



Journal of Research in Interactive Marketing

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Article information:

To cite this document:

Kristin Stewart, Matt Kammer-Kerwick, Hyeseung Elizabeth Koh, Isabella Cunningham, (2018) "Examining digital advertising using an affect transfer hypothesis", Journal of Research in Interactive Marketing, <https://doi.org/10.1108/JRIM-07-2017-0053>

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Examining digital advertising using an affect transfer hypothesis

Examining
digital
advertising

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Received 14 July 2017
Revised 15 January 2018
Accepted 29 March 2018

Abstract

Purpose – This paper aims to develop a framework for understanding consumers' response to digital advertising using the affect transfer hypotheses and incorporating search behaviors. The paper also offers future research suggestions.

Design/methodology/approach – A quantitative approach is used in this paper by conducting survey research on a research panel. Structural equation model with multi-group comparisons is conducted. The research is conducted using a general US population sample.

Findings – Findings demonstrate that the affect transfer hypothesis is sufficient to enhance extant understanding of consumers' response to digital advertising, but the incorporation of search intentions into the model improves the explanatory power.

Originality/value – To date, little research in digital marketing has studied search intentions and less has done so in the context of digital video advertising. Interestingly, theory from a more traditional domain can lend support for the authors hypotheses.

Keywords Structural equation modeling, Search marketing, Video marketing, Advertising management

Paper type Research paper

Consumers have ubiquitous access to technology and information, and with marketers focused on providing seamless customer experiences across all available marketing platforms; consumers are almost able to make a purchase at any time. The days of watching a TV advertisement and having a lag until purchase are behind us. Moreover, the way people purchase products and services is evolving because of online capabilities. For many, the purchase journey begins with information from advertising or search. Digital advertising and Search Engine Marketing expenditures are predicted to through the year



The authors would like to acknowledge the IC² Institute at The University of Texas at Austin for funding the grant with which this research was made possible.

2020 at a rate that even surpasses the rate of growth in TV advertising spending (eMarketer, 2016), while the use of internet continues to increase along with the proportion of users who have access to the internet on mobile devices. It is predicted that in 2017, there will be over 2 billion smartphone users across the globe (eMarketer, 2014a), one-tenth of whom will live in the USA. Understanding how consumers use advertising and search in their purchase process is essential to optimizing future shifts in spending.

In addition, with many major corporations like Google and Facebook working to establish the internet and cellular networks in the most remote parts of the world, it is predicted that within 20 years, the whole world will have the internet and cellular service access. As of 2015, there are 3.17 billion internet users worldwide, up from 1.02 billion in 2005 and 2.02 billion in 2010 (Statista, 2015). Consequently, digital advertising expenditures are also increasing. In particular, video advertisements are a prevailing digital marketing format. According to estimates made by the Interactive Advertising Bureau (IAB), the revenue from US digital video advertising is predicted to reach \$13.3 billion by 2020, which is up from 5 billion in 2015 (Hoelzel, 2015). Moreover, US digital video ad spending will see double-digit growth annually through 2020 (eMarketer, 2016). Thus, digital *video* advertising is the context within which the digital buying process is studied in the current paper.

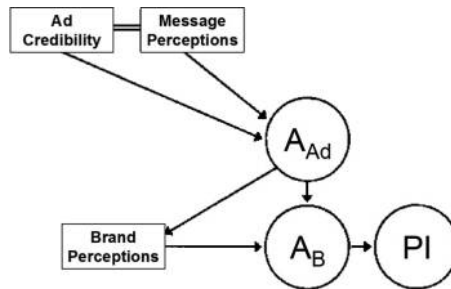
Marketing research must enhance our understanding of how digital advertising influences consumers' purchase in the digital environment. Few studies have examined how advertising influences consumers' intentions to search for product information, particularly in a digital context, however, recent changes in marketing spending and consumer behavior suggest such an inquiry is warranted (Yadav and Pavlou, 2014). Marketers are required to have a clearer understanding of how digital advertising affects consumers on digital platforms. This paper contributes to advertising literature in two ways. First, we extend an established theory of advertising effectiveness to better explain digital consumer behavior by incorporating digital relevant metrics of information search and click-through behavior to the model. Past research supports such a theoretical extension, examining the effectiveness of Online and Banner advertising through clicks (Lepkowska-White *et al.*, 2014; Obal and Lv, 2017). Second, we further extend the theory to explain how the degree of a consumer's perceived personal involvement with the product being advertised affects their digital purchase process.

Theoretical framework

This research study aims to apply the affect transfer hypothesis (Mitchell and Olson, 2000) and dual mediation hypothesis (Lutz *et al.*, 1983) of advertising to examine the processes through which digital *video* advertising influences consumers' decision-making process in the digital environment. In their two seminal studies, MacKenzie *et al.* (1986) and MacKenzie and Lutz (1989) examined attitude toward advertisements as a mechanism through which ads are effective. Because search is believed to be one of many integral elements in digital marketing, we integrate search-related metrics into the model (Figure 1).

The affect transfer hypothesis elucidates the way in which consumers' perceptions of an advertisement might influence their attitudes toward the advertisement (A_{Ad}). These attitudes, in turn, influence attitudes toward a brand (A_B) (Mitchell and Olson, 2000). Two perceptions of note are message quality and advertisement credibility (Lutz *et al.*, 1983; MacKenzie *et al.*, 1986). Both are believed to influence A_{Ad} (Figure 1). Attitudes toward an advertisement (A_{Ad}) are then shown to influence A_B , which ultimately influence purchase intentions (PI).

Another theory that might be considered is the elaboration likelihood model (ELM; Petty and Cacioppo, 1986). This model explains that a message will influence attitudes differently depending on the motivation and ability of the consumer. Higher motivation and ability lead



Notes: Measures in the model included the following: 1. Ad Credibility – the perceived credibility of advertising, or how truthful or believable the audience perceives the assertions made about the brand to be; 2. Ad perceptions – perceptions of the informativeness and quality of the ad execution; 3. Brand perceptions – recipients’ perceptions of the brand being advertised

Source: Lutz *et al.* (1983)

Figure 1.
Foundational
advertising process
model

to more elaborative processing and more lasting attitudes and higher click-through rates (Cho and Leckenby, 2000; Petty *et al.*, 1983). This model accounts for source credibility mainly as a peripheral cue; however, it assumes message quality is directed at an individual’s rational judgment rather than his/her affect (Bhattacharjee and Sanford, 2006; Wood, 2012). Moreover, the distinction between ad and brand responses is not delineated. Rather, affective and cognitive responses are proposed (Li, 2013).

Three other models, the dual mediation hypothesis, the reciprocal mediation hypothesis, and the independent influences hypothesis, all account for perceptions and cognitions’ influences on responses toward both the ad and brand, but none of them discuss affective responses. However, Mitchell and Olson (1981) and Shimp (1981) demonstrated that, A_{Ad} can be treated as both a cognitive belief and affective reaction toward an ad, and can also mediate the relationship between A_B and PI . Many subsequent studies began investigating the role of A_{Ad} , or more broadly attitudes towards some form of promotional messaging that precede brand, product or company attitudes, and suggested that A_{Ad} is a critical indicator of advertising effectiveness (Brown and Stayman, 1992; Marchegiani and Phau, 2010; Limbu *et al.*, 2012; Boateng and Okoe, 2015). Thus, with respect to digital *video* advertising, as seen in a prior study (Huang *et al.*, 2013), the pattern of cognition → attitude → intention can be most appropriately assessed with the affect transfer hypothesis. Moreover, it accounts for the dual influence of message quality and perceived ad credibility.

As available digital channels have been increasing in the market, consumers also have many different options in their ways to research products advertised. Interestingly, one industry source supports that digital channels are now the method of choice for consumers’ product research (eMarketer, 2014c). However, the affect transfer hypothesis does not incorporate search-related constructs. Thus, product information search intentions and likelihood of click-through for more information are two factors of the digital advertising process that might be added to the affect transfer hypothesis model to expand our understanding of digital advertising effectiveness. This extension is depicted in Figure 2.

A digital ad process

In an earlier work, Mitchell and Olson (2000) anchor advertising effectiveness to attitudes toward the advertising message. Moreover, MacKenzie et al. (1986) test five major propositions and explain how traditional forms of advertising work to affect consumers' purchase. The original model is replicated in the current study by postulating H1-H5.

Message perceptions. The first proposition is that ad cognitions affect attitudes toward the message. These ad cognitions reflect consumers' thoughts about the message and elements of the message. According to the ELM (Petty and Cacioppo, 1986), message perceptions refer to an individual's subjective perception of the arguments in the message. That is, consumers perceive the same advertisement differently based on their subjective perceptions. In accordance with the ELM, early models of traditional advertising effectiveness support advertisements perceived as high quality are related to positive attitudes toward the message. Accordingly, consumers who perceive ads to be less believable, clear and realistic should have less favorable attitudes toward that ad. Thus, we propose the following hypothesis:

H1. Message perceptions will be positively related to attitudes toward the advertisement (A_{Ad}).

It is important to note that brand perceptions, not message perceptions, influence brand attitudes (MacKenzie et al., 1986). However, brand perceptions, according to Aaker (1991), are the category of attributes "linked" in memory to a brand. Thus, in the case of fictitious or new brands, these perceptions of the ad/message are believed to reflect brand perceptions for novel or new brands, as existing memories of the brand do not yet exist. Moreover, MacKenzie and Lutz (1989) found no effect of brand perceptions on brand attitudes, suggesting they are independent of each other. Thus, we propose the following hypothesis:

H2. Message perceptions will be positively related to attitudes toward the brand (A_B).

Perceived ad credibility. A second proposition of earlier advertising models is that ad credibility affects ad attitudes. Credibility refers to the objective and subjective components

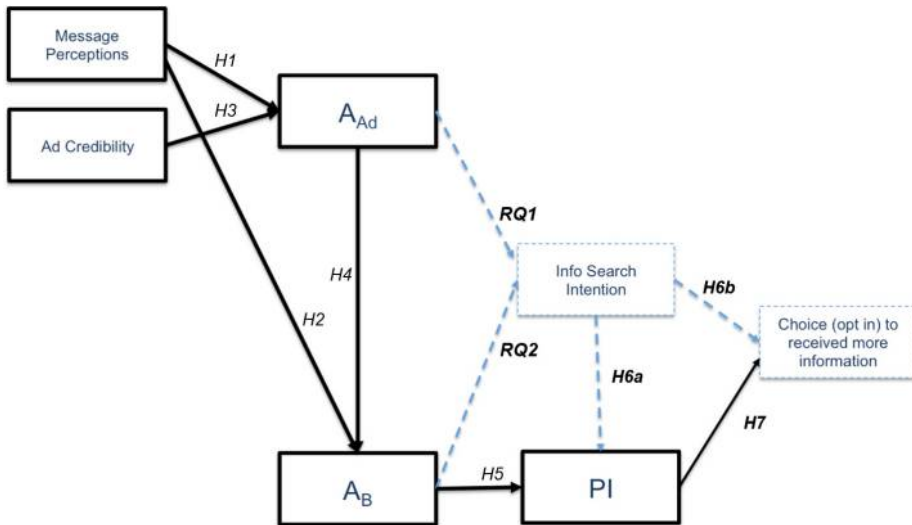


Figure 2. Proposed theoretical model of the digital advertising process

of the believability of a source, as well as message, which is the focus on this research. Media and advertising credibility can be defined as the extent to which the consumer believes or trusts in the media or advertising claims (Moore and Rodgers, 2005).

According to Petty and Cacioppo (1986), source expertise influences recipients' perceptions and attitudes toward a persuasive message. High credibility sources have been found to be more persuasive than low credibility sources (MacKenzie *et al.*, 1986; Petty and Wegener, 1998; Pornpitakpan, 2004; Sinkovics *et al.*, 2012; Yang *et al.*, 2013). Similarly, past research demonstrates that a positive relationship exists between perceived ad credibility and attitudes toward an ad (MacKenzie and Lutz, 1989; Cotte *et al.*, 2005). Thus, this research contends:

H3. Perceived ad credibility will be positively related to attitudes toward the advertisement (A_{Ad}).

Relationships between attitudes and intentions. Many studies have demonstrated the effect of a consumer's attitude toward an advertisement on their attitude toward a brand and their purchase intention (Brown and Stayman, 1992; Gardner, 1985; MacKenzie and Lutz, 1989; MacKenzie *et al.*, 1986; Shimp, 1981). Attitude toward an advertisement refers to a subjective response to a particular advertisement at the time of exposure in a favorable or unfavorable manner. Shimp (1981) argues that attitude toward an ad is transferred to the brand, which, in turn, predicts consumers' purchase intentions. MacKenzie and Lutz (1989) found positive direct relationship between attitudes toward an advertisement and attitudes toward the brand. Accordingly, we hypothesize the following:

H4. Attitudes toward the advertisement (A_{Ad}) will be positively associated with attitudes toward the brand (A_B).

Successively, attitudes toward advertisements have been shown to indirectly influence consumers purchase intentions, through brand attitudes, which directly influence purchase intentions (Batra and Ray, 1986; Brown *et al.*, 1998; Burke and Edell, 1989; Edell and Burke, 1987; MacKenzie and Lutz, 1989; MacKenzie *et al.*, 1986; Merchant and Rose, 2013; Spears and Singh, 2004; Yazdanparast and Spears, 2013). Accordingly, this study hypothesizes the following:

H5. Attitudes toward the brand (A_B) will be positively associated with PI.

Theoretical extension

Interestingly, the relationship between attitudes and other consumer intentions may be important to examine because of the unique characteristics and utilization of digital devices including laptops, tablets and smartphones (Maity and Arnold, 2013; Punj, 2012; Vatanparast and Asil, 2007). Specifically, digital devices afford consumers immediate access to information to aid their advertising process and thus the lag between ad exposure and action are nearly eradicated. If consumers are interested in an advertised product, they might search for more information about it. Consequently, searching for more information about a product, one of the unique functions that digital advertising immediately allows, would be a valuable step to measure in a digital advertising process (Häubl and Trifts, 2000). Additionally, prior models such as the attitude belief model and the theory of reasoned action substantiate the prediction of search intentions by attitudes (Fishbein, 1979; Muk and Chung, 2015). Thus, we extend the affect transfer hypothesis of advertising effectiveness by testing the relationship between attitudes, product information search intentions and purchase intentions, and beg the following questions:

RQ1. Will attitudes toward the advertisement (A_{Ad}) be positively associated with intention to search for product information?

RQ2. Will attitudes toward the brand (A_b) be positively associated with intention to search for information?

Intentions to product information search and intentions to purchase. According to Shim *et al.* (2001), consumers' intention to search for product information is a key predictor of consumers' online purchasing intentions. Thus, it is reasonable to assume that following exposure to an advertisement, consumers' intentions to search for information about the advertised brand may influence subsequent intentions to purchase the product. According to theories regarding consumers' advertising process, consumers need to gather information for their purchase decision (Laroche *et al.*, 1996). Thus, this research posits:

H6a. Intention to search for product information (SI) will be positively associated with purchase intention (PI).

Intention and choice. Finally, this study attempts to explore the association between behavioral intentions and actual behavior to inform integrated marketing strategies. Theory suggests that volitional behaviors such as click-through when using an app or web-browser can be predicted by prior intentions (Fazio, 1990). These intentions are defined as "a measure of the likelihood that a person will engage in a given behavior" (Ajzen and Fishbein, 1980, p. 41). Thus, it is reasonable to assert that people are more likely to click-through to receive more product information when they have stronger intentions toward the advertised product.

H6b. Intention to search for information (SI) will be positively associated with the likelihood of clicking-through to receive product information.

H7. Purchase intention (PI) will be positively associated with the likelihood of clicking-through to receive product information.

H1-H7 and RQ1 and RQ2 are graphically represented in Figure 2.

The dual nature of the digital buying process

To ensure a richer understanding of how digital advertising works, a robust parameter of information processing is tested. According to the ELM, people process information through either a central or peripheral route (Petty and Cacioppo, 1986). People who have high motivation and/or ability tend to engage in central route processing, while those who have low motivation and ability tend to engage in peripheral route processing.

Similarly, the heuristic systematic model (HSM) posits two types of information processing: systematic processing that encompasses the central route and heuristic processing which is similar to the peripheral route of persuasion (Chaiken and Maheswaran, 1994). The major difference between the ELM and the HSM is that the HSM posits that two ways of information processing can co-occur with one predominating in some instances, whereas the ELM posits the independent role of the two routes of persuasion (Stiff, 1986; Stiff and Boster, 1987). The ELM and HSM have been widely applied to research attempting to explicate how consumers process advertising messages regarding various marketing communication variables such as source (Goldsmith *et al.*, 2000; Petty *et al.*, 1983; Reinhard and Sporer, 2010) and message (Andrews and Shimp, 1990; Petty *et al.*, 1983; Worthington *et al.*, 2015).

Consistent with the HSM, one major tenant of the proposed model of the digital advertising process is that consumers' involvement can affect which process will be

activated (Chang *et al.*, 2013; Matthes, 2013). In the current paper, involvement refers to the extent to which an individual perceives that a topic or issue in a message is personally relevant to them (Petty *et al.*, 1983). That is to say, when consumers perceive that the message/ad or product/brand in a message is personally relevant to them, they are highly motivated in the subsequent decision-making processes. Furthermore, motivated consumers tend to engage in a more effortful and deliberate purchase process.

In particular, research has shown that attitudes are more predictive of intentions when consumers are involved in a deliberate purchase process (Fazio and Zanna, 1981; MacKenzie *et al.*, 1986). On the other hand, when involvement is low, non-deliberate attitudes are weaker predictors of behavior (Olson and Fazio, 2008; Sherman and Fazio, 1983). In turn, when involvement is high, the predictive power of an attitude on subsequent behavior gets stronger (Glasman and Albarracín, 2006; Petty *et al.*, 1995). We propose that this effect will persist for other types of intentions in the digital space such that:

H8a. Attitudes toward brand (A_b) will be stronger predictors of search intentions when involvement is high, compared to when involvement is low.

H8b. Attitudes toward brand (A_b) will be stronger predictors of PI when involvement is high, compared to when involvement is low.

Similarly, consumers are more likely to exert effort, act or purchase in alignment with existing intentions when involvement is high (Ajzen and Fishbein, 1977; Petty *et al.*, 1983). Thus, in this study, the relationship between purchase intentions and click-through likelihood and the relationship between search intentions and click-through likelihood should be stronger when involvement is high, compared to when involvement is low. Thus, the authors argue:

H9a. Search intentions will be a stronger predictor of consumers' likelihood to click-through for more product information when involvement is high, compared to when involvement is low.

H9b. Purchase intentions will be a stronger predictor of consumers' likelihood to click-through for more product information when involvement is high, compared to when involvement is low.

Methods

Design and procedure

To examine the advertising process in a digital context, a survey was administered online. A research company, Critical Mix, recruited participants from an online panel. Members of the research panel received an invitation to participate in the online study by clicking on a URL. Upon clicking the study URL, consumers reported the type of digital device they were using, and then participants responded to a series of manipulation checks that confirmed the device they were using. Moreover, participants clarified their device by selecting the image most similar to their device (Appendix 1). Cross-referencing these two checks revealed 96 per cent accuracy across all devices. Furthermore, all indicated that they had the adequate software to view the digital advertisements they would respond to. Following the robustness checks, participants responded to a demographic profile. The accrued sample was relatively balanced across device type, with 35 per cent using a laptop, 38 per cent using a tablet and 28 per cent using a smartphone.

Within the survey, participants were presented with eight digital video ads in random order. This was one of the three strategies we used to minimize for common method

variance (CMV). After viewing the first stimulus, participants reported their attitudes toward the ad, attitudes toward the brand featured in the ad, intentions to seek more information about the product and purchase intentions for the product. These measures were presented in random order as a second strategy to account for CMV. Finally, to measure a behavioral response, participants were given a choice to receive more information about the product advertised or not. This process was repeated for each of the seven remaining ads.

A third strategy to minimize CMV was to analyze the data of consumers' response to only the first ad shown. By modeling the consumers' responses to only the first ad, we were able to generalize the model to the digital advertising process across multiple product types. Random presentation of each ad (e.g. across product types) reduced confounding by equalizing concomitant factors that have not been accounted for in the experimental design (Jo, 2008). The generalizability of the results was enhanced through our design, as the digital buying process for eight different products ads were assessed across three device types within one general model.

Stimuli

The stimuli were created for this research using foreign brands, largely unknown in the USA (Appendix 2). This was to control brand familiarity. A consultant adapted TV ads into 15-second digital video advertisements for 12 different consumer offerings. These offerings included multiple types of products such as toothpaste and detergent, a minivan and a laptop, and a cruise and a music festival. The purpose of using eight different products was to enhance the authors' ability to generalize the results of varying products to a general digital advertising process. Focus groups with eight upper-level undergraduate advertising majors were conducted at a southwestern university to pre-test that the ads. These participants served as judges and evaluated the advertisements realism and the products categorization. Evaluations of advertisements as good/bad, for similar offerings, did not significantly ($p < 0.05$) differ from each other (Appendix 3). Participants negatively rated realism of four ads, so they were not used in the study.

Study measures

Message perceptions. Participants' perception of the advertising messages quality ($\alpha = 0.93$) was assessed using a seven-point semantic differential scale adapted from prior research (Beltramini, 1988; Slater and Rouner, 1996). The scale consisted of three word-pairs as follows: "I felt or thought the advertisement I just saw was [...] *realistic/unrealistic*, *believable/unbelievable*, and *clear/unclear*."

Perceived ad credibility. The extent to which participants perceived the message as credible ($\alpha = 0.90$) was assessed using a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree) adapted from prior research (Dholakia and Sternthal, 1977; Harmon and Coney, 1982; Ohanian, 1991). The scale consisted of five items that advertisements are *reliable*, *honest*, *clear*, *credible* and *truthful*.

Involvement. Asking consumers "Are you currently in the market to buy this product?" assessed the extent to which the advertised product was personally relevant to the participants. Participants who said yes were assigned to the high-involvement category = 1, and those who said no were assigned to the low-involvement category = 0.

Responses to advertising included four multi-item scales measuring attitude toward the advertisement, attitude toward the brand, intention to search for information about the product, and purchase intention. A final advertising response was a binary scale measuring whether the respondent chose (clicked-through) to receive additional information about the

product advertised. The measures, as operationalized in the survey, are summarized in Table I.

Attitude toward the ad and brand. Participants' attitudes toward the ad ($\alpha = 0.82$) and brand ($\alpha = 0.80$) were assessed with a seven-point semantic differential scale adopted from prior research (MacKenzie *et al.*, 1986). Four word-pairs were used to assess participants' attitude toward the advertisement: *likeable/unlikeable*, *interesting/uninteresting*, *good/bad* and *irritating/not irritating*. Three word-pairs were used to assess participants' attitude toward the brand: *likeable/unlikeable*, *pleasant/unpleasant* and *good/bad*.

Information search intention. The extent to which participants intended to seek additional information about the advertised products was measured with a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree) adapted from prior research (Biswas *et al.*, 2002; Dutta-Bergman, 2003; Yang, 2012). The scale consisted of three items ($\alpha = 0.94$).

Variables	Measures
Message perceptions	I felt or thought the advertisement I just saw was . . . Realistic – Unrealistic (7-point) I felt or thought the advertisement I just saw was . . . Believable – Unbelievable (7-point)
Ad credibility perceptions	I felt or thought the advertisement I just saw was . . . Clear – Unclear (7-point) The information conveyed the advertising on the device you are currently using is . . . reliable (7-point) The information conveyed the advertising on the device you are currently using is honest (7-point) The information conveyed the advertising on the device you are currently using is clear (7-point) The information conveyed the advertising on the device you are currently using is truthful (7-point) The information conveyed the advertising on the device you are currently using is credible (7-point)
Personal involvement	Are you currently in the market to purchase this product? 0 = No or 1 = Yes
Attitude toward the ad	Please describe the advertisement you just saw as . . . Likable - Unlikable (7-point) Please describe the advertisement you just saw as . . . Interesting - Uninteresting (7-point) Please describe the advertisement you just saw as . . . Good - Bad (7-point) Please describe the advertisement you just saw as . . . Irritating - Not irritating (7-point)
Attitude toward the brand	Please evaluate the brand from the ad you just saw as . . . Likeable - Unlikeable (7-point) (7-point) Please evaluate the brand from the ad you just saw as . . . Pleasant - Unpleasant (7-point) Please evaluate the brand from the ad you just saw as . . . Good - Bad (7-point)
Information Search Intention	I will . . . Spend time search information about the product advertised (7-point) I intend to . . . Speak to friends about the product advertised (7-point) I intend to . . . Search for information about the product advertised (7-point)
Purchase Intention	My purchasing the product in the advertisement I just saw is . . . Likely - Unlikely (7-point) My purchasing the product in the advertisement I just saw is . . . Probable - Improbable (7-point) My purchasing the product in the advertisement I just saw is . . . Possible - Impossible (7-point)
Choice to Receive More Information	Please choose whether you would like more information about the product in the advertisement you just viewed. (Yes or No)

Table I.
Summary of
variables measured

An example item includes “*I will spend time search information about the product advertised.*”

Purchase intention. The extent to which participants would like to buy the advertised product was assessed with a seven-point semantic differential scale adopted from prior research (MacKenzie *et al.*, 1986). The following three word-pairs were used to assess participants’ intention to buy the advertised products: *likely/unlikely*, *probable/improbable* and *possible/impossible* ($\alpha = 0.85$).

Click-through for more information. Similar to click-through behaviors in digital marketing, consumer’s choice was measured by asking participants “*Please choose whether you would like more information about the product in the advertisement you just viewed.*” They could select yes = 1 and no = 0. Thus, the actual choice, rather than their preference or intentions was observed.

Control variables

Age and gender were assessed as control variables. Additionally, the type of device the participant used during the study was assessed because it may affect consumers’ credibility perceptions of advertising (Stewart and Cunningham, 2017). Moreover, device ownership and usage differs by device type and age (Anderson, 2015; eMarketer, 2015c).

Sample

The total number of panel members that accessed the study was 7,256. The final sample included 1,725 participants, which corresponds to a 23.8 per cent response rate. The quality of quasi-experimental data resulting from research conducted online can be severely hampered (Albaum *et al.*, 2015). Participants were flagged if their responses to the advertising response scales used in the survey (see study measures) were either consistently low or high, as measured by being 3 or more standard deviations from the sample mean and the speed with which they completed the survey, as both serve as a proxy for speeding through and not answering questions carefully. Participants were also flagged if they incorrectly answered a quality screener question for which they had two chances to complete accurately, included to assess how carefully they read directions. Participants were removed from the sample if they were flagged for two or three of the three checks. This resulted in 7 per cent of the participants ($n = 139$) being removed from the sample.

Of the 1725 participants 59 per cent were female, and the largest concentration resided in California 8.4 per cent and Florida 7.8 per cent. At least one representative from all 50 US states was present. The age of the sample ranged from 18-75 years (*Median* = 46, *SD* = 13.64) with a median household income range of \$40,000-\$49,999. Eighty-three per cent of the sample was Caucasian, 9.3 per cent African American and 3.5 per cent Asian; 8.4 per cent identified as Hispanic. Sixty-four per cent of the sample reported having some college and less than a four-year degree education, while 23 per cent reported having a four-year degree and 13.2 per cent reported having a graduate or professional degree.

Results

Overall structural model

The hypothesized relationships were assessed using path analyses in AMOS. One assumption of structural equation modeling is that all latent variables and indicators vary between units. Thus, the analysis assessed the consumers’ advertising process with respect to only the first stimuli that participants see. Two analyses were conducted. First, we analyzed a model to test *H1-H7* and two research questions. Figure 3 depicts the results of the first model. Next, we analyzed a second model test the role of involvement as a

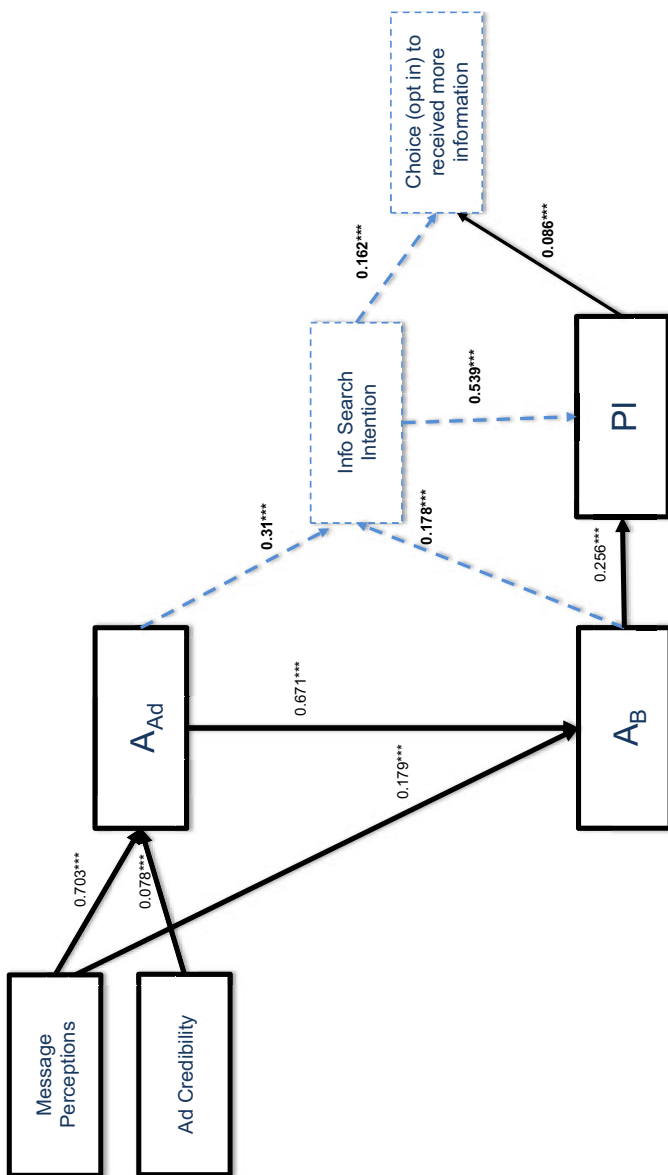


Figure 3. Structural results of the general advertising process model

moderator (i.e. *H8a*, *H8b*, *H9a* and *H9b*). A summary of the models propositions and findings can be found in [Appendix 4](#).

Individual measures were first converted into scales by extracting the principle component from each multi-item scale to represent model variables and then paths were drawn to examine the hypothesized relationships.

A general digital ad process model

The general model was analyzed using SPSS 22 AMOS statistical modeling software. [Kline \(2005\)](#) and [Hu and Bentler \(1999\)](#) have provided benchmarks for model fit of comparative fit index (CFI) > 0.90 and root mean square error of approximation (RMSEA) < 0.06, respectively. Figure 4 provides the standardized path coefficients (and significance) of each parameter. The proposed structural model provided an acceptable fit to the study data: $\chi^2(25) = 270.713$ $p < 0.001$, normed fit index (NFI) = 0.956, CFI = 0.960, RMSEA = 0.076. It is worth noting that the RMSEA was borderline but below 0.08 the upper limit for adequate fit used by [MacCallum et al. \(1996\)](#) and [Browne and Cudeck \(1993\)](#), especially when taken in combination with the acceptable NFI and CFI values.

Results of the model support *H1-H7* and offer evidence for research questions 1 and 2. Each relationship is detailed in [Figure 3](#). In particular:

- *Message perceptions* were significantly positively related to *attitudes toward the advertisement*.
- *Message perceptions* were significantly positively related with *attitudes toward the brand*.
- *Perceived ad credibility* was significantly positively related to *attitudes toward the advertisement*.
- *Attitudes toward the advertisement* were significantly positively associated with *attitudes toward the brand*.
- *Attitudes toward the brand* were significantly positively associated with *purchase intentions*.
- *Attitudes toward the advertisement* were significantly positively associated with intention to search for product information.
- *Attitudes toward the brand* were significantly positively associated with intention to search for information.
- *Intention to search* for product information was significantly positively associated with *purchase intentions*.
- *Intention to search* for information was significantly positively associated with the likelihood of *clicking-through* to receive product information.
- *Purchase intentions* were significantly positively associated with the likelihood of *clicking-through* to receive product information.

Note, regressing *gender* onto *message perceptions* controlled for the significant relationship between the two variables. Similarly, the relationships between *gender* and *A_{Ad}*, *age* and *ad credibility*, *age* and *intentions*, *device type* and *ad credibility*, *device type* and *age*, *device type* and *search intentions*, and *device type* and *click-through* were also controlled.

A dual digital ad process model

Next, we conducted a second structural equation model to test *H8a*, *H8b*, *H9a* and *H9b*, which address how involvement moderates the structure of the digital ad process model.

Multi-group path analysis was conducted using invariance testing. The invariance test compares whether the chi-square statistics of the two models – one model for low involvement and one model for high involvement – differs significantly from each. Moreover, this analysis tests which specific parameters differ.

Results of the multi-group model are summarized in Table II. The proposed structural model provided a good fit to the study data: $\chi^2(48) = 344.174, p < 0.001$, NFI = 0.935, CFI = 0.942, RMSEA = 0.060. Moreover, when compared to the fully constrained model $\chi^2(64) = 523.568, p < 0.001$, the invariance test supports that involvement moderates the structure of the model ($\Delta\chi^2(16) = 179.394, p < 0.001$). Additionally, the involvement moderated dual digital ad process model has improved fit compared to the original general digital ad process model, meeting the combined criteria of Kline (2005) and Hu and Bentler (1999) of CFI > 0.90 and RMSEA < 0.06, respectively.

Assessing both a 95 per cent confidence threshold of 348.02 and the difference in slopes by constraining the relevant parameters on at a time, *H8a*, *H8b*, *H9a* and *H9b* are tested. First, results testing *H8a*, which states A_B will be a stronger predictor of search intentions (SI) when involvement is high (vs low), were partially supportive, A_B is no longer a significant predictor of SI when involvement is high, compared to when it is low. However, the chi-square ($\chi^2 = 344.527$) did not exceed the confidence threshold. Thus, the attenuation of the relationship between A_B and SI when involvement is high (vs low), ultimately does not support *H8a*, though the chi-square offers inconclusive evidence of the relationship.

Next, *H8b*, which states A_B will be a stronger predictor of PI when involvement is high (vs low), was also supported by the chi-square ($\chi^2 = 414.802$) and *t*-test difference in slopes ($t = 8.27, p < 0.001$). Furthermore, *H9a*, which states that SI will be a stronger predictor of

Variables	Estimate	
	Low Involvement	High Involvement
Message perceptions → A_{Ad}	0.663***	0.721***
Ad credibility → A_{Ad}	0.089***	0.012
Message perceptions → A_b	0.166***	0.208***
A_{Ad} → A_b	0.661***	0.653***
A_{Ad} → Search Intentions	0.222***	0.273***
A_b → Search intentions	0.150***	0.109
A_b → PI	0.130***	0.439***
Search intentions → PI	0.496***	0.223***
PI → Choice for additional product info	0.048***	0.047
Search intentions → Choice for additional product info	0.090***	0.252***
<i>Control Variables</i>		
Gender → A_{Ad}	0.105**	0.121*
Age → Search Intentions	-0.010***	-0.007**
Age → PI	-0.006**	0.000
Device type → Search intentions	0.003	-0.283***
Device type → Purchase intentions	-0.034	0.082
Device type → Choice for additional product info	-0.025	-0.113**
<i>Covariates</i>		
Message perceptions ↔ Gender	0.032*	0.032*
Message perceptions ↔ Ad credibility	0.380***	0.358***
Age ↔ Ad credibility	-4.594***	4.626***
Device type ↔ Ad credibility	0.029	-0.003
Device type ↔ Age	-0.506**	-0.514

Table II.
Summary of advertising process models comparing dual processes

consumers' likelihood to click-through for more product information (click-through) when involvement is high (vs low), was supported ($\chi^2 = 377.686$). This is also supported by the t -test difference in slopes ($t = 7.51, p < 0.001$).

Finally, $H9b$, which states that PI will be a weaker predictor of consumers' click-through for more product information when involvement is high (vs low), was not supported ($\chi^2 = 344.175$). However, it is important to note that PI is no longer a significant predictor of click-through when involvement is high. Thus, the difference in slopes test is not necessary, as a change in the p -value suggests that PI is not related to click-through when involvement is high (vs low). Taken together, the results are consistent with $H9b$.

Discussion and conclusion

This study develops a digital advertising framework that accounts for previously studied drivers and consequences of attitudes toward an ad, while adding two metrics particularly important in the digital context – product information search intentions and click-through – to the model. We extend the affect transfer hypothesis to examine consumers' processing of digital video advertising and, in doing so, enhance our understanding of how digital advertising works. We further offer implications for marketers regarding digital video advertising and other digital marketing tactics.

Theoretical implications

This study contributes to existing literature in digital advertising, information processing and consumer behavior in three ways. First, the extension of the affect transfer hypothesis enhances the current understanding of digital advertising, in particular, how consumers process digital advertising. Scholars have suggested that further advancement in digital marketing requires linking empirical research with established theories (Bart *et al.*, 2014; Grassmann and Brettel, 2015). Moreover, few digital advertising models account for recent shifts in consumers' digital purchase behavior. Thus, this study has investigated how digital advertising works and accounted for consumers' reliance on product information search on digital platforms. We demonstrate an empirical relationship between brand attitudes and product information search intentions (SI), as well as a relationship between SI and purchase intention. Consequently, this research offers a coherent framework that identifies drivers and consequences of attitudes toward digital ads.

In doing this, we demonstrate that the affect transfer hypothesis is a useful theoretical framework for better understanding consumers' response to digital advertising via various devices, as we had consumers take the study on laptops, tablets and smartphones. Indeed, by including search intentions in the model, we expand its ability to explain digital advertising effectiveness. Additionally, by simulating click-through likelihood, we further understand the role of purchase intentions in digital advertising. Specifically, consumers purchase intentions are related to click-through likelihood.

Second, our digital advertising model allows for the simultaneous examination of the long understood relationship between attitude toward advertisement, brand attitudes and purchase intentions along with a novel digital-based relationship between brand attitudes, search intentions (SI) and purchase intentions. Specifically, consumers' perceptions about digital video ads indirectly predict their intentions to search for more information about the product. Thus, researchers might consider whether digital video ads push consumers to search, thereby enhancing search engine marketing effectiveness. Prior studies have systematically examined consumers' intentions to search for information, an integral antecedent of purchase intentions from online buying process, though this is the first study to do so for digital advertising (Choi and Rifon, 2002; Shim *et al.*, 2001). Consumer's search

intentions are increasingly important to marketers because search marketing expenditures are increasing and omni-channeling allows consumers to search online as well as in-store (Nielsen, 2016; Wang *et al.*, 2015).

By taking the perspective of the consumer to examine digital advertising effectiveness, our study complements previous research that has primarily focused on individual customers and traditional response variables (Bart *et al.*, 2014). Both academic and industry sources tout the importance of search metrics in digital marketing (Aldredge *et al.*, 2015; Srinivasan *et al.*, 2016). Interestingly, the results of this study support that intentions to search are a fundamental variable in the digital advertising process, as search intentions are positively related purchase intentions, and both search intentions and purchase intentions are positively related to consumers' likelihood of clicking through for more product information.

Third, by distinguishing the roles of purchase and search intentions in the process, we extend prior theory on the attitude–behavior link, as purchase intentions were not as salient of a predictor for click through in a digital-based high-involvement advertising process as search intentions. With regard to the nature of consumer involvement, we find that when consumers are in the market for a product, they are more likely to click-through for more product information when they have stronger search intentions. On the other hand, although being in the market to buy a product is often seen as the rationale for active customer involvement, it does affect a stronger relationship between purchase intention and opting in for more information. This begs the question, is the intention–behavior link (Fishbein and Ajzen, 1975) contingent on situational factors? Smith and Swinyard (1983) proposed just that, observing that when intentions are based on advertising, their relationship consistency is significantly reduced. This research proposes an advertising-specific model of consumer responses; however, further research testing the model in other contexts (i.e. when attitudes are the result of pricing or packaging) will also help enhance our understanding of when involvement moderates the relationship between purchase intentions and behavior. Indeed, brand attitudes predicted search intentions when consumer were not in the market for the product, but no longer did when consumers were in the market. This suggests that, digital advertising can elicit search intentions and thus activate the early stages of a buying process for consumers through elicited search; however, it also suggest that search is not relevant when consumer are already in the market. These findings suggest that the digital buying process tested here is sensitive to situational factors; thus, further studies could be done to take into account other factors such as the differences across product characteristics (e.g. degree of product involvement such as utilitarian vs hedonic value).

Alternatively, involvement not moderating the relationship between purchase intention and behavior might be attributed to the relevance of the behavior being performed to the intention or attitude. In particular, click-through is a very important behavior in interactive marketing; however, is it the equivalent of purchase. From this research, search intentions may be more relevant than purchase intentions in predicting certain actions such as click-through. Future research should include actual purchase behavior to further understand the role of involvement in digital marketing. Engagement is a key metric in digital advertising; however, involvement or the personal relevance of a product to the consumers must not be overlooked. Consumers have access to endless information anywhere, and because of omni-commerce, they are almost able to take action anytime, but what actions will they take. Based on the findings of this research, the attitudes of consumers with high involvement (vs low involvement) predict purchase intentions but not search intentions. Moreover, the purchase intentions of consumers with high involvement (vs low involvement) do not predict click-through for information. Taken together, these findings suggest that external search for information may not be part of

the advertising process when consumers' who are not in the market for the product. Future research should test additional models, as past studies have shown that high involvement increases motivation to engage in external information search (Celsi and Olson, 1988; Olshavsky and Wymer, 1995).

The days of watching a TV ad and having a lag till purchase are behind us. Consequently, involvement is an integral piece to understanding digital advertising. Consumers can go from liking to purchase in minutes. For consumers who are identified as "not in the market" for the product, marketers can focus on affecting search intentions, as they lead to purchase intentions and click-through more product information. However, for consumers who are identified as "in the market" for the product, marketers can focus on affecting brand attitudes, which predicts purchase intentions. Moreover the click-through should not lead to more information, but directly to commerce.

Managerial implications

Prior research has shown that consumers use the internet as a source of information and inspiration (Sands *et al.*, 2016). In particular, digital consumers are searching for ideas, rather than simply optimizing the price of a purchase. Consequently, consumers' product information search is assumed to be a central step in the pre-purchase process. Accounting for search in a digital advertising process allows for a better understanding of digital advertising and how it might impact other marketing communication tactics. With abundant information available to consumers from ostensibly unlimited and often unfamiliar sources, marketers must understand how their advertising influences consumers' search of such information.

From a managerial perspective, we address emerging issues around increased spending on digital. Findings from this research implicate search intentions as a key metric for digital marketing. Findings of this research show that advertising appears to work for consumers not in the market by affecting their attitudes, which subsequently inspire search intentions and consequently click-through likelihood. Thus, marketers should consider assessing return on investment for recent industry wide increases in digital advertising expenditures as a function of lead generation and click-through rather than sales and profits. Research has shown that consumers generally have low involvement when exposed to digital advertising. Inspiring the consumer to engage the company, using a 15-second video advertisement, relies on many factors including the ad credibility, the message perceptions and the consumer's attitudes toward the ad and brand, and can be worth the expenditure, even if it might not lead to purchase for much of the targeted audience.

As proliferation of mobile platforms continues, video-search engine marketing may become a key strategy for companies. We demonstrate that search intentions are important predictors of purchase intentions, while purchase intentions lead to a consumer clicking-through to be sent more information. However, whether a consumer is in the market for the product affects these relationships. One implication for marketers is that they should facilitate consumer search during both earlier and later stages of the digital buying process. Buyer behavior theory asserts that information search occurs prior to evaluation and purchase. However, according to the findings of this research, in a digital context, search might also be salient later in the process and inspired by evaluations (Yu, 2016). Consequently, another implication is that marketers consider an integrated approach to digital advertising, aligning search strategies with advertisements. The ads in this study drove consumers to search, suggesting that marketers should continuously reinforce ads with search (e.g. PPC and SEO). One such strategy includes retargeting – the ability to reach consumers who have viewed a company's ad or website.

Findings suggest that perceptions formed from digital advertising exposure lead consumers not in the market to purchase to form favorable attitudes and then intentions to search and actual search actions. Consequently, marketers might increase the effectiveness of their efforts by ensuring that consumers are given a chance to search after being exposed to an advertisement. Finally, marketers must use behavioral segmentation – tracking consumers past search queries, purchase and browsing behavior to ensure the efficient use of these strategies, as findings suggest that the affect transfer from message perceptions and ad credibility, to attitudes on to search intentions is less salient in the process of consumers who are in the market to buy.

Limitations and future research

This research examined the changes in consumers' advertising process in a digital context. However, a comparison to traditional platforms (e.g. TV) was not made. Though the results of this research are robust, future studies might examine the same advertising process with respect TV. Doing so would possibly enhance the authors' conclusion that the advertising process is evolving along with technology.

Extending the affect transfer hypothesis, this research examined consumers' response to digital advertising using "fictitious" brands. This resulted in brand perceptions being excluded from the conceptual and tested model of this research. Future studies can include "existing" brands to better understand the role of brand perception in the digital advertising process. However, the researchers believe the model to be robust without brand perceptions, as past studies assert that brand attitude is strongly influenced by ad attitude and not by brand perceptions (MacKenzie and Lutz, 1989). This this may be attributed to the activation of affective or peripheral processing in the formation of brand attitude, and the independence of brand attitude from brand perceptions. Consequently, future research examining brand perceptions in subsequent models would enhance marketers understanding of where systematic processes are occurring.

Additionally, mobile devices are implicitly different than more traditional laptops in their mobility, display of information and sensory experience afforded. On a mobile device, purchase may not be the consumer's immediate goal. If consumers are moving around, purchase intentions may not be as salient in the consumer's advertising process (eMarketer, 2014b). Consequently, mobile devices may inspire consumers to respond to advertising differently than they do on laptops. Future research should examine whether consumers prefer laptops for product research by testing whether device type moderates the advertising process. When consumers are not in the market to buy a product, will the device (laptop vs smartphone) affect the ads influence on their pursuit of more product information? With respect to measuring click-through, this research took a controlled approach asking participants to self-report if they would like more information (yes vs no). In future projects, a more realistic variable is suggested where participants "click here" for more information. In conclusion, the findings of this research greatly enhance our understanding of digital advertising, as well as uncover questions that can be examined to directly impact marketing theory and practice.

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Appendix 1

Examining
digital
advertising

What device are you currently responding to this survey with?

- Laptop / Notebook Computer Device
- Tablet Device
- Smartphone Device
- Other
- Don't know / Not sure

Just to clarify. Have a look at the device you are currently using. Please select the picture below that looks most like the device you are on right now.



Figure A1.
Platform verification
survey questions

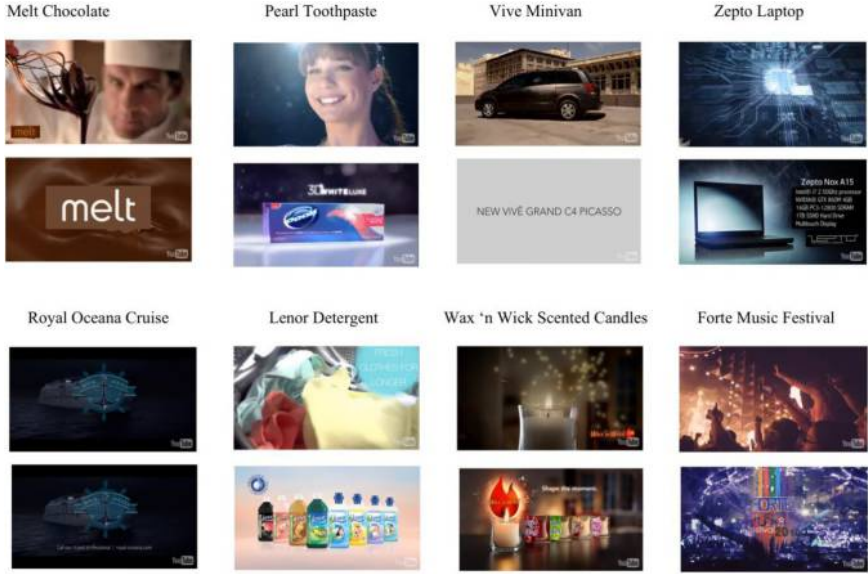


Figure A2.
Example of stimuli

Appendix 3

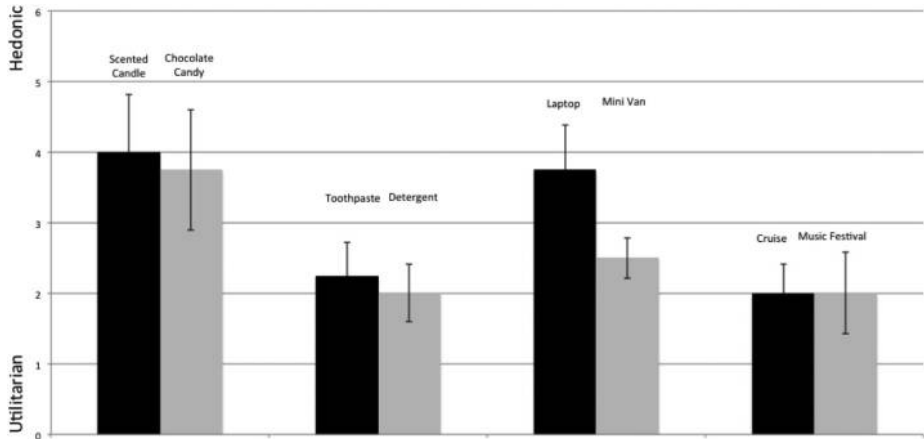


Figure A3.
Manipulation check of stimuli

Appendix 4

Examining digital advertising

<i>H1.</i> Message perceptions will be positively related to attitudes toward the advertisement	Supported
<i>H2.</i> Message perceptions will be positively related with attitudes toward the brand	Supported
<i>H3.</i> Perceived ad credibility will be positively associated with A_{Ad}	Supported
<i>H4.</i> A_{Ad} will be positively associated with A_B	Supported
<i>H5.</i> A_B will be positively associated with PI	Supported
<i>RQ1.</i> Will A_{Ad} be positively associated with intention to search for product information?	Evidence in Support
<i>RQ2.</i> Will A_B be positively associated with intention to search for information?	Evidence in Support
<i>H6a.</i> Intention to search for product information will be positively associated with PI	Supported
<i>H6b.</i> Intention to search for information will be positively associated with the likelihood of clicking-through to receive product information	Supported
<i>H7.</i> PI will be positively associated with the likelihood of clicking-through to receive product information	Supported
<i>H8a.</i> Brand attitudes will be stronger predictors of search intentions when involvement is high, compared to when involvement is low	Not Supported
<i>H8b.</i> Brand attitudes will be stronger predictors of purchase intentions when involvement is high, compared to when involvement is low	Supported
<i>H9a.</i> Search intentions will be a stronger predictor of consumers' likelihood to click-through for more product information when involvement is high, compared to when involvement is low	Supported
<i>H9b.</i> Purchase intentions will be a stronger predictor of consumers' likelihood to click-through for more product information when involvement is high, compared to when involvement is low	Not Supported

Table AI.
Summary of hypotheses and findings

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