inappropriateness, pertaining to the (hidden) motives of the author (e.g., Why is this brand mentioned? Does it aim to manipulate my opinion? Is the author paid for inserting this particular brand name in the text?), and thereby producing more negative evaluations (e.g., Campbell and Kirmani 2000).

However, an alternative (or maybe complementary) explanation for the decline in brand evaluations for high-NFC readers that future research could directly investigate may be that the prominent placements elicited negative thoughts about the *character* placing the brand. Specifically, it could be that dialogue placements violated *conversational norms* (Grice 1975; Schwarz 1994). Since recipients expect that communicators share information that is relevant, not redundant, and appropriate for the particular social context and circumstances, "hearing" the

character repeatedly referring to the brand name can be seen as violating some of these norms. It is likely that people with high NFC would be more sensitive to such violations, since they process the narrative more extensively. In support of this account, past research has found that the “avoid redundancy” conversational norm in a survey context is not automatically applied by all respondents, but only by those with high NFC (McCabe and Brannon 2004). Albeit speculative, this account may be especially relevant in the context of books, where readers’ persuasion knowledge with regard to (paid) brand placement may be less developed, and less likely to be activated upon seeing a brand name in the text, than persuasion knowledge in response to placements in audiovisual media, where the practice is much more common. Future studies could measure readers’ inferences about story characters and perceptions of whether dialogue placements comply with conversational forms, in addition to persuasion knowledge and thoughts related to tactic inappropriateness, in order to test (and eventually disentangle) these different accounts.

It must be noted that although brand responses of low NFC readers were mostly unaffected by placement modality, in line with our predictions, dialogue placements were found to *enhance* purchase intentions for participants with very low NFC at Time 2. Despite the fact that this relationship was only obtained on one measure and was significant for NFC scores that only represented 13% of our (relatively small) sample, it indicates that NFC might be associated with different effects if it is sufficiently low, so future studies might consider using participant samples that feature greater variance in terms of this construct.

Further, the present research only tested the impact of placement modality for a *familiar* brand (Esprit). In light of evidence for the moderating effect of brand familiarity on advertising (e.g., Campbell and Keller, 2003) and brand placement effects (Mau, Silberer, and Constien 2008), it would be interesting to investigate whether modality exerts the same effect for

unfamiliar brands. Another potential moderator that could be studied in the future is placement frequency. Based on past work on placement repetition in audiovisual media (e.g., Matthes et al. 2007) and written narratives (Avramova et al. 2016), a higher number of exposures to dialogue placements would be expected to lead to even greater decline in brand evaluations among high-NFC readers. However, it is not clear whether increasing exposure to narrative placements will further strengthen the positive effects that we obtained in the present study, or if those placements would lose their subtlety, resulting in wearout. In addition, it could be that low-NFC readers are also affected by placement modality at higher repetition levels (see Petty et al. 2008).

Finally, an intriguing question for future research pertains to placement modality effects in the context of *audiobooks*. To our knowledge, no empirical work exists on brand placement in this medium, which is quite surprising. Audiobook sales have doubled in the last five years, with British readers, for instance, spending £10million on audiobooks in 2014 (Furness 2015; see also Alter 2013), and some podcasts being streamed or downloaded up to 5 million times (Alter 2014b). Moreover, the medium itself is undergoing a “renaissance” that brings it closer to classic radio plays with multiple (and sometimes famous) actors (instead of a single narrator) and elaborate sound effects (Alter 2014b). Notably, besides the growing number of audiobooks available through both traditional publishers and dedicated platforms, some audiobook producers and retailers like Audible (owned by Amazon) have started commissioning original works that are only available in this format. This booming market calls for systematic empirical research into the possibilities and consequences of product placement in audiobooks.

REFERENCES

- Alexander, J. D., and L. C. Nygaard. 2008. Reading voices and hearing text: talker-specific auditory imagery in reading." *Journal of Experimental Psychology: Human Perception and Performance*, 34, no 2: 446-459.
- Alter, A. 2014a. E-Book Mingles Love and Product Placement. *The New York Times*, November 2, http://www.nytimes.com/2014/11/03/business/media/e-book-mingles-love-and-product-placement.html?_r=0
- Alter, A. 2014b. An art form rises: Audio without the book. *The New York Times*, November 30, http://www.nytimes.com/2014/12/01/business/media/new-art-form-rises-audio-without-the-book-.html?_r=2
- Alter, A. 2013. The new explosion in audio books. *The Wall Street Journal*, August 1, <http://www.wsj.com/articles/SB10001424127887323854904578637850049098298>
- Alter, A. 2012. Your e-book is reading you. *The Wall Street Journal*, July 19, <http://www.wsj.com/articles/SB10001424052702304870304577490950051438304>
- Alter, A. and K. Russell. 2016. Moneyball for book publishers: A detailed look at how we read. *The New York Times*, March 14, <http://www.nytimes.com/2016/03/15/business/media/moneyball-for-book-publishers-for-a-detailed-look-at-how-we-read.html>
- Appel, M., and T. Richter. 2007. Persuasive effects of fictional narratives increase over time." *Media Psychology* 10, no 1: 113-134.
- Avramova, Y. R., P. De Pelsmacker, and N. Dens. 2016. Brand placement repetition in a fictional text, *International Journal of Advertising*. doi: 10.1080/02650487.2016.1182258
- Baguley, T. 2012. *Serious stats: A guide to advanced statistics for the behavioral sciences*. Palgrave Macmillan.
- Barsalou, L. W. 2008. Grounded cognition, *Annual Review of Psychology* 59, 617-645.

- Bergkvist, L., and J. R. Rossiter. 2009. Tailor-made single-item measures of doubly concrete constructs. *International Journal of Advertising* 28, no. 4: 607-621.
- Bhatnagar, N., and F. Wan. 2011. Is self-character similarity always beneficial? *Journal of Advertising* 40, no. 2: 39-50.
- Bortolussi, M., and P. Dixon. 2003. *Psychonarratology: Foundations for the empirical study of literary response*. Cambridge University Press.
- Brunyé, T. T., T. Ditman, C. R. Mahoney, E. K. Walters, and H. A. Taylor. 2010. You heard it here first: Readers mentally simulate described sounds. *Acta psychologica* 135, no 2: 209-215.
- Cacioppo, J., and R. E. Petty. 1982. The need for cognition. *Journal of Personality and Social Psychology* 42, no. 1: 116-131.
- Cacioppo, J. T., R. E. Petty., and C. F. Kao. 1984. The efficient assessment of need for cognition. *Journal of Personality Assessment* 48, no. 3: 306-307.
- Cacioppo, J., R. E. Petty, J. Feinstein, and W. Jarvis. 1996. Dispositional differences in cognitive motivation: The life and times of individuals varying in need for cognition. *Psychological Bulletin* 119, no. 2: 197-253.
- Campbell, M. C., and A. Kirmani. 2000. Consumers' use of persuasion knowledge: The effects of accessibility and cognitive capacity on perceptions of an influence agent. *Journal of Consumer Research* 27, no 1: 69-83.
- Cauberghe, V., and P. De Pelsmacker. 2010. Advergaming: The impact of brand prominence and game repetition on brand responses. *Journal of Advertising* 39, no. 1: 5-18.
- Clark, H. H., and R. J. Gerrig. 1990. Quotations as demonstrations. *Language* 66, no 4: 764-805.

- Connell, L., and D. Lynott. 2016. Do we know what we're simulating? Information loss on transferring unconscious perceptual simulation to conscious imagery. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, doi:10.1037/xlm0000245
- Cowan, N., J. Scott Saults, E. M. Elliott, and M. V. Moreno. 2002. Deconfounding serial recall. *Journal of Memory and Language* 46, no 1: 153-177.
- Cowley, E., and C. Barron. 2008. When product placement goes wrong: The effects of program liking and placement prominence. *Journal of Advertising* 37, no 1: 89-98.
- Dens, N., P. De Pelsmacker, M. Wouters, and N. Purnawirawan. 2012. Do you like what you recognize? The effects of brand placement prominence and movie plot connection on brand attitude as mediated by recognition. *Journal of Advertising* 41, no.3: 35-53.
- Drumm, A. M., and C. M. Klin. 2011. When story characters communicate: readers' representations of characters' linguistic exchanges. *Memory and Cognition* 39, no 7: 1348-1357.
- Eerland, A., J. A. A. Engelen, and R. A. Zwaan. 2013. The influence of direct and indirect speech on mental representations. *PloS one* 8, no 6: e65480.
- Fischer, M. H., and R. A. Zwaan. 2008. Embodied language: A review of the role of the motor system in language comprehension. *The Quarterly Journal of Experimental Psychology* 61, no 6: 825-850.
- Fleischhauser, M., S. Enge, B. Brocke, J. Ullrich, and A. Strobel. 2010. Same or different? Clarifying the relationship of need for cognition to personality and intelligence. *Personality and Social Psychology Bulletin* 36, no. 1: 82-96.
- Flood, A. 2014. The car's the star: William Boyd gets into Land Rover tie-in deal. *The Guardian*, November 13, <http://www.theguardian.com/books/2014/nov/13/william-boyd-land-rover-product-placement>

- Friedman, M. 1985. The changing language of a consumer society: Brand name usage in popular American novels in the postwar era. *Journal of Consumer Research* 11, no. 4: 927.
- Friestad, M., and P. Wright. 1994. The persuasion knowledge model: how people cope with persuasion attempts. *Journal of Consumer Research* 21, no. 1: 1-31.
- Furness, H. 2015. Audiobook sales double in five years thanks to downloads and famous faces, *The Telegraph*, <http://www.telegraph.co.uk/culture/books/booknews/11571627/Audiobook-sales-double-in-five-years-thanks-to-downloads-and-famous-faces.html>
- Gathercole, Susan E., and Martin A. Conway (1988), "Exploring long-term modality effects: Vocalization leads to best retention." *Memory & Cognition* 16, no 2: 110-119.
- González, J., A. Barros-Loscertales, F. Pulvermüller, V. Meseguer, A. Sanjuán, V. Belloch, and C. Ávila. 2006. Reading cinnamon activates olfactory brain regions. *Neuroimage* 32, no 2: 906-912.
- Green, M., and T. Brock. 2000. The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology* 79, no. 5: 701-721.
- Green, M., S. Kass, J. Carrey, B. Herzig, R. Feeney, and J. Sabini. 2008. Transportation across media: repeated exposure to print and film. *Media Psychology* 11, no. 4: 512-539.
- Grice, H. P. 1975. Logic and conversation, in *Syntax and semantics*, P. Cole & J. Morgan, eds, Vol. 3, New York: Academic Press, 41-58.
- Gupta, P., and K. Lord. 1998. Product placement in movies: The effect of prominence and mode on audience recall. *Journal of Current Issues & Research In Advertising* 20, no. 1: 47-59.
- Haugtvedt, C. P., and R. E. Petty. 1992. Personality and persuasion: Need for cognition moderates the persistence and resistance of attitude changes. *Journal of Personality and Social psychology* 63, no 2: 308-319.

- Haugtvedt, C., R. Petty, and J. Cacioppo. 1992. Need for cognition and advertising: Understanding the role of personality variables in consumer behavior. *Journal of Consumer Psychology* 1, no. 3: 239-260.
- Hayes, A. F. 2013. *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Hayes, A. F., and J. Matthes. 2009. Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behavior research methods* 41, no. 3: 924-936.
- Homer, P. M. 2009. Product placements: The impact of placement type and repetition on attitude. *Journal of Advertising* 38, no 3: 21-31.
- Jensen, J. D., J. K. Bernat, K. M. Wilson, and J. Goonewardene. 2011. The delay hypothesis: The manifestation of media effects over time. *Human Communication Research* 37 no 4: 509-528.
- Johnson, P. O., and J. Neyman. 1936. Tests of certain linear hypotheses and their application to some educational problems. *Statistical research memoirs*, 1, 57-93.
- Kardash, C. A. M., and L. K. Noel. 2000. How organizational signals, need for cognition, and verbal ability affect text recall and recognition. *Contemporary Educational Psychology* 25, no. 3: 317-331.
- Kisielius, J., and B. Sternthal. 1984. Detecting and explaining vividness effects in attitudinal judgments. *Journal of Marketing Research* 21, 54-64.
- Klin, C. M., and A. M. Drumm. 2010. Seeing what they read and hearing what they say: Readers' representation of the story characters' world. *Psychonomic bulletin & review* 17, no 2: 231-236.

- Kosslyn, S. M., and A. M. Matt. 1977. If you speak slowly, do people read your prose slowly? Person-particular speech recoding during reading. *Bulletin of the Psychonomic Society* 9, no 4: 250-252.
- Kuzmičová, A. 2014. Literary narrative and mental imagery: A view from embodied cognition. *Style* 48, no 3: 275-293.
- Martin, B. A. S., M. J. Sherrard, and D. Wentzel. 2005. The role of sensation seeking and need for cognition on Website evaluations: a resource-matching perspective. *Psychology & Marketing* 22, no 2: 109-126.
- Matthes, J., C. Schemer, and W. Wirth. 2007. More than meets the eye: Investigating the hidden impact of brand placements in television magazines. *International Journal of Advertising* 26, no.4: 477-503.
- Mau, G., G. Silberer, and C. Constien. 2008. Communicating brands playfully: Effects of in-game advertising for familiar and unfamiliar brands, *International Journal of Advertising*, 27, no.5: 827-851.
- Mccabe, A. E., and L. A. Brannon. 2004. Application of conversational norms to the interpretation of survey results as a function of participants' need for cognition. *The Journal of psychology* 138, no 1: 91-94.
- Olsen, L., and E. Lanseng. 2012. Brands in texts: Attitudinal effects of brand placements in narrative fiction. *Journal of Brand Management* 19, no. 8: 702-711.
- Orden, E. 2011. This book brought to you by... *The Wall Street Journal*, April 26, <http://www.wsj.com/articles/SB10001424052748704132204576285372092660548>
- Petty, R. E., J. T. Cacioppo, and K. J. Morris. 1983. Effects of need for cognition on message evaluation, recall, and persuasion. *Journal of Personality and Social Psychology* 45, no. 4: 805-818.

- Petty, R. E., P. Briñol, C. Loersch, and M.J. McCaslin. 2009. The need for cognition. In *Handbook of individual differences in social behavior*, ed. M. R. Leary and R. H. Hoyle, 318-329. New York: Guilford Press.
- Petty, R., K. DeMarree, P. Briñol, J. Horcajo, and A. Strathman. 2008. Need for cognition can magnify or attenuate priming effects in social judgment. *Personality and Social Psychology Bulletin* 34, no. 7: 900-912.
- Pulvermüller, F. 2005. Brain mechanisms linking language and action”, *Nature Reviews Neuroscience* 6, no 7: 576-582.
- Rentfrow, P. J., L. R., Goldberg, and R. Zilca. 2011. Listening, watching, and reading: The structure and correlates of entertainment preferences. *Journal of Personality* 79, no. 2: 223–257.
- Russell, C. 2002. Investigating the effectiveness of product placements in television shows: The role of modality and plot connection congruence on brand memory and attitude. *Journal of Consumer Research* 29, no. 3: 306-318.
- Scerrati, E., G. Baroni, A. M. Borghi, R. Galatolo, L. Lugli, and R. Nicoletti. 2015. The modality-switch effect: visually and aurally presented prime sentences activate our senses, *Frontiers in Psychology* 6, <http://doi.org/10.3389/fpsyg.2015.01668>
- Schemer, C., J. Matthes, W. Wirth, and S. Textor. 2008. Does “passing the Courvoisier” always pay off? Positive and negative evaluative conditioning effects of brand placements in music videos. *Psychology and Marketing* 25, no. 10: 923-943.
- Schwartz, N. 1994. Judgment in a social context: Biases, shortcomings, and the logic of conversation, *Advances in experimental social psychology* 26, 123-123.

- Shoots-Reinhard, B. L., D. D. Rucker, R. E. Petty, and R. Shakarchi. 2014. Not all contrast effects are created equal: extent of processing affects contrast strength, *Journal of Applied Social Psychology* 44, no 8: 523-535.
- Smith, S. M., C. P. Haugtvedt, and R. L. Petty. 1994. Need for Cognition and the Effects of Repeated Expression on Attitude Accessibility and Extremity, *Advances in Consumer Research* 21, no 1: 234-237.
- Spears, N. and Singh, S. N. 2004 Measuring attitude toward the brand and purchase intentions. *Journal of Current Issues & Research in Advertising* 26, no.2: 53–66.
- Speer, N. K., J. R. Reynolds, K. M. Swallow, and J. M. Zacks. 2009. Reading Stories Activates Neural Representations of Visual and Motor Experiences, *Psychological Science* 20, no 8: 989–999.
- Sohlberg, J. 2015. Thinking matters: The validity and political relevance of need for cognition. *International Journal of Public Opinion Research*. doi: 10.1093/ijpor/edv023
- Spiller, S., G. Fitzsimons, J. Lynch, and G. McClelland. 2013. Spotlights, Floodlights, and The Magic Number Zero: Simple Effects Tests In Moderated Regression. *Journal of Marketing Research* 50, no. 2: 277-288.
- Stanfield, R. A., and R. A. Zwaan. 2001. The effect of implied orientation derived from verbal context on picture recognition, *Psychological science* 12, no 2: 153-156.
- Stites, M. C., S. G. Luke, and K. Christianson. 2013. The psychologist said quickly, "Dialogue descriptions modulate reading speed!", *Memory & cognition* 41, no 1: 137–151.
- Storm, B. C., and E. Stoller. 2015. Exposure to product placement in text can influence consumer judgments. *Applied Cognitive Psychology* 29, no.1: 20–31.
- Thompson, R., and G. Haddock. 2012. Sometimes stories sell: When are narrative appeals most likely to work?. *Eur. J. Soc. Psychol.* 42, no. 1: 92-102.

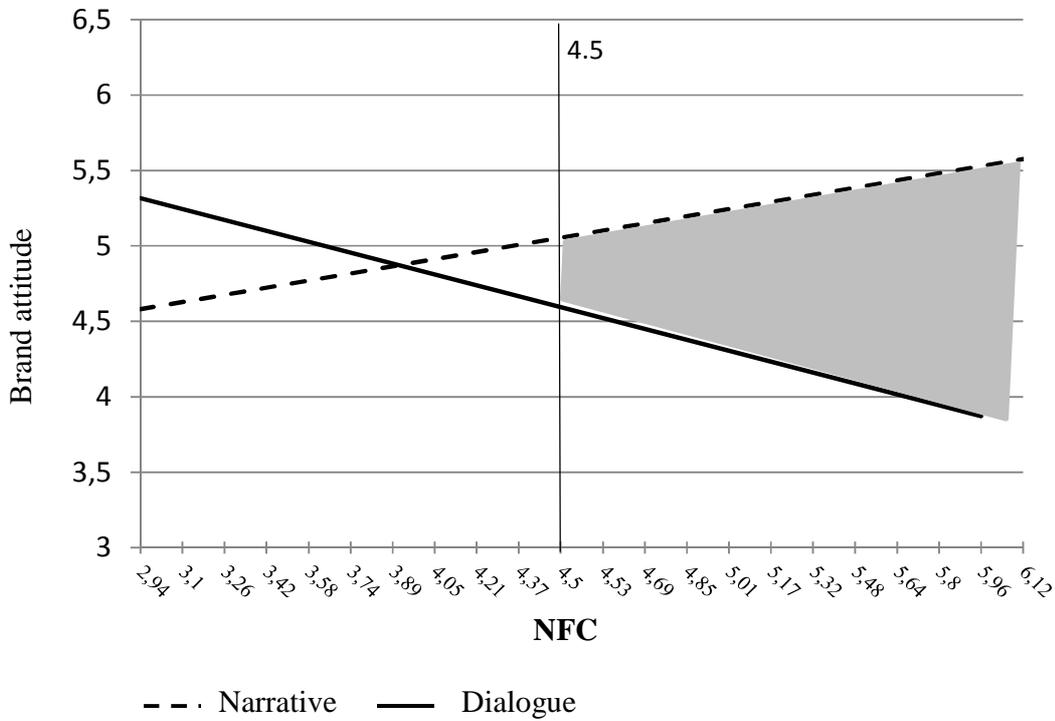
- Tinti, C., and C. Cornoldi. 1997. Modality-specific auditory imaging and the interactive imagery effect, *European Journal of Cognitive Psychology* 9, no 4: 417– 436.
- Van Reijmersdal, E., P. Neijens, and E. G. Smit. 2009. A new branch of advertising, *Journal of advertising research* 49, no 4: 429-449.
- Verhellen, Y., J. Eelen, N. Dens, and P. De Pelsmacker. 2015. The short-and long-term impact of brand placement in an advertiser-funded TV program on viewers' attitudes toward the sponsor brand and its main competitor. *International Journal of Advertising*, doi:10.1080/02650487.2015.1087089
- Verplanken, B. 1993. Need for cognition and external information search: Responses to time pressure during decision-making. *Journal of Research in Personality* 27, no. 3; 238-252.
- Wilson, T. D., and N. Brekke. 1994. Mental contamination and mental correction: Unwanted influences on judgments and evaluations, *Psychological Bulletin* 116, no 1: 117-142.
- Yao, B., and C. Scheepers. 2011. Contextual modulation of reading rate for direct versus indirect speech quotations, *Cognition* 121, no 3: 447-453.
- Yao, B., and C. Scheepers. 2015. Inner voice experiences during processing of direct and indirect speech”, in *Explicit and implicit prosody in sentence processing*, Frazier, L, & Gibson, E, eds., Springer International Publishing, 287-307.
- Yao, B., P. Belin, and C. Scheepers. 2011. Silent reading of direct versus indirect speech activates voice-selective areas in the auditory cortex. *Journal of Cognitive Neuroscience* 23, no. 10: 3146-3152.
- Yzerbyt, V. Y., D. Muller, and C. M. Judd. 2004. Adjusting researchers' approach to adjustment: On the use of covariates when testing interactions. *Journal of Experimental Social Psychology* 40, no. 3: 424-431.

- Zhou, P., and K. Christianson. 2016. I “hear” what you're “saying”: Auditory perceptual simulation, reading speed, and reading comprehension. *The Quarterly Journal of Experimental Psychology* 69, no. 5: 972-995.
- Zwaan, R. A. 2009. Mental simulation in language comprehension and social cognition. *European Journal of Social Psychology* 39, no.7: 1142-1150.
- Zwarun, L., and A. Hall. 2012. Narrative persuasion, transportation, and the role of need for cognition in online viewing of fantastical films. *Media Psychology* 15, no. 3: 327-355.

Table 1: Descriptive statistics for all measured variables

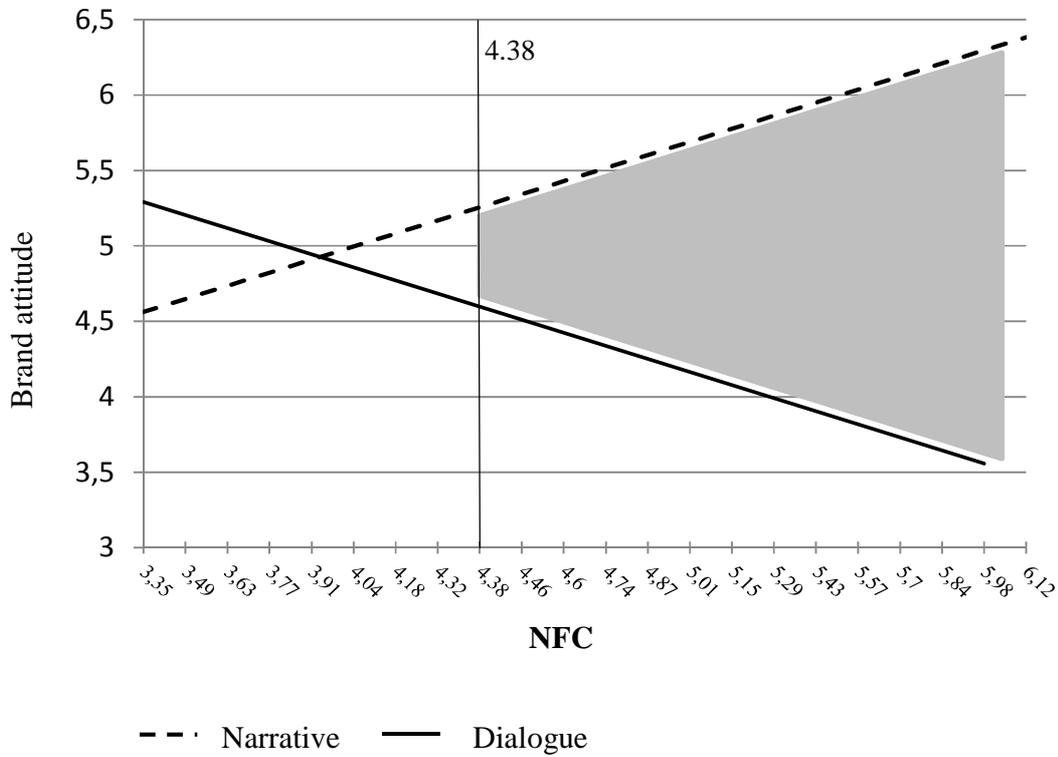
	# items	M	SD	Cronbach's α
Brand familiarity	1	4.46	1.59	-
Need for cognition Time 1	17	4.35	.66	.81
Brand attitude Time 1	4	4.9	1.00	.90
Purchase intention Time 1	1	4.04	1.63	-
Brand attitude Time 2	4	4.93	1.12	.94
Purchase intention Time 2	1	4.27	1.56	-

Figure 1a: Interaction effect of placement modality and need for cognition (NFC) on brand attitude at Time 1: Floodlight analysis using the J-N technique



Note: Shaded area represents the region of significance of the simple effect of placement modality. N = 93. Brand attitude and NFC were both measured on a 7-point scale.

Figure 1b: Interaction effect of placement modality and need for cognition (NFC) on brand attitude at Time 2: Floodlight analysis using the J-N technique



Note: Shaded area represents the region of significance of the simple effect of placement modality. N = 55. Brand attitude and NFC were both measured on a 7-point scale.