A meta-analysis of the effects of disclosing sponsored content

Eisend, M.; van Reijmersdal, E.A.; Boerman, S.C.; Tarrahi, F.

DOI
10.1080/00913367.2020.1765909
Publication date
2020
Document Version
Final published version
Published in
Journal of Advertising

Journal of Advertising, 49: 344–366

ISSN: 0091-3367 print / 1557-7805 online
DOI: 10.1080/00913367.2020.1765909

Routledge
Taylor & Francis Group

Literature Review Corner

A Meta-Analysis of the Effects of Disclosing Sponsored Content

Martin Eisend
European University Viadrina, Frankfurt (Oder), Germany

Eva A. van Reijmersdal
University of Amsterdam, Amsterdam, The Netherlands

Sophie C. Boerman
University of Amsterdam, Amsterdam, The Netherlands

Farid Tarrahi
European University Viadrina, Frankfurt (Oder), Germany

The amount of literature on the effects of disclosing sponsored content has increased greatly in recent years. Although the literature provides valuable insights into the effects of disclosing sponsored content, several research gaps remain, such as inconclusive findings, boundary conditions, and the mechanisms that explain how disclosures work. This article offers a meta-analysis of 61 papers that use 57 distinct data sets to address these research gaps. The results showed that disclosing sponsored content reduced brand attitudes, credibility, and source evaluation but increased recognition, persuasion knowledge, and resistance. Disclosure content, timing, and awareness, as well as product and sample characteristics, provide boundary conditions for the positive and negative effects of disclosures. A path model that tested the mechanism of disclosing sponsored content showed that, as suggested by memory priming effect, recognition of sponsored content increased memory but did not influence evaluation. Moreover, the understanding of sponsored content influenced evaluation, but memory remained unaffected, which corresponds to the flexible correction approach (i.e., consumers try to correct their answer to limit persuasive effects).

Because of the increasing popularity of sponsored content in various media, online discussions about the transparency of sponsored content have intensified (Federal Trade Commission [FTC] 2015; Word of Mouth Marketing Association [WOMMA] 2017). Without clear disclosure, the persuasive intention of sponsored content tends to be masked, because such sponsored content presents paid advertising in the form of editorial content (Wojdynski and Evans 2016). Sponsored content is defined as the purposeful integration of brands or branded persuasive messages in editorial media content in exchange for compensation by a sponsor (van Reijmersdal, Neijens, and Smit 2009). Examples of sponsored content are brand placements, advergames, advertorials in magazines and newspapers, and mentions of brands and products in blogs. Sponsored content has been criticized because consumers are often unaware that they are reading advertising rather than noncommercial media content (Han, Drumwright, and Goo 2018). In response, several parties in Europe and the United States recently developed regulations and legislation on disclosing the persuasive or commercial nature of sponsored content to enhance media transparency (e.g., FTC 2015; Social Code 2017; WOMMA 2017). These disclosures are in

Address correspondence to Martin Eisend, European University Viadrina, Große Scharrnstr. 59, 15230 Frankfurt (Oder), Germany. E-mail: eisend@europa-uni.de

Martin Eisend (PhD, Free University Berlin) is a professor of marketing, European University Viadrina.

Eva A. van Reijmersdal (PhD, University of Amsterdam) is an associate professor of persuasive communication, Amsterdam School of Communication Research, University of Amsterdam.

Sophie C. Boerman (PhD, University of Amsterdam) is an assistant professor of persuasive communication, Amsterdam School of Communication Research, University of Amsterdam

Farid Tarrahi (PhD, European University Viadrina) is a postdoctoral researcher, European University Viadrina.

the form of texts or pictograms that accompany sponsored content, which are used to inform the audience about the commercial or persuasive nature of such content (Cain 2011). Examples of disclosures on television are the PP logo, text such as "This program contains product placement," and the inclusion of sponsors' names in end credits. Examples of online disclosures are #spon, which is often used on Twitter, and "Brand X gave me this product so I could try it out," which appears in blogs.

The scientific literature has followed these developments, which is indicated by the many articles published on this topic in recent years. Although the literature provides valuable insights into the consequences of disclosing sponsored content, several research gaps exist. First, although the literature shows that disclosing sponsored content activates persuasion knowledge and worsens evaluation, the effects on other important response variables (e.g., attention, memory, processing, and credibility) are inconclusive, mixed, or difficult to predict (e.g., attitude toward the message) (Boerman and van Reijmersdal 2016). The lack of a proper synthesis has caused advertising practitioners to query whether and to what extent disclosures are beneficial and whether and how they reduce negative effects. Second, mixed findings have indicated the existence of boundary conditions and the need to investigate moderator variables. Although previous studies have tested several theoretically and practically relevant moderators (e.g., disclosure content; Tessitore and Geuens 2013; Tewksbury, Jensen, and Coe 2011), their findings are not consistent, which indicates the need for a generalizable synthesis. Some moderators that require data beyond those provided in a single study have not been tested, although they provide relevant insights for practitioners and researchers (e.g., comparisons across different cultural contexts or media types). Third, the literature suggests different underlying mechanisms and explanations for the effects of disclosures on consumers' cognitive responses (e.g., memory) versus their affective responses (e.g., brand attitude). Although these mechanisms have been investigated using partial models (e.g., Boerman, van Reijmersdal, and Neijens 2015; Campbell, Mohr, and Verlegh 2013), they have not been integrated with the aim of understanding their interrelationships and relative merits in explaining how disclosing sponsored content works and how and to what extent it affects consumers.

To address these research gaps, we collected and analyzed data provided in prior research studies that investigated the effects of disclosing sponsored content on consumers' responses. In this study, we applied a meta-analysis of findings in 51 papers and 47 distinct data sets. We aggregated the effects of disclosing sponsored content, explained their heterogeneity by applying moderator variables, and tested a meta-analytic path model to assess the underlying mechanisms of the effects of disclosing sponsored content.

By addressing the gaps in prior research, we provide several contributions to the literature, which will also benefit advertising practitioners. First, we provide insights into the magnitude and significance of the effects of disclosing sponsored content. This synthesis will enable practitioners to determine whether and to what extent disclosures harm the message and sponsored brands. The synthesis will also support the efficient accumulation of knowledge for researchers, which will enable them to determine the relevant effects of disclosing sponsored content. Second, in investigating several moderator variables, we explain the variations in disclosure effects found in prior research studies. This knowledge will inform practitioners about avoiding negative effects of disclosing sponsored content. Moreover, it will inform researchers about the existence of boundary conditions in the effects of disclosing sponsored content and their generalizability across various conditions. Third, we illuminate the mechanisms that underlie disclosure effects by suggesting and testing a comprehensive and integrative model of disclosure effects that distinguishes between different components of persuasion knowledge that play different roles as mediators for evaluation and memory effects. The findings of the meta-analytic path model will contribute to scholarship on the relative value of different explanatory processes and their interrelationships.

THEORETICAL BACKGROUND

Effects of Disclosing Sponsored Content

Table 1 shows the major response variables that were investigated in prior studies. The final column describes the expected effect of disclosing sponsored content on a particular response variable. "Unclear" expectations reveal inconsistencies in the literature, which are addressed in the present meta-analysis.

Boerman and van Reijmersdal (2016) provided a qualitative literature review and suggested ways in which disclosing sponsored content affected several variables. They found that disclosing sponsored content activated persuasion knowledge but reduced brand attitudes and purchase intentions. However, findings on the effects on attention or memory (i.e., recall and recognition) were inconclusive or mixed and did not indicate whether they were positive or negative.

Further variables were provided in prior research (Table 1), the overall effects of which were hypothesized. According to Campbell and Kirmani (2008), resistance is a typical outcome of the activation of persuasion knowledge. We, therefore, assume that disclosures increase resistance. Because the disclosure reminds the audience of

TABLE 1
Effects of Disclosing Sponsored Content: Response Variables Investigated in the Meta-Analysis

Response Variable	Definition and Operationalization/Related Variables	Expected Total Effect of Disclosing Sponsored Content
Attitude toward the ad (message)	Evaluation of the advertisement and the advertised message. Related variables: attitude toward ad, attitude toward placement, acceptance of claims.	Unclear
Brand attitude	Evaluation of the sponsored brand. Related variables: attitude toward brand, brand attitude, brand affect, brand evaluation.	Negative
Attention	Consumers' amount of processing and concentration and focus of their minds on placement. Related variables: visual attention, attention test, depth of processing, percentage of thoughts.	Unclear
Behavioral intention	Consumers' likelihood that they will engage in a brand-favoring behavior. Related variables: intention to buy, purchase intention, behavioral intention, chance of contacting the advertiser, intention to engage in postpurchase behavior.	Negative
Brand recall	Consumers' ability to correctly retrieve a brand (name) from memory when prompted by a product category (Keller 1993).	Unclear
Brand recognition	Consumers' ability to correct discrimination of a brand as having been seen or heard before (Keller 1993).	Unclear
Credibility	The extent to which the source or the message can be believed or trusted. Related variables: credibility, trustworthiness, bias evaluation, integrity.	Negative
Persuasion knowledge: recognition of sponsored content (PK1)	The set of theories and beliefs about persuasion and its tactics that people develop throughout their lives (Friestad and Wright 1994), assessed as the recognition of the specific content as being advertising. Related variables: recognition of advertising, conceptual persuasion knowledge.	Positive
Persuasion knowledge: understanding of sponsored content (PK2)	The set of theories and beliefs about persuasion and its tactics that people develop throughout their lives (Friestad and Wright 1994), assessed by the understanding of the persuasive intent of communication. Related variables: suspicion of ulterior motive, understanding of persuasive intent, inference about intention, activation of persuasion knowledge.	Positive
Resistance	Negative reactions toward sponsored content. Related variables: skepticism, cognitive and affective resistance, negative feelings of deception, critical processing.	Positive
Source evaluation	Evaluation of the source or platform of the sponsored content. Related variables: source attitude, attitude toward vlogger/blogger/game.	Negative

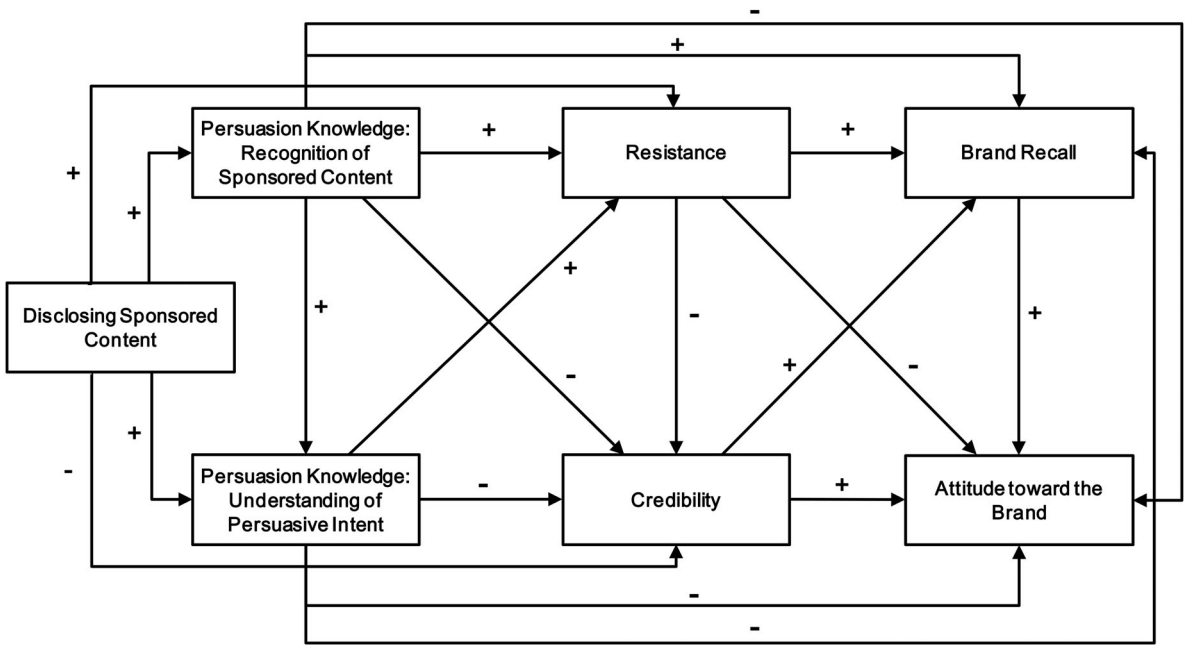

FIG. 1. How disclosing sponsored content works: Proposed integrated model.

a persuasive source that was hidden, we expect the effects on source evaluation and credibility to be negative (Byrne et al. 2012). Mixed results of previous studies (Boerman and van Reijmersdal 2016) indicated the difficulty in predicting the effect on attitude toward the message. Furthermore, persuasion knowledge has different components (Ham, Nelson, and Das 2015). The most common types found in prior disclosure research are the following: recognition of advertising, which is consumers' recognition of the sponsored elements in the content as forms of advertising; understanding of the persuasive intent, which is consumers' understanding that the sponsored content is intended to sell products or services or change consumers' attitudes and opinions about these products or services. Both components can be activated by disclosures, but consumers may not always need disclosures to recognize that content is sponsored (Kim, Pasadeos, and Barban 2001). Therefore, each component of persuasion knowledge can be linked to different explanations of how disclosing sponsored content works.

How Disclosure of Sponsored Content Works

The model shown in Figure 1 describes the chain of effects triggered by disclosing sponsored content, which ultimately affect two major response variables: brand attitude and brand recall.[1] The chain of effects works through the activation of persuasion knowledge and the additional mediators of credibility and resistance, which are described in detail next. The model integrates various theoretical explanations of effects of disclosing sponsored content that have been applied as partial explanations in prior research (e.g., the persuasion knowledge model and reactance). The model is applied to resolve seemingly conflicting explanations (i.e., priming and flexible correction in memory effects). Furthermore, the model addresses the research question of whether either or both components of persuasion knowledge are relevant mediators in the relationship between disclosing sponsored content and either memory (i.e., brand recall) or evaluation (i.e., brand attitude).

Disclosing sponsored content and activation of persuasion knowledge. The goal of disclosures is to inform consumers that they are being exposed to sponsored content that is intended to influence them. The audience is more likely to activate persuasion knowledge when such ulterior motives are accessible. Persuasion knowledge has been defined as based on the set of theories and beliefs about persuasion and related tactics that people develop (Friestad and Wright 1994). Two components of persuasion knowledge have been emphasized in the disclosure literature: (a) the recognition of content as being sponsored as well as the commercial source; and (b) the understanding of selling, persuasive intent, and beliefs about ulterior motives (Hudders et al. 2017; Wright, Friestad, and Boush 2005). Several studies supported a positive effect of disclosure on both components of persuasion knowledge (Boerman and van Reijmersdal 2016). For example, several studies showed that disclosures enhanced recognition of both sponsored Facebook posts (Boerman, Willemsen, and Aa 2017) and brand

placements in a movie as advertising (Guo et al. 2018). Disclosures were also found to enhance children's understanding of the persuasive intent of brand placements in movies (Spielvogel, Naderer, and Matthes 2019).

While it is recognized that disclosing sponsored content can directly increase both components of persuasion knowledge, it is also assumed that people first need to recognize a persuasive attempt before they can understand its persuasive intent (Boerman, van Reijmersdal, and Neijens 2015; John 1999). This assumption suggests a mediating path that enables the recognition of sponsored content as advertising and, therefore, increases understanding of persuasive intent.

The mediating effects of persuasion knowledge on memory. Prior research has found mixed results regarding the effects of disclosure on memory. The positive effects on memory, as assessed by brand recall, have been explained by priming. Disclosures function as a prime that makes the audience more likely to notice, process, and remember the brand (van Reijmersdal et al. 2017; Wood et al. 2008). Campbell, Mohr, and Verlegh (2013) found a negative memory effect and explained it using a flexible correction approach: When consumers infer the persuasive attempt of communication, they try to correct their answer to limit its persuasive effect, which reduces memory of the brand. Both explanations refer to different components of persuasion knowledge and can, therefore, be integrated into our model despite the seemingly contradictory effects of disclosures on memory. The priming explanation (i.e., positive memory effect) refers to the recognition of advertising, whereas the flexible correction approach (i.e., negative memory effect) refers to understanding of persuasive intent.

The mediating effects of persuasion knowledge on evaluation. Furthermore, because of resistance to a message, the recognition of content as sponsored and understanding its persuasive intent negatively influence evaluations of the brand (e.g., Boerman, van Reijmersdal, and Neijens 2014; Guo et al. 2018; Tessitore and Geuens 2013). This response may be due to the "change in meaning" principle (Friestad and Wright 1994). Although the content may first seem genuine and entertaining, the recognition of sponsored content as having a persuasive goal changes its meaning and possibly even leads to feelings of deception (Boerman, van Reijmersdal, and Neijens 2012; Wei, Fischer, and Main 2008). In addition, according to reactance theory (Brehm 1966), people may feel restricted in their freedom of choice when they realize and understand that someone is trying to persuade them (Campbell and Kirmani 2008).

The effects of disclosure and persuasion knowledge on resistance and credibility. Disclosing sponsored content can have direct effects on resistance and credibility under low levels of processing in which persuasion knowledge is not activated. When it is activated, persuasion knowledge is an important mediator. The activation of persuasion knowledge has been found to evoke resistance to a persuasive attempt, which in this case is sponsored content. According to the persuasion knowledge model, people can cope with a persuasive attempt when they recognize it. This coping behavior includes various actions during the persuasion attempt, such as analyzing, evaluating, and interpreting the message (Friestad and Wright 1994). Although coping does not necessarily lead to resistance, it has been assumed that, in the context of sponsored content, people tend to resist persuasive attempts when they recognize them (Boerman, van Reijmersdal, and Neijens 2012; Sagarin et al. 2002; Wei, Fischer, and Main 2008). Resistance has been examined in terms of negative reactions to sponsored content using several variables, such as skepticism, feelings of deception, and critical processing (Abendroth and Heyman 2013; Cartwright, van Reijmersdal, and Opree 2017; van Reijmersdal and Tutaj 2010). Both components of persuasion knowledge are expected to be positively related to resistance.

In addition, the persuasion knowledge literature suggests that activation of persuasion knowledge lowers the credibility of the source and the message. The realization that a source or message is based on ulterior motives raises suspicion and negatively influences perceived credibility (Campbell and Kirmani 2008). Moreover, credibility assessments can be an outcome of increased reactance, and the literature suggests that disclosing sponsored content leading to resistance also lowers credibility perceptions (Xie, Boush, and Liu 2015).

The mediating effects of resistance and credibility on memory and evaluation. According to the literature, resistance has contradictory effects on memory and evaluation. On one hand, resistance to sponsored content may extend to the brand, leading to less favorable attitudes (Guo et al. 2018). Thus, resistance reduces brand attitudes. On the other hand, the use of persuasion knowledge requires cognitive effort and systematic processing, which increases the chance that the brand will be processed and remembered (Buijzen, van Reijmersdal, and Owen 2010). Hence, resistance may increase brand memory.

The effects of brand and memory were also found to be triggered by credibility perceptions. It was shown that the perceived credibility of an ad or source was positively related to brand evaluation (MacKenzie and Lutz 1989). Credibility increases the probability that a brand will be

included in the consideration set, thus enhancing memory of the brand (Erdem and Swait 2004).

The final outcome variables of recall and attitude are not independent of each other. Therefore, we included a path from memory to brand attitudes, which is in line with prior research that provided evidence that memory could be used as a source of judgments and evaluations (Carpenter and Boster 2013; Hastie and Park 1986; Segijn and Eisend 2019).

Moderators of Effects of Disclosing Sponsored Content

Heterogeneous findings in the literature indicate that conditions exist under which disclosures do or do not have certain effects. Single studies are restricted in the type of moderators they can investigate, whereas a meta-analysis has the advantage of a broad database and allows for testing moderator variables that vary between different types of studies, even if they do not vary within a study.

In this meta-analysis, we address the research question of how the relationship between disclosing sponsored content and its major outcome variables are contextual and depend on moderating variables. We examine five categories of moderators: disclosure characteristics, sample characteristics, media characteristics, temporal characteristics, and product characteristics. With respect to disclosure characteristics, several moderator variables were applied in prior research, such as content, timing, and duration. Insights into the moderating effects of disclosure characteristics are important, as they can reveal which types of disclosure are effective in enhancing transparency. In addition, these insights have important practical implications for implementing disclosures. Previous studies on content characteristics found mixed effects (Stubb, Nyström, and Coliander 2019; Tewksbury, Jensen, and Coe 2011; van Reijmersdal 2016). In this meta-analysis, we distinguish three major types of content information: mentioning the brand, mentioning the word *advertising*, and mentioning persuasive intent, all of which are likely to predict disclosure effectiveness (van Reijmersdal 2016). Furthermore, previous studies showed contradictory findings for timing and lacked a generalizable conclusion, which we aim to provide through the present meta-analysis.

With respect to sample characteristics, moderators, such as age of the respondents, their gender, cultural background (Europe versus the United States), and whether they were students, can yield important insights into differing susceptibility of certain groups to effects of disclosing sponsored content. Comparing effects between samples in Europe and the United States is important because of differing regulations regarding disclosing sponsored content (Boerman et al. 2018), and thus, potentially, people's familiarity with and responses to disclosures.

With respect to media characteristics, the question arises regarding whether the effects of disclosures in traditional media are similar to those in online media. Although people may be familiar with brand placements in television programs and movies, sponsored content in online media can take many forms. Thus, the boundaries between advertising and editorial content are blurred even further online, which increases the need for disclosures.

Another important mediator is related to the year in which the study was conducted (i.e., temporal characteristic). Testing this moderator can provide insights into whether disclosure effects were fading, increasing, or stable over time, which is relevant for both theory and regulation. Finally, testing product characteristics (i.e., familiarity of the product and level of product involvement) as moderators reveals in-depth insights into the generalizability of disclosure effects on different types of products (Campbell and Evans 2018).

Table 2 provides an overview of the moderators, their operationalization and coding, and the expected relationship between disclosing sponsored content and the responses that are investigated in this meta-analysis. Table 2 further describes and explains the expected influence of each moderator on the effect of disclosing sponsored content.

METHOD

Study Retrieval and Coding

We performed an exhaustive search of published and unpublished papers that provided estimates of the effects of disclosing sponsored content. To identify the relevant studies, we first referred to a review article that provided a review of previous research (Boerman and van Reijmersdal 2016). Second, we performed a keyword search of electronic databases (namely, Business Source Complete, Communication and Mass Media Complete, JSTOR, PsycINFO, ProQuest Dissertations & Theses, and Google Scholar) using several keywords, such as "disclosure", "labeling", "promoted", and "sponsored" in combination with "source," "sponsorship", "content," "placement," and "persuasion." Third, we performed a manual search of the journal outlets that were major sources of journal articles on disclosing sponsored content. Fourth, we searched the Web for working papers (specifically, Social Science Citation Index, Social Science Research Network, and key authors' web pages). Fifth, we reviewed reference lists in all previously obtained papers. The compilation procedure, which was in line

TABLE 2
Variables Moderating the Effect of Disclosing Sponsored Content on Response Variables

Moderators	Description and Operationalization	Expected Influence (and Explanation)	Coding Scheme
Disclosure timing	Captures whether the disclosure is presented before, during, or after the sponsored content.	Disclosures presented after the sponsored content reduce evaluations of the message and the brand because they activate more persuasion knowledge (Campbell, Mohr, and Verlegh 2013). Disclosures presented before or during the sponsored content increase processing and thus recall of the sponsored content.	• Before: 1 vs. 0 for other • During: 1 vs. 0 for other • After: 1 vs. 0 for other
Disclosure duration (in seconds)	Captures the amount of time the disclosure appears on the screen.	Duration increases opportunity for critical processing and can reduce evaluations of the message and the brand but can increase memory (Boerman, van Reijmersdal, and Neijens 2012).	• Continuous variable
Disclosure modality	Captures the modality (in particular, whether it is visual) of the disclosure.	As previous studies that compared modalities found no clear effects (Boerman and van Reijmersdal 2016), we have no expectation of the direction of effects of disclosure modality.	• Visual only: 1 vs. 0 for other
Disclosure content	Captures various content components of the disclosure.	If the disclosure mentions the brand, the evaluation of the brand decreases, but recall increases. Mentioning the persuasive intent (e.g., "persuade") or "advertising" increases persuasion knowledge because these disclosures more explicitly refer to people's knowledge about persuasion (Dekker and van Reijmersdal 2013).	• Brand mentioned: 1 vs. 0 for not • Persuasive intent mentioned: 1 vs. 0 for not • "Advertising" mentioned: 1 vs. 0 for not
Disclosure awareness	Captures whether consumers were aware of the disclosure.	Awareness of the disclosure leads to stronger effects of disclosures on all outcomes (Boerman, van Reijmersdal, and Neijens 2012). Disclosure awareness indicates that the disclosure is noticed and processed. This processing of disclosure seems to be an important precondition for effects of the disclosure on other outcomes (Wogalter and Laughery 1996).	• Consumers aware of disclosure: 1 vs. 0 for other/mixed
Sample characteristics	Captures characteristics of the sample in terms of age (adults vs. children/adolescents), education (students vs. nonstudents), and gender.	Children/adolescents have developed less persuasion knowledge and are therefore less likely to activate it (Friestad and Wright 1994; Rozendaal, Buijzen, and Valkenburg 2010). As a result, their evaluations are more favorable (Hudders et al. 2017). We have no prior expectations regarding the direction of effects of education and gender.	• Adults: 1 vs. 0 for children/adolescents • Students: 1 vs. 0 for nonstudents • Gender: % female sample participants

(*Continued*)

TABLE 2
(*Continued*).

Moderators	Description and Operationalization	Expected Influence (and Explanation)	Coding Scheme
Media characteristics	Captures whether the sponsored content is presented in offline media (e.g., product placement on TV) or online media (e.g., sponsored blogs).	Previous studies that focus on different media generally showed comparable effects (Boerman and van Reijmersdal 2016), but the overall effect of online versus offline media has not been investigated so far.	• Offline media: 1 vs. 0 for online media
Cultural context	Captures the nationality of the sample by distinguishing between U.S. samples and samples from the European Union (single or multiple E.U. countries).	Different countries have different types of regulations regarding disclosing sponsored content, and consumers might be more or less accustomed to disclosures. The effect can be in either direction due to either habituation (leading to less intense responses toward disclosures) or due to more experience in how to deal with disclosures (leading to possibly more extreme responses).	• United States: 1 vs. 0 for other • European Union: 1 vs. 0 for other
Temporal context	Captures the year of data collection.	The same reasoning as for cultural context applies to the temporal context: Disclosures became more prominent over time, leading to either habituation or to more experience responses by consumers.	• Continuous variable
Product characteristics	Captures whether the sponsored product is familiar or not, or a low-involvement or high- involvement product.	Unfamiliar and high-involvement products increase processing (Celsi and Olson 1988) and thus memory.	• Familiar/well-known product: 1 vs. 0 for unfamiliar/ fictitious product • High-involvement product: 1 vs. 0 for low-involvement product

with recommendations in the literature (Eisend 2017) and with the procedure in other advertising research meta-analyses (e.g., Franke and Taylor 2017; Segijn and Eisend 2019), included all studies that were available by December 2019.

After identifying papers for potential inclusion in the meta-analysis, we applied inclusion and exclusion criteria to determine which ones would be retained by referring to our definition of disclosing sponsored content (i.e., texts or pictograms accompanying sponsored content that are used to inform the audience about the commercial or persuasive nature of sponsored content; see Cain 2011). We included all papers which reported empirical studies and which quantitatively measured and provided estimates of the effects of disclosing sponsored content on any response variable. We excluded any papers that were outside this scope. In particular, we did not consider papers that dealt with disclosures that did not refer to sponsored content, such as those of certain product features (e.g., warnings about product claims and health risks). We further excluded research on disclosing sponsored content that did not assess the effects of disclosing sponsored content to the audience because they did not compare a disclosure condition with a no-disclosure condition (e.g., studies that investigated different screen positions of disclosures) (e.g., Wojdynski and Evans 2016). We also excluded papers that did not provide enough statistical information to calculate an effect size. Before excluding these papers, we tried to retrieve the necessary information by contacting the authors via e-mail. Except

these exclusions, we considered any paper in English providing the appropriate empirical data.

To avoid duplications in our database, we proceeded as follows. A document with an original analysis and findings by the authors (e.g., journal article, working paper, or conference paper) was called a "paper." Some papers analyzed more than one distinct data set (e.g., a paper reporting several experiments), while some data sets were analyzed in more than one paper (e.g., a research project that was published as a conference paper and later as a journal article). To avoid duplication, our analysis was based on data sets. Each data set provided single or multiple effect sizes that referred to the effect of disclosing sponsored content on any response variable. Any response variable that appeared either in one or two independent data sets or in only one paper was eliminated from further analysis. This was done to ensure the minimum degree of generalizability. The reason is that a meta-analysis should provide a high degree of generalization and thus contain more information than a single paper or a single data set in a paper that was followed by a replication.[2] Our final database included 61 papers that used 57 distinct data sets, which provided 473 effect sizes that described the effects of disclosing sponsored content (see supplemental online appendix). The combined sample size included 278,791 respondents.

The response variables were categorized according to the variable definitions provided in Table 1. Two authors independently assigned all response variables in the data sets to these categories. The agreement rate was above 95%, and inconsistencies were resolved by discussion. The authors also coded the moderator variables shown in Table 2.

Effect Size Computation

The effect size metric selected for the meta-analysis was the correlation coefficient, which indicated an easy interpretable effect size that could be used for further analysis (e.g., path models). A positive sign in the correlation coefficient indicated that, compared with not disclosing sponsored content, disclosure increased the response variable. Higher absolute values of the correlation coefficient indicated a stronger influence of disclosing sponsored content on a response variable. In data sets that reported other measures (e.g., Student's t and mean differences), those measures were converted to correlation coefficients by following the common guidelines for meta-analysis (Lipsey and Wilson 2001). The correlations were adjusted for measurement errors in the response variables. When a data set did not report the reliability of a response variable that was typically measured using multiple items, we used the mean reliability of that variable across all data sets.

We dealt with integrating dependencies between correlation estimates using the following approach. When a data set provided more than one correlation estimate that referred to different response variables, the estimates were treated as independent because we integrated and analyzed the estimates of each response variable separately. In some data sets, multiple relevant tests were conducted on the same response variable, which were not statistically independent. We accounted for dependencies in the correlation estimates and the nested structure of the meta-analytic data using a mixed-effects multilevel model called hierarchical linear modeling (HLM; Raudenbush and Bryk 2002). In specifying the correlation estimates as clustered under the higher-level unit of a data set, multilevel modeling was designed to address the dependence problem. We estimated the following model:

$$r_{ij} = \gamma_{00} + \mu_{0j} + e_{ij} \quad (1)$$

where $i = 1, 2, 3 \ldots I$ effect sizes, $j = 1, 2, 3 \ldots J$ data sets. This formula estimates average effect size γ_{00}, deviation of average effect size in a data set from γ_{00} (μ_{0j}), and deviation of each effect size in the kth data set from γ_{00} (e_{ij}). The latter two terms have variances that follow a normal distribution and are uncorrelated.

We computed fail-safe N to address publication bias, that is, the possible bias in effect size estimates resulting from the publication status of a paper. For any relationship of interest, fail-safe N represents the number of additional nonsignificant correlations needed to render the results of that relationship nonsignificant at $p = .05$ (Rosenthal 1979). We calculated the fail-safe N for all significant ($p < .05$) integrated correlations by using correlation estimates that were adjusted for measurement error. Next, we conducted a homogeneity test as an aid in deciding whether the observed correlations were more variable than would be expected from sampling errors alone. If they were, then there was a strong basis for testing moderators.

Path Model Estimation

To investigate our hypothesized model and to apply a path model analysis, we developed a correlation matrix that included meta-analytically integrated correlations of the effects of disclosing sponsored content on the response variables suggested by the model. We then added integrated correlations of the interrelationships between these response variables (e.g., between brand recall and brand attitude), following the recommendations in the literature (Bergh et al. 2016). For a variable to be included in such analysis, multiple correlations must

relate it to every other variable in the model. Therefore, several of the variables shown in Table 1 could not be considered, as we did not find sufficient correlations to meet these conditions. For example, because we did not find correlations between resistance and behavioral intentions, the latter could not be included in the model. We searched the data sets in the meta-analysis and added 76 correlations on the interrelationships between variables. We found a minimum of three correlations for each variable relationship. Correlations indicating a relationship between response variables were integrated and adjusted in the same way as correlations that describe effects of disclosing sponsored content on response variables.

A single indicator was used to measure all constructs in the path model. Error variances in the indicators were set at zero because we had already considered measurement errors when we integrated the effect sizes (i.e., we adjusted for measurement error in response variables by means of the reliability coefficient). The harmonic mean ($n = 717$) of the cumulative sample size underlying each integrated correlation was used as the sample size in the analysis, which has been commonly practiced in meta-analytic structural equation modeling studies. In the final analysis, we included chi-square test statistics and fit indices. Furthermore, we reported explained variance in brand recall and brand attitudes, and we computed the sum of all indirect effects of disclosing sponsored content on both variables. We performed a bootstrapping analysis with 95% bias-corrected bootstrap confidence intervals using 5,000 bootstrap samples to assess the overall significance of the effects. We also computed all specific indirect effects of disclosing sponsored content to either brand recall or brand attitude.

Moderator Analysis

We conducted a moderator analysis if the homogeneity test indicated heterogeneity and the variation in correlations could not be explained by sampling error alone. We ran a single moderator analysis to test the individual effect of each moderator variable using a conditional model (i.e., each moderator was tested individually). We continued using the mixed-effects multilevel model that was used to determine integration of effect size, described above. A multilevel model that includes moderator variables is termed a conditional model. In our analysis, the conditional model was a mixed-effects metaregression model because fixed effects of the moderators were considered in addition to random components. We specified the estimated model of a moderator M_{ij} that was measured at the effect size/correlation level (i.e., disclosure timing, disclosure duration, disclosure modality, disclosure content, and disclosure awareness) where

$$r_{ij} = \gamma_{00} + \gamma_{10} * M_{ij} + u_{0j} + e_{ij} \quad (2a)$$

and of a model with a moderator M_j at the data set level (i.e., sample characteristics, media characteristics, cultural context, year of data collection, and product characteristics)

$$r_{ij} = \gamma_{00} + \gamma_{01} * M_j + u_{0j} \quad + e_{ij} \quad (2b)$$

where r_{ij} is the ith correlation describing the relationship between disclosing sponsored content and a particular response variable reported within the jth data set. Equation (2a) describes the influence of moderator variables that varied *within* data sets; equation (2b) describes the effect of variables that varied *between* data sets. All continuous moderator variables were mean-centered before they were entered in the model. To assure robustness of the model, which required a sufficient number of correlations and data sets, as well as a reasonable ratio of correlations per data set, we did not apply the model to two response variables that were based on a small number of correlations and data sets, even if the homogeneity test indicated heterogeneity (i.e., attitude toward the ad and recognition). Thus, we ran the analysis for six response variables: brand attitude, behavioral intention, brand recall, credibility, persuasion knowledge: recognition of advertising, and persuasion knowledge: understanding of persuasive intent.

RESULTS

Summary of Effects of Disclosing Sponsored Content

Table 3 presents an overview of the integrated correlations of effects of disclosing sponsored content. Table 3 includes all dependent variables described in Table 1, including those that were not used in the path model analysis. Table 3 also provides information about homogeneity and publication bias. The significant integrated correlations indicated that disclosing sponsored content reduced brand attitude, credibility, and source evaluation (at $p < .1$) but increased brand recognition, persuasion knowledge, and resistance. The positive effect on attention was marginally significant. Effects on attitude toward the ad, behavioral intention, and brand recall were not significant. Significant findings are in line with the assumptions shown in Table 1; only the assumption of the negative effect on behavioral intention was not supported. The findings further provided generalizable results of the mixed and inconsistent findings in prior research: Disclosures did not affect attitude toward the ad, but they tended to increase attention and brand memory. Results of the homogeneity test indicated that the integrated correlations were heterogeneous. The fail-safe N indicates that the integrated correlations did not contain

publication bias because the number was higher than Rosenthal's (1979) rule of thumb (i.e., five times the number of effect sizes plus 10).[3]

Path Model Results

Table 4 provides the correlation matrix based on the meta-analytically integrated findings that were used as input in the path model analysis. Only six dependent variables were considered in which the effect sizes were sufficient to describe their intercorrelations.

Table 5 shows results of the path model analysis. Table 5 and Figure 2 depict the standardized path coefficients for the proposed model (Model 1). All but two path coefficients were significant and in line with our assumptions (see Figure 1).

Effects on brand recall. As for brand recall, Model 1 explained 18% of the variance in brand recall. The sum of all indirect paths from disclosing sponsored content to brand recall is .080 and significant as indicated by the confidence interval [.043; .118]: Disclosing sponsored content significantly increased memory. We could not support a direct effect of understanding of persuasive intent on brand recall ($\beta = .017$, $p = .671$). Also, the analysis of the mediating paths shows that the path from recognition of advertising on brand recall was significant (total effect = .363, $p < .001$), whereas the total effect from understanding of persuasive intent was not significant (total effect = .054, $p = .155$).

Effects on brand attitude. As for brand attitude, Model 1 explained 25% of the variance in brand attitude. The sum of all indirect paths from disclosing sponsored content to brand attitude is −.077 and significant as indicated by the confidence intervals [−.177; −.038]; disclosing sponsored content significantly reduced brand evaluation. We could not support a direct effect of recognition of advertising on brand attitude ($\beta = .043$, $p = .248$). Also, the mediating paths leading from recognition of advertising to brand attitude indicated a nonsignificant total effect of −.023 ($p = .545$), but the mediating paths from understanding of persuasive intent were significant (total effect = −.326, $p < .001$).

These findings were interpreted in line with our reasoning regarding two opposing interpretations in the literature. As suggested by memory priming effect, recognition as advertising increased memory but did not influence evaluation. Moreover, the understanding of sponsored content was related to evaluation, but memory was unaffected, which corresponded to the flexible correction approach. The findings further answer our research question: Effects on brand memory are mainly mediated by persuasion knowledge as recognition of advertising, while effects on brand attitude are mainly mediated via understanding of persuasive intent.

Indirect specific effects and parsimonious model. To further investigate the role of the mediators in the model, we tested specific indirect effects of disclosing sponsored content on both brand recall and attitude (Table 5).[4] Findings showed that the paths through persuasion knowledge explained more variance than any other path did, particularly those including resistance or credibility. Therefore, we ran a parsimonious model (Model 2) that excluded resistance and credibility. Findings and fit indices shown in Table 5 were consistent with those of the proposed and integrated model (Model 1). Figure 3 presents the findings of the parsimonious model (Model 2). The specific indirect effects of Model 2 in Table 5 provide further support for our answer to the research question: Effects on brand attitude are primarily mediated via understanding of persuasive intent, while effects on brand recall are mediated via recognition of advertising. Model 2 is nested within proposed Model 1, and restricting the paths in Model 1 to the nested Model 2 shows that Model 1 is superior to the Model 2 (χ^2 difference/df = 527.088/11, $p < .001$). Hence, the Model 2 can help to provide first insights into the effects of disclosing sponsored content on brand attitude and brand recall as mediated by persuasion knowledge, but the Model 1 provides a more precise and detailed picture of the underlying mechanisms. We therefore accept Model 1 over Model 2 as basis for testing our assumptions.

Moderator Analysis Results

Table 6 provides the results of moderator analysis for the six dependent variables, showing a sufficient number of correlations and data sets, as well as a reasonable ratio of correlations per data set. The findings answer our research question regarding the conditional effects of disclosing sponsored content.

Disclosure timing and duration. In line with our expectations (Table 2), we found that a disclosure presented after the sponsored content decreased brand evaluation and credibility, and a disclosure presented before or during the sponsored content led to less negative brand evaluation; both effects were marginally significant. Disclosures presented during the sponsored content led to higher recall and less negative credibility. We did not find any effects of duration, but a small sample size was used in these tests.

TABLE 3
Effects of Disclosing Sponsored Content: Integration of Correlations

Consumer Response Variable	Expected Effect	# Data Sets	# Effect Sizes	Sample Size	Corrected Mean *r*	*Q* Value	Fail-Safe *N*
Attitude toward the ad (message)	O	8	13	1,152	−.060	46.338***	—
Attention	O	6	14	883	.106^{+}	13.658*	—
Behavioral intention	−	19	66	137,601	−.023	99.386***	—
Brand attitude	−	33	89	5,550	−.108*	658.646***	2,400
Brand recall	O	12	31	1,223	.104	285.495***	—
Brand recognition	O	4	6	450	.286*	9.058*	81
Credibility	−	26	82	5,363	−.132*	1,216.866***	4,404
PK1: recognition of sponsored content as advertising	+	19	50	3,443	.255**	10,020.131***	14,982
PK2: understanding of persuasive intent	+	17	63	3,686	.257**	1,580.778***	3,519
Resistance	+	10	32	2,826	.110*	76.311***	218
Source evaluation	−	11	27	2,969	−.054	25.253**	—

Note. The corrected mean correlation coefficients (*r*) are the variance-weighted, reliability-corrected estimates of the population correlation coefficients. The *Q* value is the homogeneity test. A significant result indicates heterogeneity. The fail-safe *N* indicates the number of nonsignificant, unpublished (or missing) correlations that would need to be added to an integrated (mean) correlation to reduce an overall statistically significant observed result (at $p < .05$) to nonsignificance; "−" indicates a negative expected effect; "+" indicates a positive expected effect; "O" indicates that the expected effect is unclear.

$^{+}p < .10$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Disclosure modality and content. Regarding modality, we found that visual disclosures (e.g., in contrast to audio disclosures) led to higher recognition of sponsored content. If the brand was mentioned in the disclosure, the effects on brand recall increased. Mentions of sponsoring intent increased persuasion knowledge (i.e., understanding persuasive intent). The word *advertising* increased credibility and persuasion knowledge (i.e., recognition of advertising). If the sample included only respondents who were aware of the disclosure, they showed higher persuasion knowledge (i.e., recognition of advertising).

Sample characteristics. Regarding sample characteristics, we found that sponsored content led to greater activation of persuasion knowledge (i.e., in terms of recognition of advertising) and more negative brand evaluations by adults than by children or adolescents, which was in line with our expectations. Furthermore, we found a marginally significant effect, indicating that samples with more female participants showed stronger brand recall and behavioral intentions due to disclosures. Student versus nonstudent samples did not lead to any difference in the investigated disclosure effects.

Media characteristics. Media characteristics did not moderate the effects, which indicated generalization of disclosure effects across online and offline media.

Cultural and temporal context. Regarding cultural context, we found only one significant effect, indicating that samples in the United States had higher negative credibility evaluation due to disclosing sponsored content. Regarding temporal context, we found that brand evaluations due to disclosure became less negative over the study period.

Product characteristics. In line with our expectations, we found that brand recall tended to be stronger when disclosures of unfamiliar products appeared. We further found that credibility evaluation was more negative when the sponsored product was referred to as low involvement.

DISCUSSION

The aim of this meta-analysis was to address several research gaps in the literature on disclosing sponsored content. Table 7 summarizes the main findings of the meta-analysis. The meta-analysis provides three major contributions to the literature.

First, the meta-analysis provided insights into the magnitude and significance of the effects of disclosing sponsored content. It also provided general findings that addressed inconsistencies in prior studies. These findings showed that disclosing sponsored content reduced brand

TABLE 4
Matrix of Meta-Analytically Integrated Correlations

		1	2	3	4	5	6	7
1 Disclosing sponsored content	*r*	1.000						
	k							
	N							
2 PK1	*r*	.255	1.000					
	k	50						
	N	3,443						
3 PK2	*r*	.257	.340	1.000				
	k	63	4					
	N	3,686	689					
4 Resistance	*r*	.110	.434	.466	1.000			
	k	27	4	3				
	N	2,969	539	423				
5 Credibility	*r*	−.132	−.107	−.323	−.310	1.000		
	k	82	4	4	3			
	N	5,363	495	1,106	904			
6 Brand recall	*r*	.104	.365	.168	.307	.043	1.000	
	k	31	4	4	3	3		
	N	1,223	641	641	328	273		
7 Brand attitude	*r*	−.108	−.041	−.304	−.242	.415	.155	1.000
	k	89	8	11	6	11	4	
	N	5,550	1,034	1,002	989	1,022	444	

Note. The harmonic mean of sample sizes (*N*) is 738. The total number of effect sizes (*k*) is 418; *r* = variance-weighted, reliability-corrected estimates of the population correlation coefficients; *k* = number of effect sizes; *N* = cumulative sample size; PK = persuasion knowledge.

attitudes, credibility, and source evaluation but increased brand recognition, persuasion knowledge, resistance, and attention. The findings could enable the efficient knowledge accumulation by future researchers in determining relevant effects (memory, brand, and source evaluation) and irrelevant effects (ad attitude) of disclosing sponsored content. Findings also provide benchmarks for advertising practitioners regarding how and to what extent disclosures harm their brands. Findings of this meta-analysis showed that disclosures increased brand memory but reduced brand evaluations.

Second, by investigating several previous and new moderator variables, the present study explained variations in disclosure effects and answers the question about conditional effects of disclosing sponsored content. With respect to characteristics of the disclosure content, we showed that disclosures that include the word *advertising* were more effective in enhancing consumers' understanding that sponsored content is a form of advertising. Mentioning persuasive intent enhanced understanding of the content's selling intent. This finding indicates that the wording of the disclosure plays an important role in its effectiveness in informing consumers. Furthermore, the findings indicated that awareness of disclosure, in terms of disclosure memory, was a crucial factor in the success of the disclosure in activating persuasion knowledge. Hence, disclosures that are remembered have greater effects.

With respect to consumer characteristics, there were no significant differences in the disclosure effects in studies that used student and nonstudent samples. This result indicates that findings from student samples may be generalizable to nonstudent samples and vice versa. These findings have important implications for the generalizability of effects of disclosing sponsored content. We may conclude that findings in the literature may be generalizable regardless of whether the consumers are students.

Importantly, the findings showed significant differences in the effects of disclosing sponsored content on adults versus minors (i.e., children and adolescents). The disclosures were less effective in informing minors than adults in helping to guard against persuasion by sponsored content. These findings are important, because minors are assumed to be in even greater need of disclosures than adults (Hudders et al. 2017; van Reijmersdal et al. 2017). The persuasion knowledge of minors has been shown to be less developed (Rozendaal, Buijzen, and Valkenburg 2010; Wright, Friestad, and Boush 2005), and minors lack cognitive and emotional skills necessary to criticize advertising, particularly sponsored content (John 1999; Lapierre 2019, 2015; Rozendaal et al. 2011). Minors

TABLE 5
How Disclosing Sponsored Content Works: Path Model Estimates and Model Statistics

Direct and Indirect Effects	Expected Effect	Proposed Model (Model 1)	Parsimonious Model (Model 2)
Direct effects on PK			
Disclosing sponsored content ⟶ PK1	+	.255***	.255***
Disclosing sponsored content ⟶ PK2	+	.182***	.182***
PK1 ⟶ PK2	+	.294***	.294***
Direct effects on resistance			
Disclosing sponsored content ⟶ resistance	+	−.069*	—
PK1⟶ resistance	+	.325***	—
PK2 ⟶ resistance	+	.373***	—
Direct effects on credibility			
Disclosing sponsored content ⟶ credibility	−	−.071*	—
PK1⟶ credibility	−	.090*	—
PK2 ⟶ credibility	−	−.255***	—
Resistance ⟶ credibility	−	−.236***	—
Direct effects on brand recall			
PK1⟶ brand recall	+	.278***	.348***
PK2 ⟶ brand recall	−	.017	.050
Resistance ⟶ brand recall	+	.224***	—
Credibility ⟶ brand recall	+	.148***	—
Direct effects on brand attitude			
PK1 ⟶ brand attitude	−	.043	−.004
PK2 ⟶ brand attitude	−	−.188***	−.339***
Resistance ⟶ brand attitude	−	−.139***	—
Credibility ⟶ brand attitude	+	.307***	—
Brand recall ⟶ brand attitude	+	.200***	.213***
Variance explained by model in			
Brand attitude		.248	.136
Brand recall		.179	.135
Sum of indirect effects			
Disclosure ⟶ brand attitude		−.077	−.066
Bootstrap (5,000 samples) bias-corrected 95% confidence interval lower bound		−.117	−.097
Bootstrap (5,000 samples) bias-corrected 95% confidence interval upper bound		−.038	−.036
Disclosure ⟶ brand recall		.080	.102
Bootstrap (5,000 samples) bias-corrected 95% confidence interval lower bound		.043	.070
Bootstrap (5,000 samples) bias-corrected 95% confidence interval upper bound		.118	.136
Specific indirect effects on brand recall			
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ resistance ⟶ brand recall		.006***	
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ resistance ⟶ credibility ⟶ brand recall		−.001***	
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ credibility ⟶ brand recall		−.002***	
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ brand recall		.001	.004

(*Continued*)

TABLE 5
(*Continued*).

Direct and Indirect Effects	Expected Effect	Proposed Model (Model 1)	Parsimonious Model (Model 2)
Disclosing sponsored content ⟶ PK1 ⟶ resistance ⟶ brand recall		.019***	
Disclosing sponsored content ⟶ PK1 ⟶ resistance ⟶ credibility ⟶ brand recall		−.003***	
Disclosing sponsored content ⟶ PK1 ⟶ credibility ⟶ brand recall		.011***	
Disclosing sponsored content ⟶ PK1 ⟶ brand recall		.071***	.089***
Disclosing sponsored content ⟶ PK2 ⟶ resistance ⟶ brand recall		.015***	
Disclosing sponsored content ⟶ PK2 ⟶ resistance ⟶ credibility ⟶ brand recall		−.002***	
Disclosing sponsored content ⟶ PK2 ⟶ credibility ⟶ brand recall		−.006***	
Disclosing sponsored content ⟶ PK2 ⟶ brand recall		.003	.009
Disclosing sponsored content ⟶ resistance ⟶ credibility ⟶ brand recall		−.001*	
Disclosing sponsored content ⟶ resistance ⟶ brand recall		−.015*	
Disclosing sponsored content ⟶ credibility ⟶ brand recall		−.011*	
Specific indirect effects on brand attitude			
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ resistance ⟶ brand attitude		−.004***	
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ resistance ⟶ brand recall ⟶ brand attitude		.001***	
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ resistance ⟶ credibility ⟶ brand recall ⟶ brand attitude		.001***	
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ resistance ⟶ credibility ⟶ brand attitude		−.002***	
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ credibility ⟶ brand attitude		−.005***	
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ credibility ⟶ brand recall ⟶ brand attitude		.001***	
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ brand attitude		−.014***	−.025***
Disclosing sponsored content ⟶ PK1 ⟶ PK2 ⟶ brand recall ⟶ brand attitude		.001	.001
Disclosing sponsored content ⟶ PK1 ⟶ resistance ⟶ brand attitude		−.012***	
Disclosing sponsored content ⟶ PK1 ⟶ resistance ⟶ brand recall ⟶ brand attitude		.004***	
Disclosing sponsored content ⟶ PK1 ⟶ resistance ⟶ credibility ⟶ brand attitude		−.006***	

(*Continued*)

TABLE 5
(*Continued*).

Direct and Indirect Effects	Expected Effect	Proposed Model (Model 1)	Parsimonious Model (Model 2)
Disclosing sponsored content ⟶ PK1 ⟶ resistance ⟶ credibility ⟶ brand recall ⟶ brand attitude		−.011***	
Disclosing sponsored content ⟶ PK1 ⟶ credibility ⟶ brand attitude		.007*	
Disclosing sponsored content ⟶ PK1 ⟶ credibility ⟶ brand recall ⟶ brand attitude		.001**	
Disclosing sponsored content ⟶ PK1 ⟶ brand attitude		.011	−.001
Disclosing sponsored content ⟶ PK1 ⟶ brand recall ⟶ brand attitude		.014***	.019***
Disclosing sponsored content ⟶ PK2 ⟶ resistance ⟶ brand attitude		−.009***	
Disclosing sponsored content ⟶ PK2 ⟶ resistance ⟶ brand recall ⟶ brand attitude		.003***	
Disclosing sponsored content ⟶ PK2 ⟶ resistance ⟶ credibility ⟶ brand attitude		−.005***	
Disclosing sponsored content ⟶ PK2 ⟶ resistance ⟶ credibility ⟶ brand recall ⟶ brand attitude		−.001***	
Disclosing sponsored content ⟶ PK2 ⟶ credibility ⟶ brand attitude		−.013***	
Disclosing sponsored content ⟶ PK2 ⟶ credibility ⟶ brand recall ⟶ brand attitude		−.001***	
Disclosing sponsored content ⟶ PK2 ⟶ brand attitude		−.034***	−.062***
Disclosing sponsored content ⟶ PK2 ⟶ brand recall ⟶ brand attitude		.001	.002
Disclosing sponsored content ⟶ resistance ⟶ credibility ⟶ brand attitude		.005*	
Disclosing sponsored content ⟶ resistance ⟶ credibility ⟶ brand recall ⟶ brand attitude		.001*	
Disclosing sponsored content ⟶ resistance ⟶ brand attitude		.010*	
Disclosing sponsored content ⟶ resistance ⟶ brand recall ⟶ brand attitude		−.003*	
Disclosing sponsored content ⟶ credibility ⟶ brand attitude		−.022*	
Disclosing sponsored content ⟶ credibility ⟶ brand recall ⟶ brand attitude		−.002*	
Model statistics			
χ^2/df		1.962/2	1.693/2
GFI		.999	.999
AGFI		.989	.993
CFI		1.000	1.000
RMR		.007	.011

*$p < .05$; **$p < .01$; ***$p < .001$.

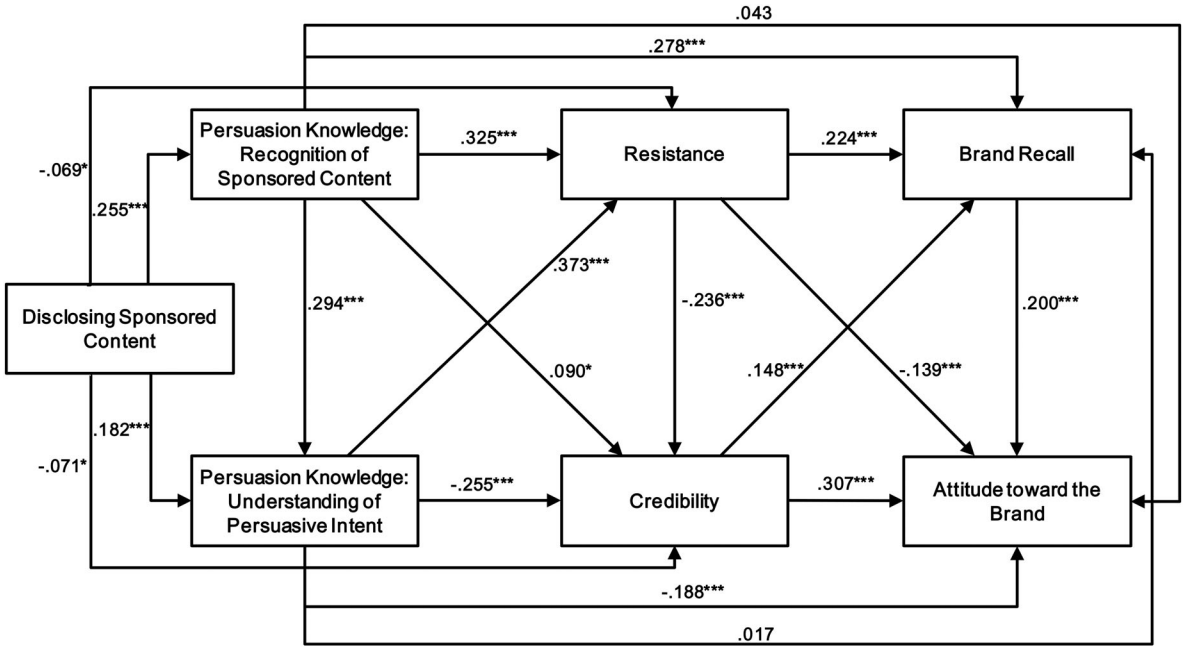

FIG. 2. How disclosing sponsored content works: Integrated model (Model 1) path coefficients;*$p < .05$; **$p < .01$; ***$p < .001$.

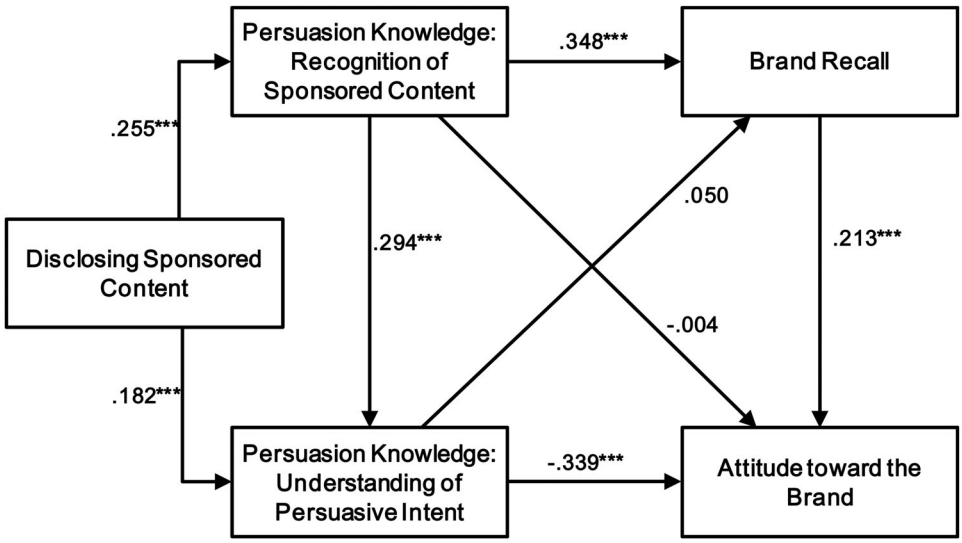

FIG. 3. How disclosing sponsored content works: Parsimonious model (Model 2) path coefficients; *$p < .05$; **$p < .01$; ***$p < .001$.

also have difficulty in recognizing sponsored content, which makes them more susceptible to its effects (van Reijmersdal et al. 2017). Therefore, knowledge of the effects of disclosures and transparency is of utmost importance for this younger segment of the population.

With respect to the context of a medium, our findings showed no differences between the effects of disclosures in online and offline media. Hence, disclosures may be equally effective across media. However, it should be noted that in previous studies reviewed for this meta-analysis, different types of disclosures in different media may have been investigated. Moderator analyses also showed that the negative effects of disclosure on brand evaluation were diminished over the years, whereas its effects on persuasion knowledge, critical processing, and other outcomes remained stable. Thus, based on our findings, disclosures are still effective, and they are needed to enhance persuasion knowledge, but their negative effects on brand evaluations have decreased.

TABLE 6
Effects of Variables Moderating the Relationship between Disclosing Sponsored Content and Response Variables

Moderators	Brand Attitude	Behavioral Intention	Brand Recall	Credibility	PK1	PK2
Disclosure timing						
Before vs. other	−.055 vs. −.165^{+} (56 vs. 33)	−.026 vs. −.022 (21 vs. 45)	.088 vs. .128 (17 vs. 14)	−.062 vs. −.145 (28 vs. 54)	.300 vs. .203 (28 vs. 22)	.225 vs. .279 (42 vs. 21)
During vs. other	.050 vs. −.170^{+} (16 vs. 73)	.013 vs. −.060 (33 vs. 33)	.228 vs. .054* (9 vs. 22)	.003 vs. −.330*** (39 vs. 43)	.250 vs. .259 (29 vs. 21)	.280 vs. .2373 (16 vs. 47)
After vs. other	−.348 vs. −.048** (17 vs. 72)	−.072 vs. .001 (30 vs. 36)	.059 vs. .109 (5 vs. 26)	−.423 vs. −.014*** (15 vs. 67)	—	.278 vs. .254 (5 vs. 58)
Disclosure duration	.007/.006 (25)	—	.020/.017 (22)	−.001/.002 (9)	.005/.015 (20)	< .001/.003 (17)
Disclosure modality: Visual only vs. other	−.103 vs. −.132 (64 vs. 25)	−.030 vs. .020 (11 vs. 55)	—	−.130 vs. −.170 (70 vs. 12)	.287 vs. .019*** (45 vs. 5)	.255 vs. .271 (39 vs. 24)
Disclosure content						
Brand mentioned vs. not	−.144 vs − .063 (59 vs. 30)	−.039 vs. −.004 (36 vs. 30)	.319 vs. −.040* (11 vs. 20)	−.125 vs. −.141 (65 vs. 17)	.201 vs. .303 (20 vs. 30)	.212 vs. .307 (47 vs. 16)
Persuasive intent mentioned vs. not	−.171 vs. −.094 (11 vs. 78)	.023 vs. −.030 (5 vs. 61)	—	−.087 vs. −.139 (7 vs. 46)	—	.449 vs. .203*** (6 vs. 57)
"Advertising" mentioned vs. not	−.059 vs. −.120 (17 vs. 72)	−.037 vs. −.021 (21 vs. 45)	.262 vs. .052 (7 vs. 24)	.008 vs. −.150* (6 vs. 76)	.418 vs. .204** (22 vs. 28)	.375 vs. .207 (12 vs. 51)
Disclosure awareness: Consumers aware of disclosure vs. other/mixed	−.075 vs. −.113 (11 vs. 78)	—	.087 vs. .113 (10 vs. 21)	−.161 vs. −.127 (7 vs. 75)	.396 vs. .209* (11 vs. 39)	.267 vs. .255 (5 vs. 58)
Sample characteristics						
Adults vs. children/adolescents	−.126 vs. .067)* (81 vs. 8	(adults only)	—	−.138 vs. −.057 (76 vs. 6)	.300 vs. .019** (40 vs. 10)	.271 vs. .192 (55 vs. 8)
Students vs. nonstudents	−.161 vs. −.045 (56 vs. 33)	−.034 vs. −.024 (34 vs. 32)	.012 vs. .197 (19 vs. 12)	−.187 vs. −.068 (42 vs. 49)	.300 vs. .205 (31 vs. 19)	.199 vs. .289 (37 vs. 26)
Gender: % females	.001/.002 (75)	.003/.002^{+} (39)	.011/.005^{+} (31)	.002/.002 (69)	.005/.004 (40)	−.001/.005 (61)
Media characteristics						
Offline vs. online	−.074 vs. −.139 (33 vs. 56)	—	−.070 vs. .137 (27 vs. 4)	−.142 vs. −.128 (22 vs. 60)	.257 vs. .253 (33 vs. 17)	.282 vs. .235 (17 vs. 46)
Cultural context						
United States vs. other	−.077 vs. −.128 (44 vs. 45)	−.024 vs. −.023 (45 vs. 21)	.072 vs. .110 (8 vs. 23)	−.232 vs. −.031* (50 vs. 32)	.237 vs. .263 (22 vs. 28)	.218 vs. .313 (48 vs. 15)
European Union vs. other	−.085 vs. −.127 (54 vs. 35)	−.027 vs. −.019 (19 vs. 47)	.108 vs. .091 (22 vs. 9)	−.059 vs. −.170 (21 vs. 61)	.216 vs. .308 (24 vs. 26)	.373 vs. .195 (12 vs. 51)

(*Continued*)

TABLE 6
(*Continued*).

Moderators	Brand Attitude	Behavioral Intention	Brand Recall	Credibility	PK1	PK2
Temporal context: Year of data collection	.044/.013** (89)	−.006/.015 (66)	−.011/.030 (31)	.024/.017 (82)	.017/.013 (50)	.002/.023 (63)
Product characteristics						
Familiar/well-known vs. unfamiliar/fictitious	−.070 vs. −.111 (39 vs. 42)	−.021 vs. −.027 (44 vs. 21)	.036 vs. .302+ (16 vs. 5)	−.123 vs. −.155 (36 vs. 34)	.301 vs. .147 (27 vs. 19)	.299 vs. .227 (19 vs. 38)
High vs. low involvement	−.066 vs. −.146 (31 vs. 36)	−.047 vs. −.013 (13 vs. 38)	.172 vs. .055 (18 vs. 12)	−.036 vs. −.301* (52 vs. 14)	.129 vs. .352 (18 vs. 31)	.152 vs. .412+ (18 vs. 15)

Note. For binary moderator variables, the first line provides the means for both subgroups and the second line the number of correlations per subgroup (in parentheses). For continuous moderator variables (disclosure duration, gender, and year of data collection), the first line provides the unstandardized regression coefficient and the standard error (separated by a slash), and the second line the sample size (in parentheses). A long dash (—) indicates that the sample size (either total sample size or sample size of one group) was too small (≤ 3) to obtain robust test results and was therefore excluded from the analysis.

$^{+}p < .10$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Third, we revealed the mechanisms that underlie disclosure effects by suggesting and testing a comprehensive and integrative model of disclosure effects. The model showed that two specific mechanisms influenced the effects of disclosures. First, the recognition of content as advertising had mainly cognitive effects, particularly the priming effect. The recognition of a message as advertising increased the memory of the brand. Merely understanding that a message was advertising did not affect brand evaluations. Moreover, understanding that sponsored content had a persuasive intent caused resistance, thereby influencing evaluative responses such as brand attitude and credibility. Understanding that the message was actually persuasive did not influence cognitive responses such as brand recall. The model answers the research question about the importance of different persuasion knowledge components for either evaluation of memory: Effects on brand attitude are primarily mediated via understanding of persuasive intent, while effects on brand recall are mediated via recognition of advertising.

Implications for Researchers

In addition to providing explanations for inconsistencies in the literature, meta-analyses can predict future research gaps and indicate the relevant variables, relations between variables, and moderators that have been understudied.

First, relatively few studies have focused on the effects of disclosure on brand recognition despite a strong effect size. Future studies are needed to draw solid conclusions about this effect. Second, the implicit effects of disclosures on brands or content remain understudied. Moreover, the focus on implicit effects could reveal consequences of disclosures that occur but cannot be detected by the focus on explicit effects (Wennekers et al. 2016). Thus, future research is needed to explore the effects of disclosure on implicit processes, thereby gaining a comprehensive picture of this phenomenon.

Third, few studies have focused on the effects of disclosure on minors (eight data sets on minors versus 50 data sets on adults). Our analyses showed that disclosures differentially affect minors versus adults; therefore, further research on minors will be crucial in enhancing our understanding of disclosure effects on different target groups. For example, children's cognitive and socialemotional development (John 1999; Valkenburg and Piotrowski 2017) should be taken into account in explaining and predicting the effects of disclosure on children. In addition, future research should explore the ways in which disclosure could be more effective in informing minors about sponsored content.

Fourth, although our meta-analysis showed no differences in disclosure effects between online and offline

TABLE 7
Summary of the Main Findings

Research Topic	Main Findings
Effects of disclosing sponsored content (results based on integrated correlations)	• Disclosing sponsored content reduces brand attitude, credibility, and source evaluation. • Disclosing sponsored content increases brand recognition, attention, persuasion knowledge, and resistance.
How disclosure of sponsored content works (results from meta-analytic path model)	• The effects on brand memory are mainly mediated by persuasion knowledge as recognition of advertising, while the effects on brand attitude are mainly mediated via persuasion knowledge as understanding of persuasive intent. • The findings support the memory priming effect: recognition as advertising increases brand memory but does not influence brand evaluation. • The findings are in line with the flexible correction approach: understanding of sponsored content relates to brand evaluation but not to brand memory.
Moderators of effects of disclosing sponsored content (results from moderator analysis)	• Disclosures presented after the sponsored content decrease brand evaluation and credibility. • Disclosures presented before or during the sponsored content lead to less negative brand evaluation. • Disclosures presented during the sponsored content lead to higher recall and less negative credibility. • Visual disclosures lead to a higher recognition of sponsored content. • Mentions of the brand in disclosures increase the effects on brand recall increase. • Mentions of the sponsoring intent in disclosures enhance understanding persuasive intent. • Mentions of the word advertising in disclosures increase credibility and recognition of advertising. • Respondents who are aware of the disclosure show higher recognition of advertising. • Disclosing sponsored content increases recognition of advertising and reduces brand evaluations by adults more than by children or adolescents. • Females show stronger brand recall and intentions due to disclosures. • U.S. consumers reveal more negative credibility due to disclosing sponsored content. • Brand evaluations due to disclosure became less negative over time. • Brand recall is stronger when disclosures of unfamiliar products appear. • Credibility is more negative when disclosures refer to low-involvement products.

media, further refinement of media effects could not be achieved in this meta-analysis because of data constraints. Thus, future research in this area would add to our knowledge. There are large differences within online media and among various offline media, which include modality, social use, and so on. These factors may be involved in the effects of disclosure. Therefore, future research could conduct a systematic comparison of disclosure effects among various media.

Fifth, from a theoretical viewpoint, our meta-analysis integrates several approaches in which the persuasion knowledge model provided the focus of the integrative model. We assumed that persuasion knowledge would increase skepticism and resistance, thus reducing evaluation. Recent research showed that persuasive agents that use a credible tactic achieved favorable evaluations of those who access persuasion knowledge (Isaac and Grayson 2017). Future research should analyze the

conditions under which disclosures are a credible tactic, thus improving evaluations of the agent and brand.

Implications for Practitioners

The findings of this meta-analysis have important practical implications. Disclosures have been found to consistently activate persuasion knowledge and increase understanding that sponsored content is advertising because it is intended to persuade. Hence, disclosure can be an effective tool for regulators to increase transparency. In addition, for disclosures to be the most effective, the sponsor's intent or the word *advertising* should be included. Our findings also underline that the noticeability of the disclosure is important. Therefore, disclosure guidelines and regulations should explicitly focus on how to implement a disclosure to ensure that it attracts attention. In addition, our findings showed that disclosures are not as effective in informing minors as they are in informing adults about the persuasive nature of embedded advertising. Moreover, disclosures lead to less resistance to persuasion among minors than among adults, which implies that minors are more susceptible to sponsored content even when disclosures are used. This finding has important implications for enhancing the transparency of sponsored content for minors and for the protection of minors against persuasion by sponsored content. Regulators should consider minors-specific guidelines to guarantee the transparency of sponsored content to minors.

Regarding advertisers, disclosure has both positive and negative outcomes. On one hand, disclosures emphasize the presence of the brand, which draws attention to it and increases the likelihood of remembering it. Thus, the transparency of sponsored content increases brand awareness. On the other hand, disclosure increases the likelihood of criticism of the brand, message, and source. Hence, advertisers should use sponsored content that requires the disclosure only of brands and products of which awareness needs to be generated, such as brand and products that are new. To improve the image of a brand or product, other advertising formats that do not require disclosures would be more appropriate. Because the negative effects of disclosure on brand evaluation were reduced over time in our study, sponsored content might become more attractive to advertisers who aim to generate positive evaluations of their brand.

NOTES

1. We could not include all variables presented in Table 1 because of data constraints, which is explained in detail in the Method section. The variables that were excluded from the model (e.g., attitude toward the ad, behavioral intention, or attention) are strongly related to the variables that were included in the model, and their integration would very likely have not challenged the findings of the proposed model. In particular, attitudes toward the ad and behavioral intention were strongly correlated with brand attitudes, source evaluation was strongly related to credibility, and attention was a mediator between disclosing sponsored content and the activation of persuasion knowledge.
2. As a result, we excluded from further analysis 10 effect sizes related to two perception variables, three effect sizes related to attention to the brand, three effect sizes related to sponsorship transparency, three effect sizes related to brain activities, five effect sizes related to brand familiarity, and five effect sizes related to product involvement.
3. As an additional test of publication bias, we tested whether the correlations differed depending on whether they were taken from published or unpublished papers (e.g., working papers and doctoral theses). We did not find any influence of publication status ($b = .034$, SE $= .054$, $t = .637$, $p = .527$), which reduced the risk of publication bias. We further regressed the absolute values of the correlations on the sample size. If publication bias existed, there should have been a relationship indicating that small samples with insignificant correlations were missing in the database. We found a nonsignificant relationship ($b < -.001$, SE $< .001$, $t = .561$, $p = .575$), which showed that significant and insignificant findings had the same likelihood of being included.
4. We further tested whether using resistance and credibility as key outcome variables instead of mediators would lead to a better fit than the proposed model. To that end, we restricted the corresponding paths from either resistance or credibility to brand attitude and brand recall to be zero in the proposed model. The chi-square difference test was significant (χ^2 difference $= 140.402$, $df = 4$, $p < .001$), indicating that resistance and credibility are better conceptualized as mediators.

FUNDING

This research received financial support from a research grant provided by the German Research Foundation (Deutsche Forschungsgemeinschaft EI 508/10-1).

SUPPLEMENTAL MATERIAL

A supplemental online appendix (Table A: Data Sets and Papers Included in the Meta-Analysis) is included on the publisher's website.

REFERENCES

Abendroth, Lisa J., and James E. Heyman (2013), "Honesty Is the Best Policy: The Effects of Disclosure in Word-of-Mouth Marketing," *Journal of Marketing Communications*, 19 (4), 245–57. doi:10.1080/13527266.2011.631567

Bergh, Donald D., Herman Aguinis, Ciaran Heavey, David J. Ketchen, Brian K. Boyd, Peiran Su, Cubie L.L. Lau, and Harry Jod (2016), "Using Meta-Analytic Structural Equation Modeling to Advance Strategic Management Research: Guidelines and an Empirical Illustration via the Strategic Leadership-Performance Relationship," *Strategic Management Journal*, 37 (3), 477–97. doi:10.1002/smj.2338

Boerman, Sophie C., and Eva A. van Reijmersdal (2016), "Informing Consumers about 'Hidden' Advertising: A Literature Review of the

Effects of Disclosing Sponsored Content," in *Advertising in New Formats and Media*, Patrick De Pelsmacker, ed., Bingley: Emerald, 115–46.

———, ———, and Peter C. Neijens (2012), "Sponsorship Disclosure: Effects of Duration on Persuasion Knowledge and Brand Responses," *Journal of Communication*, 62 (6), 1047–64. doi:10.1111/j.1460-2466.2012.01677.x

———, ———, and ——— (2014), "Effects of Sponsorship Disclosure Timing on the Processing of Sponsored Content: A Study on the Effectiveness of European Disclosure Regulations," *Psychology and Marketing*, 31 (3), 214–24.

———, ———, and ——— (2015), "Using Eye Tracking to Understand the Effects of Brand Placement Disclosure Types in Television Programs," *Journal of Advertising*, 44 (3), 196–207.

———, Guda Van Noort, Natali Helberger, and Chris J. Hoofnagle (2018), "Sponsored Blog Content: What Do the Regulations Say? And What Do Bloggers Say?," *Information Technology and Electronic Commerce Law*, 9 (2), 146–59.

———, Lotte M. Willemsen, and Eva P. Van Der Aa (2017), "'This Post Is Sponsored': Effects of Sponsorship Disclosure on Persuasion Knowledge and Electronic Word of Mouth in the Context of Facebook," *Journal of Interactive Marketing*, 38 (2), 82–92.

Brehm, Jack W. (1966), *A Theory of Psychological Reactance*, New York: Academic Press.

Buijzen, M., Eva A. van Reijmersdal, and L.H. Owen (2010), "Introducing the PCMC Model: An Investigative Framework for Young People's Processing of Commercialized Media Content," *Communication Theory*, 20 (4), 427–50. doi:10.1111/j.1468-2885.2010.01370.x

Byrne, Sahara, Jamie E. Guillory, Alan D. Mathios, Rosemary J. Avery, and P. Sol Hart (2012), "The Unintended Consequences of Disclosure: Effect of Manipulating Sponsor Identification on the Perceived Credibility and Effectiveness of Smoking Cessation Advertisements," *Journal of Health Communication*, 17 (10), 1119–37. doi:10.1080/10810730.2012.665425

Cain, Rita Marie (2011), "Embedded Advertising on Television: Disclosure, Deception, and Free Speech Rights," *Journal of Public Policy and Marketing*, 30 (2), 226–38. doi:10.1509/jppm.30.2.226

Campbell, Colin, and Nathaniel J. Evans (2018), "The Role of a Companion Banner and Sponsorship Transparency in Recognizing and Evaluating Article-Style Native Advertising," *Journal of Interactive Marketing*, 48 (August), 17–32. doi:10.1016/j.intmar.2018.02.002

Campbell, Margaret C., and Amna Kirmani (2008), "I Know What You're Doing and Why You're Doing It: The Use of Persuasion Knowledge Model in Consumer Research," in *Handbook of Consumer Psychology*, Curtis P. Haugtvedt, Paul M. Herr, and Frank R. Kardes, eds., New York, NY: Taylor & Francis, 549–73.

———, Gina S. Mohr, and Peeter W.J. Verlegh (2013), "Can Disclosures Lead Consumers to Resist Covert Persuasion? The Important Roles of Disclosure Timing and Type of Response," *Journal of Consumer Psychology*, 23 (4), 438–95. doi:10.1016/j.jcps.2012.10.012

Carpenter, Christopher J., and Franklin J. Boster (2013), "The Relationship between Message Recall and Persuasion: More Complex Than It Seems," *Journal of Communication*, 63 (4), 661–81. doi:10.1111/jcom.12042

Cartwright, Robert F., Eva A. van Reijmersdal, and Suzanna Opree (2017), "How Disclosure Type Affects Adolescents' Persuasion Knowledge of Embedded Advertising in Music Videos," presented at the International Conference on Research in Advertising, Ghent, Belgium, June.

Celsi, Richard L., and Jerry C. Olson (1988), "The Role of Involvement in Attention and Comprehension Processes," *Journal of Consumer Research*, 15 (2), 210–24. doi:10.1086/209158

Dekker, Kim, and Eva A. van Reijmersdal (2013), "Disclosing Celebrity Endorsement in a Television Program to Mitigate Persuasion: How Disclosure Type and Celebrity Credibility Interact," *Journal of Promotion Management*, 19 (2), 224–40. doi:10.1080/10496491.2013.769473

Eisend, Martin (2017), "Meta-Analysis in Advertising Research," *Journal of Advertising*, 46 (1), 21–35. doi:10.1080/00913367.2016.1210064

Erdem, Tülin, and Joffree Swait (2004), "Brand Credibility, Brand Consideration, and Choice," *Journal of Consumer Research*, 31 (1), 191–98. doi:10.1086/383434

Federal Trade Commission (2015), "Guides Concerning the Use of Endorsements and Testimonials in Advertising," https://www.ftc.gov/sites/default/files/attachments/press-releases/ftc-publishes-final-guides-governing-endorsements-testimonials/091005revisedendorsementguides.pdf.

Franke, George R., and Charles R. Taylor (2017), "Public Perceptions of Billboards: A Meta-Analysis," *Journal of Advertising*, 46 (3), 395–410. doi:10.1080/00913367.2017.1334248

Friestad, Marian, and Peter Wright (1994), "The Persuasion Knowledge Model: How People Cope with Persuasion Attempts," *Journal of Consumer Research*, 21 (1), 1–31. doi:10.1086/209380

Guo, Fu, Guoquan Ye, Vincent G. Duffy, Mingming Li, and Yi Ding (2018), "Applying Eye Tracking and Electroenecephalography to Evaluate the Effects of Placement Disclosures on Brand Responses," *Journal of Consumer Behaviour*, 17 (6), 519–31. doi:10.1002/cb.1736

Ham, Chang-Dae, Michelle R. Nelson, and Susmita Das (2015), "How to Measure Persuasion Knowledge," *International Journal of Advertising*, 34 (1), 17–53. doi:10.1080/02650487.2014.994730

Han, Jiyonn (Karen), Minette Drumwright, and Wongun Goo (2018), "Native Advertising: Is Deception an Asset or a Liability?," *Journal of Media Ethics*, 33 (3), 102–19. doi:10.1080/23736992.2018.1477048

Hastie, Reid, and Bernadette Park (1986), "The Relationship between Memory and Judgment Depends on Whether the Judgment Task Is Memory-Based or On-Line," *Psychological Review*, 93 (3), 258–68. doi:10.1037/0033-295X.93.3.258

Hudders, Liselot, Pieter De Pauw, Veroline Cauberghe, Katarina Panic, Brahim Zarouali, and Esther Rozendaal (2017), "Shedding New Light on How Advertising Literacy Can Affect Children's Processing of Embedded Advertising Formats: A Future Research Agenda," *Journal of Advertising*, 46 (2), 333–49. doi:10.1080/00913367.2016.1269303

Isaac, Mathew, and Kent Grayson (2017), "Beyond Skepticism: Can Accessing Persuasion Knowledge Bolster Credibility?," *Journal of Consumer Research*, 43 (6), 895–912.

John, Deborah Roedder (1999), "Consumer Socialization of Children: A Retrospective Look at Twenty-Five Years of Research," *Journal of Consumer Research*, 26 (3), 183–213. doi:10.1086/209559

Keller, Kevin Lane (1993), "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity," *Journal of Marketing*, 57 (1), 1–22. doi:10.2307/1252054

Kim, Bong-Hyun, Yorgo Pasadeos, and Arnold Barban (2001), "On the Deceptive Effectiveness of Labeled and Unlabeled Advertorial Formats," *Mass Communication and Society*, 4 (3), 265–81. doi:10.1207/S15327825MCS0403_02

Lapierre, Matthew A. (2015), "Development and Persuasion Understanding: Predicting Knowledge of Persuasion/Selling Intent from Children's Theory of Mind," *Journal of Communication*, 65 (3), 432–42. doi:10.1111/jcom.12155

——— (2019), "Advertising Literacy and Executive Function: Testing Their Influence on Children's Consumer Behavior," *Media Psychology*, 22 (1), 39–59.

Lipsey, Mark W., and David T. Wilson (2001), Practical Meta-Analysis, Thousand Oaks, CA: Sage. doi:10.1093/sw/41.6.677

MacKenzie, Scott B., and Richard J. Lutz (1989), "An Empirical Examination of the Structural Antecedents of Attitude toward the Ad in an Advertising Pretesting Context," *Journal of Marketing*, 53 (April), 48–56. doi:10.2307/1251413

Raudenbush, Stephen W., and Anthony S. Bryk (2002), *Hierarchical Linear Models: Application and Data Analysis Methods*, 2nd ed., Thousand Oaks, CA: Sage.

Rosenthal, Robert (1979), "The 'File Drawer Problem' and Tolerance for Null Results," *Psychological Bulletin*, 86 (3), 638–41. doi:10.1037/0033-2909.86.3.638

Rozendaal, Esther, M. Buijzen, and P.M. Valkenburg (2010), "Comparing Children's and Adults' Cognitive Advertising Competences in the Netherlands," *Journal of Children and Media*, 4 (1), 77–89. doi:10.1080/17482790903407333

———, Matthew A. Lapierre, Eva A. van Reijmersdal, and Moniek Buijzen (2011), "Reconsidering Advertising Literacy As a Defense against Advertising Effects," *Media Psychology*, 14 (3), 333–54. doi:10.1080/15213269.2011.620540

Sagarin, Brad J., Robert B. Cialdini, William E. Rice, and Sherman B. Serna (2002), "Dispelling the Illusion of Invulnerability: The Motivations and Mechanisms of Resistance to Persuasion," *Journal of Personality and Social Psychology*, 82 (3), 526–41. doi:10.1037/0022-3514.83.3.526

Segijn, Claire M., and Martin Eisend (2019), "A Meta-Analysis into Multiscreening and Advertising Effectiveness: Direct Effects, Moderators, and Underlying Mechanisms," *Journal of Advertising*, 48 (3), 313–32. doi:10.1080/00913367.2019.1604009

Social Code (2017), "Social Code: Richtlijnen voor Reclame in Online Video," https://www.cvdm.nl/wp-content/uploads/2017/11/Social_Code_YouTube.pdf.

Spielvogel, Ines, Brigitte Naderer, and Jörg Matthes (2019), "Again and Again: Exploring the Influence of Disclosure Repetition on Children's Cognitive Processing of Product Placement," *International Journal of Advertising*, published electronically August 16, doi:10.1080/02650487.2019.1648984

Stubb, Carolina, Anna-Greta Nyström, and Jonas Coliander (2019), "Influencer Marketing: The Impact of Disclosing Sponsorship Compensation Justification on Sponsored Content Effectiveness," *Journal of Communication Management*, 23 (2), 109–22. doi:10.1108/JCOM-11-2018-0119

Tessitore, Tina, and Maggie Geuens (2013), "PP for 'Product Placement' or 'Puzzled Public'? The Effectiveness of Symbols As Warnings of Product Placement and the Moderating Role of Brand Recall," *International Journal of Advertising*, 32 (3), 419–42. doi:10.2501/IJA-32-3-419-442

Tewksbury, David, Jakob Jensen, and Kevin Coe (2011), "Video News Releases and the Public: The Impact of Source Labeling on the Perceived Credibility of Television News," *Journal of Communication*, 61 (2), 328–48. doi:10.1111/j.1460-2466.2011.01542.x

Valkenburg, Patti M., and Jessica Taylor Piotrowski (2017), *Plugged In: How Media Attract and Affect Youth*, New Haven, CT: Yale University Press.

van Reijmersdal, Eva A. (2016), "Disclosing Brand Placements in Movies: Effects of Disclosure Type and Movie Involvement on Attitudes," *Journal of Media Psychology*, 28 (2), 78–87. doi:10.1027/1864-1105/a000158

———, Sophie C. Boerman, Moniek Buijzen, and Esther Rozendaal (2017), "This Is Advertising! Effects of Disclosing Television Brand Placement on Adolescents," *Journal of Youth and Adolescence*, 46 (2), 328–42. doi:10.1007/s10964-016-0493-3

———, Peter C. Neijens, and Edith G. Smit (2009), "Modeling a New Branch of Advertising: A Review of Factors Influencing Brand Placement," *Journal of Advertising Research*, 49 (4), 429–50. doi:10.2501/S0021849909091065

———, and Karolina Tutaj (2010), "Effects of Brand Placement Disclosure on Audience Reactions and Persuasion Knowledge," presented at the International Conference on Research in Advertising, Madrid, Spain, June.

Wei, Mei-Ling, Eileen Fischer, and Kelley J. Main (2008), "An Examination of the Effects of Activating Persuasion Knowledge on Consumer Response to Brands Engaging in Covert Marketing," *Journal of Public Policy and Marketing*, 27 (1), 34–44. doi:10.1509/jppm.27.1.34

Wennekers, Annemarie M., Lisa Vandeberg, Kim Zoon, and Eva A. van Reijmersdal (2016), "Distinguishing Implicit from Explicit Brand Attitudes in Brand Placement Research," in *Advances in Advertising Research*, Peeter Verlegh, Hilde Voorveld, and Martin Eisend, eds., vol. 6, Wiesbaden: Gabler Springer, 253–67.

Wogalter, Michael S., and Kenneth R. Laughery (1996), "WARNING! Sign and Label Effectiveness," *Current Directions in Psychological Science*, 5 (2), 33–37. doi:10.1111/1467-8721.ep10772712

Wojdynski, Bartosz W., and Nathaniel J. Evans (2016), "Going Native: Effects of Disclosure Position and Language on the Recognition and Evaluation of Online Native Advertising," *Journal of Advertising*, 45 (2), 157–68. doi:10.1080/00913367.2015.1115380

Wood, Michelle L.M., Michelle R. Nelson, Lucy Atkinson, and Julie B. Lane (2008), "Social Utility Theory: Guiding Labeling of VNRs As Ethical and Effective Public Relations," *Journal of Public Relations Research*, 20 (2), 231–49. doi:10.1080/10627260801894405

Word of Mouth Marketing Association (2017), "WOMMA Social Media Disclosure Guidelines," https://womma.org/wp-content/uploads/2017/05/WOMMA-Social-Media-Disclosure-Guidelines-2017.pdf.

Wright, Peter, Marian Friestad, and David M. Boush (2005), "The Development of Marketplace Persuasion Knowledge in Children, Adolescents, and Young Adults," *Journal of Public Policy and Marketing*, 24 (2), 222–33. doi:10.1509/jppm.2005.24.2.222

Xie, Guang-Xin, David M. Boush, and Raymond R. Liu (2015), "Tactical Deception in Covert Selling: A Persuasion Knowledge Perspective," *Journal of Marketing Communications*, 21 (3), 224–40. doi:10.1080/13527266.2012.754369