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To cite this article: Bartosz W. Wojdyski & Nathaniel J. Evans (2015): Going Native: Effects of Disclosure Position and Language on the Recognition and Evaluation of Online Native Advertising, Journal of Advertising, DOI: [10.1080/00913367.2015.1115380](https://doi.org/10.1080/00913367.2015.1115380)

To link to this article: <http://dx.doi.org/10.1080/00913367.2015.1115380>

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Going Native: Effects of Disclosure Position and Language on the Recognition and Evaluation of Online Native Advertising

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Despite recent industry attention, questions remain about how native advertising is perceived and processed by consumers. Two experiments examined effects of language and positioning in native advertising disclosures on recognition of the content as advertising, effects of recognition on brand and publisher evaluations, and whether disclosure position affects visual attention. Findings show that middle or bottom positioning and wording using “advertising” or “sponsored” increased advertising recognition compared to other conditions, and ad recognition generally led to more negative evaluations. Visual attention mediated the relationship between disclosure position and advertising recognition. Theoretical, practical, and regulatory implications for disclosures in native advertising are discussed.

Native advertising has recently gained attention as a means for advertisers to cut through the clutter and for online publishers to boost their diminishing ad revenues (Benton 2014). Also called sponsored content, native advertising is a term used to describe any paid advertising that takes the specific form and appearance of editorial content from the publisher itself. The \$3.2 billion spent on native advertising in 2014 represents news publishers’ efforts to follow the shifting media habits of their audiences to an online world, and the majority of advertisers are spending money on native ads or looking to do so in 2015 (Sebastian 2014, 2015). Native advertising holds promise for publishers because they can charge advertisers more for native advertising content than for display ads, which users are likely to avoid or ignore (e.g., Benway 1998; Cho and Cheon 2004). However, the growth of native advertising online has

brought to the forefront questions about how much of its effectiveness is due to consumers not recognizing that such content is advertising at all.

The persuasion knowledge model (PKM) (Friestad and Wright 1994) suggests that consumers’ ability to effectively cope with advertising messages is predicated on the recognition of the persuasive nature of the messages. Evidence from research in television product placement suggests that disclosing such content in advertising affects the use of persuasion knowledge only for consumers who pay visual attention to the content and who effectively recall the disclosure content (Boerman, van Reijmersdal, and Neijens 2014). However, while most examples of online native advertising include some indication that the content differs from standard editorial content, these disclosures vary in frequency, size, language, and position (Wojdyski and Evans 2014).

This study makes theoretical contributions to the understanding of how online native advertising is processed and evaluated by consumers by examining the effects of disclosure characteristics on advertising recognition. First, in an online experiment, we examined the influence of disclosure position and language on consumers’ understanding that native ad content in the form of articles on news websites is, in fact, advertising, and the consequences of this understanding on their attitudes and intentions. In a second experiment, we conducted an eye-tracking study to examine whether the influence of disclosure position (top/middle/bottom) on advertising recognition is mediated through consumers’ visual attention to the disclosure.

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BACKGROUND

Native Advertising and the Role of Disclosures

The emergence of native advertising has seen a concomitant rise in concern that its effectiveness may stem from viewers’ lack of awareness that they are viewing paid content (e.g., Carlson 2015; Hart 2014). However, little is known to date about how consumers’ actually perceive and process native

advertising content. As evidence of this lack of knowledge, a recent Federal Trade Commission (FTC) workshop on native advertising asked two key questions that addressed “consumers’ recognition and understanding of these messages” and whether “ads [can] effectively be differentiated from regular content, such as through the use of labels and visual cues” (FTC 2013b). Such labels or visual cues fit broadly into the category of advertising disclosures, which are intended to prevent consumers from being deceived or misled by providing information that allows the most informed decision possible (Hoy and Andrews 2004). In the case of covert advertising, the FTC is suggesting that disclosures serve as a means to clearly identify the communication as advertising.

To date, little is known about how such sponsorship disclosures ought to be effectively employed in the case of native advertising. The Clear and Conspicuous Standard (CCS) for advertising disclosures includes guidelines for all disclosures that consider modality, type size, contrast, background, presentation rate, potential distraction, proximity, placement, language, duration, and audience consideration (FTC 1970, 1984, 2013a; Hoy and Andrews 2004; Hoy and Lwin 2008). The Interactive Advertising Bureau (IAB 2013) recommends native advertisements include disclosures (1) featuring language conveying that the advertising has been paid for and (2) that are sufficiently conspicuous for a consumer to notice them. However, there is little established knowledge regarding what kind of language and display practices are effective at communicating these factors to consumers in the context of native advertising.

Guided by the tenets of the PKM and visual information-processing theories, this study focuses on examining the effects of native advertising disclosure characteristics (i.e., language and position) on consumers’ advertising recognition and subsequent attitudinal evaluations and behavioral intent (see Figure 1). PKM posits that advertising recognition, or lack thereof, affects attitudes and intent (Boerman, Van Reijmersdal, and Neijens 2012; Boerman, Van Reijmersdal, and Neijens 2015; Friestad and Wright 1994; Shrum et al. 2012). The present study offers insight to researchers seeking to understand the relationship between the effectiveness of disclosure characteristics at promoting advertising recognition

and the subsequent effect advertising recognition has on attitudes and behavioral intent. In addition, consumer organizations and policymakers may find the study results helpful for developing and implementing effective native advertising disclosure practices.

The Effects of Disclosure Position and Language on Advertising Recognition

For disclosures to be effective at conveying information, two sequential processes must occur: Consumers must first notice the disclosures and then be able to understand the messages they convey. Research has validated that disclosures in advertising lead to advertising recognition only when consumers view them (Boerman, van Reijmersdal, and Neijens 2015), but the characteristics that increase the likelihood of disclosures in online text stories being viewed have not been systematically examined. Faraday’s (2000) model of visual hierarchy suggests that users navigate information through two sequential phases: first scanning the page for entry points and then processing the information more deeply around entry points found. Where such entry points lie may be dictated by users’ preexisting schemata that shape expectations regarding where on the page particular content is located (Roth et al. 2010), and these patterns may vary based on the content domain of the page being viewed (Kim and Shin 2014; Lagun and Agichtein 2014).

Studies of online reading behavior confirm that information near the top left corner of the page is most likely to be seen (e.g., Nielsen 2006; Shrestha and Lenz 2007), followed by information horizontally branching rightward from the top left, and then down the page, in the shape of an *F*. The aforementioned guidelines for the positioning of advertising disclosure labels generally suggest that placement near the top of the content is preferable, and a content analysis of online native advertising articles found that disclosures above the story headline were most frequent (Wojdynski and Evans 2014). While this might suggest the supremacy of a top disclosure position, there is also evidence that users begin their general *F*-shaped viewing pattern further down the page, leaving information above that area unnoticed. Users expect advertising to be toward the right side or top of a web page (Shaikh and Lenz 2006), and display advertising at the top of the page is also most likely to be ignored (Benway 1998). On news pages, headlines often are ignored (Bucher and Schumacher 2006) or viewed very briefly (Outing and Ruel 2004), and users often engage with information in the body of the page prior to viewing information in the header (Goldberg et al. 2002).

Overall, research suggests that disclosure timing and location have varying effectiveness for promoting consumer understanding and advertising recognition. One line of research suggests consumers better locate, and thus recognize, advertising when disclosures are placed before or above the

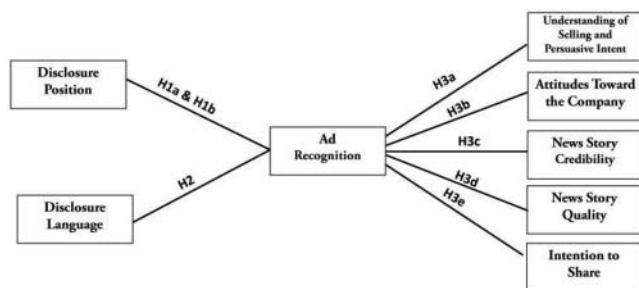


FIG. 1. Study 1 model and hypotheses.

content (Boerman, van Reijmersdal, and Neijens 2014). However, competing research suggests that consumers' reading patterns and expectations may lead them to engage with editorial or entertainment content first and disclosure information later, which in turn reduces their odds of recognizing advertising (Campbell, Mohr, and Verlegh 2013). On the basis of the existing literature, we propose the following competing hypotheses:

H1a: Disclosure of sponsorship at the top of the article will lead to greater advertising recognition than elsewhere on the page.

H1b: Disclosure of sponsorship at the top of the article will lead to decreased advertising recognition than elsewhere on the page.

While disclosure position may play a role in whether users notice the disclosure, a second necessary component is consumers' ability to understand the information being conveyed by the disclosure. To date, little empirical research has explicitly examined the effects of disclosure language on advertising recognition. A study of print advertorials found that the presence of the word *advertisement* significantly increased advertising recognition over no label, although no other wording was examined (Kim, Pasadeos, and Barban 2001). In the context of online advertising, Becker-Olsen (2003) found that a sponsor's logo adjacent to an author byline at the end of editorial content generally led to less favorable evaluations of the website, although recognition of the content as advertising was not measured. In the context of televised product placement, Boerman, van Reijmersdal, and Neijens (2015) found that disclosures featuring a combination of text ("This program contains product placement") and a product placement (PP) logo were more effective than a PP logo alone at increasing advertising recognition. Research indicates that PP symbols are effective in this regard only when consumers have received informational and verbal training on the inherent meaning of the PP symbol (Tessitore and Geuens 2013).

Taken collectively, these studies indicate that disclosure language is important for consumers' advertising recognition. As PKM suggests, disclosure language that conveys information about (1) whether the publication of the message has been paid for, (2) whether it has been produced by a third party other than the publisher, and (3) whether the message is marked as different from the regular content published in that venue will lead to better advertising recognition. In this regard, we predict native advertising disclosures that use more recognizable and precise language will result in more advertising recognition compared to disclosures that feature unclear or abstract language.

H2: Use of "advertising" and "sponsored content" wording in disclosure conditions will lead to higher advertising recognition than "presented by" and "brand-voice."

Effects of Ad Recognition on the Inference of Intent, Attitudes, and Behavioral Intention

Previous research indicates "people need to be aware of a persuasion attempt before they can activate persuasion knowledge" (Boerman, van Reijmersdal, and Neijens 2012, p. 1049). According to PKM, the change of meaning principle (Friestad and Wright 1994; Nelson, Wood, and Paek 2009) suggests that communications not previously considered the domain of advertising are recognized as advertising when elements of the communication, such as the structure, presence of disclosures, or format lead consumers to that conclusion (Evans and Park 2015). Once viewers conclude that a communication is an advertisement, they then use existing persuasion knowledge to make inferences about the selling and persuasive intent of the communication or the communicator (Rozenaal et al. 2011). While advertising recognition and persuasion knowledge have often been considered interchangeable concepts, research suggests that advertising recognition is a separate and initial step that leads to the subsequent activation of persuasion knowledge (Evans and Park 2015). We predict that increased advertising recognition of online native advertising content will result in better understanding of selling and persuasive intent:

H3: (a) Participants who report more advertising recognition will better understand an ad's selling and persuasive intent.

The recognition of advertising elicits protective mechanisms, such as increased skepticism and critical processing, that influence attitudes toward and perceptions of advertising content in a negative manner (Boerman, van Reijmersdal, and Neijens 2015; Evans and Park 2015; Friestad and Wright 1994; Nelson, Wood, and Paek 2009; Shrum et al. 2012). While the link between advertising recognition and attitudes toward the ad, brand, or sponsor can be negative, less is known regarding consumers' attitudinal perceptions of story quality and credibility in the context of native advertising. Perceptions of story quality and credibility warrant empirical investigation, because PKM predicts the occurrence of a negative relationship between advertising recognition and subsequent consumer attitudes. In addition, news publishers engaging in advertorial-style online native advertising have a vested interest in promoting positive perceptions of story quality and credibility. Henceforth, our decision to focus on the array of consumers' attitudes that encapsulate elements of credibility, quality, and the sponsoring company represents a contribution to existing persuasion knowledge theory.

H3: Participants who report more advertising recognition will have (b) less positive attitudes toward the company, (c) less positive perceptions of news story credibility, and (d) less positive perceptions of news story quality.

While the link between advertising recognition and attitudinal measures has been substantiated in previous research (Boerman, van Reijmersdal, and Neijens 2015; Friestad and Wright 1994; Nelson, Wood, and Paek 2009; Shrum et al. 2012) we posit that consumers' intention to pass along or share a native advertising-style story can be subsequently reduced when their ability to recognize the communication as advertising increases. This proposed relationship is theoretically sound based on the change of meaning principle (Friestad and Wright 1994; Nelson, Wood, and Paek 2009). For example, the recognition of content as advertising when it was not previously anticipated as such may trigger attitudes and responses that are informed by increased feelings of skepticism and defensiveness (Nelson, Wood, and Paek 2009). Therefore, we hypothesize the following relationship:

H3: (e) Participants who report more advertising recognition will have lower intentions to share the story.

STUDY 1

Method

Study design. All participants ($N = 242$) in a 3 (disclosure position: top, middle, bottom) \times 4 (disclosure wording: "advertising," "sponsored content," "brand-voice," "presented by [sponsor]") mixed factorial between-subjects experiment were randomly assigned to view one of 12 versions of a target news story. After reading the target story, all participants read the same version of an unrelated distractor news story, which contained no disclosure. Once they had completed reading both stories, participants completed dependent measures about the target story.

Participants. A total of 242 adult U.S. residents were recruited for participation via Amazon Mechanical Turk, a web-based human intelligence task market. Participants ranged in age from 19 to 73 years in age ($M = 37.4$, $SD = 12.8$), and 52.5% of participants were male. Participants varied in racial/ethnic background (73.6% white or Caucasian, 9.1% black or African American, 7.4% Asian or Pacific Islander, 3.7% Hispanic or Latino, 2.5% multiracial, 1.2% Native American), highest completed level of education (14% graduate degree, 42.6% college graduate, 32.2% some college, 10.7% high school only) and state of residence (40 states).

Stimulus materials. Each of the 12 versions of the news story web page consisted of a site banner (based on a real U.S.-based midsized market newspaper), story headline, author byline and e-mail address, date stamp, story text, and two images. The story discussed advances in automotive batteries and prominently featured a fictitious lithium-ion battery manufacturer, LEOMotive. The sole quoted source in the article was an executive at the company, and the article featured the company in a positive light, highlighting both its technological breakthroughs and the leading market position of its products.

A second distractor story discussed the potential of hydrogen fuel cells in developing cleaner, more efficient cars. Both stories were between 500 and 600 words in length.

Participants were randomly assigned to one of 12 versions of the target story page, which differed in the wording and position of a single text label that identified the story as paid content. Disclosure position was varied by either including this label immediately prior to the headline (i.e., top), in an outlined box after the fifth paragraph of the story (middle), or beneath the final paragraph of the story (bottom). Disclosure wording was manipulated by varying the entire text of the disclosure label to use language typical of native advertising disclosures ("advertisement," "sponsored content," "brand-voice" [an example of a site-specific neologism], and "presented by [sponsor]") (see Wojdyski and Evans 2014).

Procedure. Participants accessed the study via a link provided in an online advertisement posted on Amazon Mechanical Turk. After providing informed consent, participants were taken to a page that contained a full-size screenshot of the first online news story, along with instructions to read the stories to evaluate their content and readability, and to click a button to advance to an online questionnaire after reading. After participants had finished reading both stories, they were taken to a page containing dependent measures. Participants completed, in order, measures of news story credibility, attitude toward the company, selling and persuasive intent, advertising recognition, perceived story quality, and intention to share the story. Upon completing those measures, participants completed several demographic questions and were provided additional information about the study and its purpose.

Dependent Measures

News story credibility was measured using five 7-point Likert-scale items. Participants answered five statements about the news story, each starting with "I think the news story was ..." (honest, trustworthy, convincing, biased, not credible) on a scale ranging from *Strongly disagree* to *Strongly agree*. After reverse-coding to match polarity, the five items were averaged to form a single measure ($M = 4.97$, $SD = 1.00$; $\alpha = .79$). *Attitude toward the company* was measured using five 7-point Likert-type items. Participants rated their perception of the company featured in the news story by selecting one of seven numbered points between a word pair (*Unappealing/Appealing*, *Bad/Good*, *Unpleasant/Pleasant*, *Unfavorable/Favorable*, *Unlikeable/Likeable*). The items were averaged to form a single measure ($M = 5.60$, $SD = 1.12$; $\alpha = .95$). *Selling and persuasive intent* was measured using six 7-point Likert items (Rozendaal, Buijzen, and Valkenburg 2010). Participants answered two items referring to selling intent, two items referring to persuasive intent, and two filler items referring to informational intent. The six items were subjected to a principal components analysis (PCA), which showed that the four items measuring persuasive and selling

intent loaded onto a single factor (eigenvalue = 2.85), which explained 47.52% of the variance in the items. These four items ($\alpha = .81$) were averaged to form a single measure of persuasive and selling intent ($M = 4.72$, $SD = 1.10$). *Advertising recognition*, or ability to discern whether the news story page contained advertising, was coded from participants' responses. Participants were asked "Was there any advertising on the story page?" and those who checked "yes" were asked to provide detail regarding what on the news story page made them think portions were advertising. Participants' open-ended responses were coded as 1 (mentioned disclosure) or 0 (did not mention disclosure) based on the procedure used by Tutaj and van Reijmersdal (2012). *Intent to share the story* was measured using three 7-point Likert items. Participants answered three statements (e.g., "I would recommend this news story to a friend") using a scale ranging from *Strongly disagree* to *Strongly agree*. The three items were averaged to form a single measure ($M = 4.56$, $SD = 1.44$; $\alpha = .91$). *Perceived story quality* was measured using three 7-point Likert items. Participants rated their agreement with three statements (e.g., "The information presented in the news story is of sufficient quality") using a scale ranging from *Strongly disagree* to *Strongly agree*. The three items were averaged to form a single measure ($M = 5.03$, $SD = 1.04$; $\alpha = .86$).

Results

To test hypotheses 1(a) and 1(b) a binary logistic regression was performed to ascertain the effects of disclosure position on the likelihood that participants would recognize the presence of advertising on the page. Position was recoded into two dummy variables, with top positioning serving as the referent category. The overall logistic regression model was statistically significant, $\chi^2(5) = 6.35$, $p < .05$. The model explained 6.4% (Nagelkerke R^2) of the variance in ad recognition. Specifically, the results showed that a midstory disclosure position increased the odds of validated disclosure-based recognition over the top position, $B = 1.629$. $Wald = 4.06$, $p < .05$. The results indicate a 5.10 times greater likelihood of recognizing the ad in the middle condition than the top condition. The difference between top and bottom positions was not statistically significant, $Wald = 2.13$, n.s. The results show that a top disclosure is inferior to a middle disclosure, thus failing to

support hypothesis 1(a) and supporting hypothesis 1(b). The overall distribution of participants in each condition on this variable is shown in Table 1.

Hypothesis 2 was tested with a binary logistic regression with a single contrast variable between the two condition groups and advertising recognition ($n = 17$) as the dependent measure. The results showed a significant effect of language on ad recognition, $\chi^2(1) = 11.77$, $p < .01$. The model with only language as the predictor explained 11.9% (Nagelkerke R^2) of the variance in advertising recognition. Specifically, "brand-voice" and "presented by LEOMotive" led to a much lower likelihood of advertising recognition than "advertisement" or "sponsored content," $\beta = -2.11$, $Wald = 7.63$, $p < .01$, odds ratio (OR) = 1:0.121. Thus, hypothesis 2 was supported.

Hypotheses 3(a) through 3(e) were examined using multiple independent-sample t tests, which treated advertising recognition as a dichotomous independent factor and all five dependent variables included (see Table 2). Advertising recognition had a significant effect on perceived news credibility, $t(17.034) = 2.61$, $p < .05$, perceived story quality, $t(17.213) = 3.12$, $p < .01$, attitude toward the company, $t(238) = 3.61$, $p < .001$, and intention to share the story, $t(240) = 3.86$, $p < .001$. However, advertising recognition did not have a significant effect on the understanding of selling and persuasive intent, $t(19.802) = -.362$, $p > .05$. While results did not support hypothesis 3(a), hypotheses 3(b) through 3(e) were supported.

Discussion

Perhaps the most striking finding from Study 1 is that very few participants recognized the article as advertising, irrespective of disclosure condition. Overall, less than 8% of participants, 17 out of 242, recognized the advertisement. However, the results also showed that variations in both disclosure positioning and disclosure language influence the likelihood that participants will perceive the content as advertising. Interestingly, the results show that although position of a sponsorship disclosure does affect ad recognition, the traditionally recommended top-of-the-page position is *less* effective than disclosures in the middle of the article or further down the page. This is in contrast with FTC recommendations, which suggest

TABLE 1
Ad Recognition Based on Disclosure Position and Wording, Study 1

Ad recognition	Position			Wording				Total sample
	Top	Middle	Bottom	Advertising	Sponsor content	Brand-voice	Presented by LEOMotive	
Yes	2 (2%)	8 (11%)	7 (8%)	8 (12%)	7 (13%)	1 (2%)	1 (3%)	17 (7%)
No	79 (98%)	62 (89%)	84 (92%)	60 (88%)	47 (87%)	53 (98%)	65 (97%)	225 (93%)
Total	81	70	91	68	54	54	66	242

TABLE 2
Effects of Ad Recognition on Dependent Measures, Study 1

Dependent variable	Ad recognition	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>
Perceived news credibility	Yes	17	4.11	1.44	2.61*
	No	222	5.03	0.93	
Attitude toward company	Yes	17	4.67	1.53	3.61***
	No	223	5.67	1.06	
Selling and persuasive intent	Yes	16	4.79	0.77	-.362
	No	224	4.72	1.12	
Intention to share story	Yes	17	3.29	1.45	3.86***
	No	225	4.65	1.39	
Perceived story quality	Yes	17	4.24	1.39	3.12**
	No	224	5.31	0.98	

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

that disclosures “appear immediately before the ad or at the top left corner of the content” (FTC 2013c, p. 4).

One explanation for this may have to do with users’ starting point on the page (e.g., *F*-shaped viewing pattern). A disclosure above the headline may be ignored, and when readers get far enough into the article to view the middle- or bottom-positioned disclosures, they may have been less likely to ignore them due to their proximity to the content of the article itself. Another potential explanation for the effectiveness of a middle-placed disclosure in the context of native advertising may relate to its ability to break up the story content. By interrupting the story content, a middle-placed disclosure attracts more attention to itself, which in turn may help the viewer recognize the content as advertising.

While vertical position may have been a key determinant of whether users noticed the disclosure at all, disclosure language also influenced advertising recognition. More commonly used terminology, such as “advertisement” and “sponsored content,” led to greater advertising recognition, compared to the use of neologisms (“brand-voice”) and more ambiguous wording (“presented by”). We believe the mechanism is based on users’ understanding of the various disclosures, that is, that certain words better convey the nature of the financial relationship between the advertiser and content publisher than others. Although the specifics of how users understood those disclosures were not explicitly measured in the present study, the results suggest that “advertising” and “sponsored content” may better convey this information.

STUDY 2

In response to the disclosure position results in Study 1, an eye-tracking experiment was conducted to determine whether disclosure position led to differences in visual attention to the disclosure. Disclosure language was kept constant in all three conditions, using the language most likely to be recognized by

participants (“sponsored by Dell”), but the position of the disclosure was varied as in Study 1.

Visual Attention to Disclosure Position

As Faraday’s (2000) model of visual hierarchy suggests, native advertising viewers may not engage with information positioned above the story content, thus reducing the likelihood of viewers’ visual attention to a top-positioned disclosure. In the context of native advertising, the effectiveness of a top-positioned disclosure may not conform to traditional *F*-shaped reading patterns (Nielsen 2006; Shrestha and Lenz 2007) because viewers either attend to information which is farther down the page (Bucher and Schumacher 2006; Outing and Ruel 2004) or which corresponds with the editorial or story content (Goldberg et al. 2002). Based on this insight we hypothesize the following:

H4: A top-positioned disclosure (a) will attract significantly less attention than a middle-positioned disclosure and (b) will attract significantly less attention than a bottom-positioned disclosure.

Mediating Effect of Visual Attention on Advertising Recognition

Viewers’ attention to and engagement with disclosure-related information impacts the ability to recognize advertising (Boerman, van Reijmersdal, and Neijens 2014, 2015). The effectiveness of disclosures at conveying the content’s advertising nature to the viewer is contingent upon viewers’ likelihood of paying attention to the disclosure. In this regard, visual attention will (1) positively influence advertising recognition and (2) mediate the effect of disclosure position on advertising recognition. Thus, we hypothesize the following:

H5: Visual attention to the disclosure will positively influence advertising recognition.

H6: (a) The effect of middle positioning on advertising recognition and (b) the effect of bottom positioning on advertising will be mediated by visual attention to the disclosure.

Effects of Ad Recognition on the Inference of Intent, Attitudes, and Behavioral Intention

In an effort to replicate our findings from hypotheses 3(a) through 3(e) in Study 1, we posit that increased advertising recognition will have significant positive effects on selling and persuasive intent and significant negative effects on attitudes and behavioral intention.

H7: Advertising recognition will have significant positive effects on (a) the understanding of selling and persuasive intent and significant negative effects on (b) attitude toward the company, (c) perceived news credibility, (d) perceived story quality, and (e) intention to share the story.

Overview. Participants ($N = 60$) in a three-level (disclosure position: top/middle/bottom) between-subjects experiment visited a campus research lab equipped with a desktop computer with a Tobii X2-60 Eye Tracker. Participants were undergraduates at a large research university in the Southeastern United States who took part in the study for course credit. They ranged in age from 18 to 31 years in age ($M = 20.87$, $SD = 1.7$), and 75% of participants were female. Participants varied in racial/ethnic background (73.6% white or Caucasian, 10.0% black or African American, 8.3% Asian or Pacific Islander, 2.2% Hispanic or Latino, 1.7% other). Participants were randomly assigned to one of three versions of an article, which varied solely in positioning of the advertising disclosure (top, middle, or bottom). They were instructed to read the article as if a friend had sent them a link and to let the researcher know once they had seen all they wanted to see. During viewing, participants' pupillary activity was recorded by the eye tracker. After viewing, participants were given access to an electronic questionnaire containing dependent measures.

Stimulus materials. A novel article and source were used for Study 2. The stimulus materials employed a more well-known publication (*USA Today*) and brand (Dell computers) to rule out the possibility that the relatively low recognition rates in Study 1 were partially caused by unfamiliar brand names. Three versions of a fictitious article on *USAToday.com* were created, differing only in the position of the disclosure that identified the article as being sponsored by Dell. The article focused on the utility of tablet computers by highlighting the various mobile uses of tablet-specific software applications, chiefly a drawing application. The article was 575 words in length and presented on a page containing a site banner (with navigation disabled), a headline, small relevant photo near the first few paragraphs, and a small display ad for an unrelated product to the right of the content. The top disclosure was above the article headline, the middle disclosure was in a thin box within the article text such that it was not visible

without scrolling, and the bottom disclosure was at the end of the article.

Dependent Measures

Measures of *selling and persuasive intent* ($\alpha = .70$; $M = 5.23$, $SD = 0.91$), *perceived story quality* ($\alpha = .83$; $M = 4.83$, $SD = 1.14$), *perceived news credibility* ($\alpha = .63$; $M = 5.20$, $SD = 0.78$), *attitude toward the company* ($\alpha = .95$; $M = 5.89$, $SD = 1.07$), and *intention to share* ($\alpha = .90$; $M = 3.47$, $SD = 1.56$) were identical to those used in Study 1. *Advertising recognition* was measured using a similar procedure to Study 1. However, for this study, participants who answered "yes" to the question about whether there was any advertising on the page were given two follow-up questions. First, they were asked "What area(s) of the page contained advertising?" Then, participants were told to "please indicate in as much detail as possible what characteristics of the content you mentioned led you to believe that it was advertising." The resulting responses were coded to reflect recognition of the article as advertising. *Visual attention to the ad* was recorded by the eye-tracking hardware and software as the total duration (in hundredths of a second) that participants spent fixating within a region of interest around the ad. To avoid discarding of valid peripheral attention data (see Purucker et al. 2013), the region coded for the disclosure represented a larger surface area than the text disclosure itself (Boerman, van Reijmersdal, and Neijens 2015). While the lettering of the disclosure took up a space 250 pixels wide by 22 pixels high, or 5,500 total pixels, the ROI added 17 pixels of padding on all four sides of the rectangle, resulting in a total area of 15,904 pixels, or approximately 297% of the original area. Raw visual attention scores ($M = 0.45$, $SD = 0.69$) were recoded into a binary measure of attention, wherein participants who fixated within the ROI for at least 100 milliseconds (e.g., Benedetto et al. 2015; Sharmin, Špakov, and Rähä 2012) were counted as having paid attention to the disclosure label.

Results

Attention to the disclosure varied by disclosure positioning condition; 40% of participants in the top condition paid attention to the disclosure label, 90% in the middle condition, and 60% in the bottom condition. Hypotheses 4(a) and 4(b) were tested using a binary logistic regression with visual attention to the ad as the outcome, and two dummy disclosure position variables as the predictor (middle positioning and bottom positioning, respectively; top positioning was the reference category). The results showed that a middle disclosure position significantly improved attention to the disclosure, $\beta = 2.49$, $Wald(1) = 10.66$, $p < .01$. The resultant odds ratio of 1:12 shows that participants were 12 times as likely to pay attention to the disclosures when they were in the middle position than when they were in the top position. Thus, hypothesis 4(a) was

supported. The results showed that the bottom disclosure position did not improve likelihood of attention to a statistically significant degree over the top condition, $\beta = 1.10$, $Wald(1) = 2.59$. Thus, hypothesis 4(b) was not supported.

For hypothesis 5, the relationship between attention and ad recognition exhibited quasi-complete separation, meaning that of the 11 participants who recognized the article as advertising, all 11 had paid attention to the disclosures; participants who paid no attention to the disclosures have no calculable probability of ad recognition, yielding odds-ratio estimates for effects of attention on ad recognition that approach infinity. A statistical solution to the problem of separation involves using Firth's (1993) procedure to obtain a penalized log-likelihood estimate on the assumption that the separation is a function of the sample and not the population (Heinze and Schemper 2002). Although we believe that attention to disclosures is indeed necessary for recognition, we utilized this method to obtain a noninfinite coefficient and log likelihood. The results estimated that participants who paid attention to the disclosure were more likely to recognize the ad, $\beta = 2.94$, $\chi^2(1) = 8.80$, $p < .01$, with an odds ratio of 18.82 to 1. Thus, hypothesis 5 was supported.

For hypotheses 6(a) and 6(b), testing mediation effects with both a dichotomous mediator and dichotomous outcome required nonstandard approaches due to the lack of algebraic equivalence of some of the estimators in the model (e.g., Herr n.d.; Iacobucci 2012; MacKinnon and Cox 2012). We chose to approach this by using weighted least squares regression with means and variance adjusted in Mplus, which treats each observed dichotomous variable as an indicator of an underlying latent variable (MacKinnon and Cox 2012; Hayes 2012). The resulting estimates (see Figure 2) replicated significant effects for the relationships in hypotheses 4(a) and 5 and no significant relationship for the relationship in hypothesis 4(b). The total indirect effect of middle positioning on advertising recognition was estimated at 0.741, and the remaining direct effect for middle position on ad recognition when controlling for visual attention was not significant. Bias-corrected bootstrapping based on 5,000 samples confirmed that the indirect effect of position on advertising recognition through attention was significantly different from zero, $p < .001$, 95% CI = 0.6688–2.162. Thus hypothesis 6(a) was supported. There was no significant indirect effect for bottom disclosure positioning; therefore hypothesis 6(b) was not supported.

Hypotheses 7(a) through (e) were tested using independent-samples t tests between participants who recognized the ad and those who did not. Levene's test was employed to verify that none of the tests violated the assumption of homogeneity of variance (all F s between 0.2 and 2.7). Results showed no significant differences between the two groups with respect to attitude toward the company, selling and persuasive intent, or intention to share the story. There was a significant difference between perceptions of news credibility, $t(58) = 3.34$, $p < .01$, with participants who recognized the content as

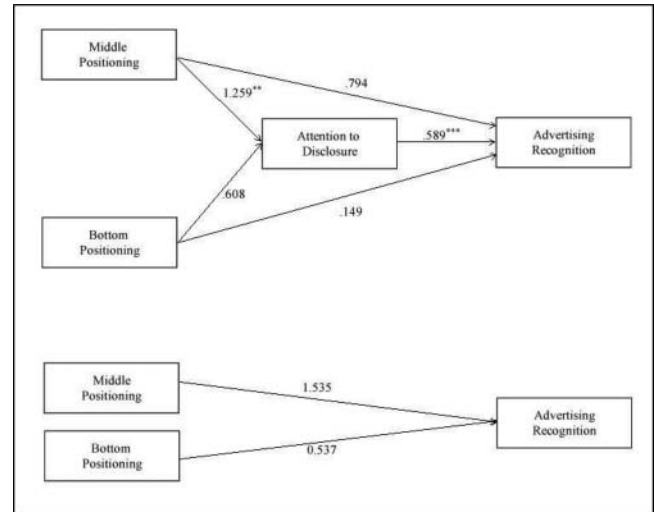


FIG. 2. Mediation of effects of middle and bottom positioning on advertising recognition via visual attention, Study 2. Notes. ** $p < .01$; *** $p < .001$. Model R^2 for visual attention = .212; model R^2 for advertising recognition = .538; direct-effects only total model R^2 for advertising recognition = .293.

advertising rating the article significantly lower ($M = 4.53$, $SD = 0.81$) than participants who did not recognize the content as advertising ($M = 5.35$, $SD = 0.70$). The effect of ad recognition on perceived story quality approached statistical significance, $t(58) = 1.84$, $p < .08$. While findings support hypothesis 7(c) and partially support hypothesis 7(d), hypotheses 7(a), 7(b), and 7(e) are not supported (see Table 3).

Discussion

Study 2 results confirm that a middle-positioned disclosure attracts greater visual attention and likelihood of fixation compared to top- and bottom-positioned disclosures. Second, as predicted, findings indicated a positive relationship between disclosure fixation and advertising recognition. However, advertising recognition exhibited less influence on attitudes and behavioral intention, as only the predicted effects on news credibility was supported.

GENERAL DISCUSSION

Findings from both studies highlight several important aspects of the relationship between native advertising disclosure characteristics, visual attention, recognition of the content as advertising by users, and the consequences of recognition for perceptions of the news story and the advertiser. Study 1 results indicated that the use of "sponsored" or "advertising" language led to greater advertising recognition than nebulous disclosure language. The results also showed the relative ineffectiveness of the most common top-disclosure position at generating advertising recognition. The relative performance of top-positioned disclosures was evident again in Study 2 results, which showed that middle-positioned disclosures

TABLE 3
Effects of Ad Recognition on Dependent Measures, Study 2

Dependent variable	Ad recognition	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>
Perceived news credibility	Yes	11	4.53	0.70	3.43**
	No	49	5.35	0.81	
Attitude toward company	Yes	11	5.83	0.92	0.19
	No	49	5.91	1.11	
Selling and persuasive intent	Yes	11	5.52	1.12	-1.20
	No	49	5.16	0.86	
Intention to share story	Yes	11	3.42	1.45	1.63
	No	49	3.70	1.39	
Perceived story quality	Yes	11	4.27	1.04	1.84
	No	49	4.96	1.42	

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

attracted far more visual attention. This study also underscored the importance of visual attention in the ad recognition process by showing that only viewers who fixated on the disclosure were able to recognize the content as advertising. While the findings regarding the effectiveness of the bottom disclosure over the top disclosure fell short of statistical significance, the pattern of recognition results in both studies and attention results in Study 2 suggests a likelihood that bottom disclosures also may be superior to top disclosures, although further testing is needed. While the broad disclosure practices employed in native advertising certainly warrant additional research, we believe that our findings have important theoretical, managerial, and public policy implications.

Theoretical Implications

Our findings support a central theoretical tenet of the PKM: When viewers are presented with additional advertiser information in the disclosures and have resources to process and elaborate on that information (via visual attention), they will better recognize a native advertisement as advertising (Buizjen, Van Reijmersdal, and Owen 2010). We found that certain disclosure characteristics (e.g., position) result in variations in visual attention and fixation, such that a middle-positioned disclosure attracted the most visual attention, and as evidenced by the significant mediation effect in Study 2, act as a mechanism for advertising recognition when viewing native advertising. Overall, these two studies provide evidence that a middle-positioned disclosure featuring clear language attracts attention and provides viewers with an opportunity to process and elaborate, which in turn increases the odds of advertising recognition.

However, the relationship among advertising recognition, attitudes, and behavioral intention did not conform to prior research or theory. Across both studies, relatively few viewers understood that the article itself was paid advertising: only 7% in Study 1 and 18.3% in Study 2 (in which all conditions used

the most recognizable language, “sponsored content”). As predicted, those who recognized the ad in Study 1 had more negative perceptions of news credibility and attitudes toward the company, lower intention to share, and perceived story quality. However, in Study 2, only the relationship between advertising recognition and negative perceptions of news credibility was significant, suggesting that there may be characteristics of the advertising content or advertiser that moderate the role advertising recognition plays on other perceptions. Future research might examine how such characteristics (such as product involvement, advertiser/brand familiarity, or sponsorship transparency) may moderate the relationship between ad recognition and evaluative outcomes. For example, while Study 1 used a fictitious brand, Study 2 used a real brand (Dell). These brand discrepancies and associated involvement or familiarity measures may have explained the variation between advertising recognition and evaluative outcomes across the two studies. We acknowledge the absence of these variables in the current study is a potential limitation and may explicate these relationships.

Managerial and Regulatory Implications

The findings of the present study have implications for the ongoing discussion regarding regulation of native advertising content, as well as for practitioners in both advertising and publishing industries. For policymakers, the relative ineffectiveness of a top-placed disclosure in garnering visual attention and subsequent advertising recognition contradicts previously established patterns of reading behavior (Shaikh and Lenz 2006) and does not support FTC recommendations (FTC 2013c). A possible modification to existing guidelines could include middle-positioned (or within-content) disclosures as a mechanism for increasing advertising recognition. In addition, the low level of advertising recognition indicated across both studies (7% in Study 1; 18.3% in Study 2) warrants the attention of policymakers because such findings are central

to the FTC's overall mission, which is to create a more informed consumer. Additional research should also examine in greater detail how consumers interpret various types of disclosures; the wide array of wording used in some of these disclosures (Wojdynski & Evans 2014) may lead to various and nuanced interpretations of the relationship between the sponsor and the content.

The results also offer considerations for online news publishers seeking to capitalize on the rise of native advertising. The results of both studies here show that when readers perceive a difference between publisher-created editorial content and paid advertising that resembles editorial content there are differences in how they perceive the credibility of the news story. As online publishers seek to balance the pull of native advertising revenue with a potential push for disclosures from regulators and advocates, they should be aware that the best attempts to create informed consumers may result in negative perceptions of news credibility and quality. This may be problematic for the industry and for journalists, whose aspirations align with these values.

While regulators may argue for increased transparency and standardization in disclosures, our findings suggest that although such disclosures may create an informed consumer who aptly recognizes native ads as advertising, this recognition may, at times, lead to more negative attitudes toward the advertiser. This works in opposition to some of the promise of native advertising—namely that it may create positive brand attitudes, awareness, and recall through good storytelling. Our study suggests that satisfying the principles of consumer informedness is perhaps a route for attitude degradation. However, these implications should be tempered by the finding that the negative effects of recognition on attitudes toward the advertiser found in Study 1 were not replicated when a real brand was used in Study 2. We suggest that these differences may have important implications for both familiar and unfamiliar brands. Future research could examine more closely the potential impact of brand involvement and familiarity on the relationship between advertising recognition and brand attitudes in a native advertising context.

Limitations

The generalizability of the present study's findings to other examples of online native advertising may be limited by the specifics of our stimulus materials and study design. The text disclosure labels were consistent in their size and color, but it is possible that larger or bolder disclosures may have increased the degree to which disclosures were noticed or encoded. This research hinges on the valid measurement of recognition of covert advertising; users may respond differently to a question asking "Did you encounter any forms of advertising on the page?" (e.g., Tutaj and van Reijmersdal 2012) than they would to a question that explicitly asks whether the article itself was a form of advertising (e.g., Kim, Pasadeos, and Barban 2001).

The former phrasing may be susceptible to users imagining or misperceiving unrelated display advertising on the page; the latter phrasing avoids this issue but may inflate positive responses by suggesting that the article has been paid for. The present research sought to mitigate both concerns by using open-ended questions asking where specifically participants saw advertising and how they knew it was advertising. The development of more granular measures of advertising recognition that minimize question effects and identify what users mean by advertising (e.g., persuasiveness versus neutrality, locus of content production, financial transaction) would benefit our understanding of how users perceive this kind of content. It also bears noting that while the two articles examined herein both mentioned the advertiser directly in the content, in other examples of native advertising the attempt to cast a favorable light on the advertiser may be more subtle or nonexistent, which may have implications both for the odds of recognition and for the impact of recognition on persuasive outcomes.

Conclusion

Although the onset of online native advertising is relatively recent, this study shows that the questions most commonly raised about the practice—Can people tell that such content is advertising? If they can, does that change how the content is processed?—are valid and fundamentally shape how users perceive the content. The significant effects of disclosure characteristics on visual attention and visual attention on advertising recognition suggest this type of advertising can be deceptive to customers who are not made aware of its nature. This deception, in this case, helps suppress negative evaluations triggered by recognition that the content is advertising. This study highlights a need to examine disclosure types that may be more effective at capturing viewers' attention, which may earn the advertiser some goodwill by removing the aura of deception or incomplete disclosure. The practice of online native advertising is still evolving and expanding as advertisers find it a vehicle for reaching consumers, but this study suggests that the growth might not be because the customers find it intrinsically compelling but because many of them do not recognize it well enough to apply the avoidance and defense strategies they have developed for other types of online ads.

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