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IS THIS FOR ME? HOW CONSUMERS RESPOND TO PERSONALIZED ADVERTISING ON SOCIAL NETWORK SITES

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ABSTRACT

We study the impact of perceived personalization on consumer responses to advertising on Facebook, a popular social network site. Based on two experiments, we test a moderated mediation model with perceived relevance as the mediator and respondents' attitude toward Facebook as the moderator of the relationship between perceived personalization on the one hand and brand attitude and click intention on the other hand. The results show that perceived personalization improves responses toward Facebook ads, through perceived relevance. The moderating impact of the attitude toward Facebook is only significant in the second study. There, the positive effect of perceived personalization of Facebook advertisements on click intention is stronger for participants with a more positive attitude toward Facebook.

KEY WORDS

Social media; online advertising; personalization

INTRODUCTION

With consumers' increasing use of social network sites, such as Facebook, Twitter and YouTube, advertising on these platforms has also increased (Kelly, Kerr and Drennan 2010, Kwon and Sung 2011). For example, two out of three Americans use social media sites, which represents about 147.8 million people (Park, Rodgers and Stemmler 2011). Especially for young people, social media have become perhaps the most popular communication channels (Chu 2011). Facebook boasts an average of 864 million daily active users worldwide (Facebook 2014). Research suggests that social network sites can be an interesting platform for firms to reach their target group: firms are able to target specific consumer groups at lower cost and with higher speed (Saxena and Khanna 2013, Trusov, Bucklin and Pauwels 2009, Wen, Tan and Chang 2009). Globally, advertising in social media reached about \$9 billion in 2013 (Magna Global 2013). In the US alone, social advertising revenues are expected to grow from \$4.7 billion in 2012 to \$11 billion in 2017, representing a compound annual growth rate of 18.6% (Stadd 2014). With this rapid growth over a short period of time, academic research on social networking sites has struggled to keep pace (Kelly, Kerr and Drennan 2010). Relatively little is known with respect to how consumers respond to advertisements on these sites, and which factors might influence consumers' responses (Chu 2011, Maurer and Wiegmann 2011, Tucker 2014, Wen, Tan and Chang 2009). In the present study, we try to partly close this knowledge gap by experimentally testing the responses to advertising in a social network site, taking ad personalization, perceived relevance and the attitude towards the site into account (Figure 1). The study is set on Facebook because that is considered by many as the most popular social network site today. For example, in the US, Facebook accounts for 56.5 percent of all social media site visits (Statista Inc. 2015).

Insert Figure 1 about here

One of the advantages of advertising in online social network sites is that advertising messages can be sent to specific targets on the basis of their disclosed interests and demographics (Kelly, Kerr and Drennan 2010, Sundar and Marathe 2010). Personalized advertising can be defined as advertising that is tailored to an individual's characteristics and/or interests or tastes (Hoy and Milne 2010, Kelly, Kerr and Drennan 2010, Sundar and Marathe 2010). As consumers share a great deal of personal information (profile information, social relationships, interests and behavior) on social network sites, marketers can use this information to personalize their advertising messages on social network sites to a great extent. This makes social network sites a very relevant context to study the effect of advertising personalization on customer responses.

Research in other digital media shows that personalization can generate more favorable consumer responses because it increases the personal relevance of an ad (Anand and Shachar 2009, Arora et al. 2008, Iyer, Soberman and Villas-Boas 2005, Kalyanaraman and Sundar 2006, Noar, Harrington and Aldrich 2009, Pavlou and Stewart 2000). However, research on advertising personalization on social network sites is extremely limited (Antheunis and van Noort 2012, Tucker 2014). Due to the specific context of social network sites, results from studies conducted in other digital environments may not apply here (Taylor, Lewin and Strutton 2011). First of all, Rodgers and Thorson (2000) state that, in order to understand how consumers react to marketing campaigns, it is necessary to understand why they use a medium. Users explicitly do not use

SNSs for commercial goals (Ellison, Steinfield and Lampe 2007). SNSs are primarily used to pass time and for amusement, next to relationship maintenance (Ku, Chu and Tseng 2013, Quan-Haase and Young 2010). These motivations are different from e.g. e-mail or website visits in that these are primarily used for information seeking (Ku, Chu and Tseng 2013). E-mail can also be used for relationship maintenance, but to a far lesser extent than SNSs (Ku, Chu and Tseng 2013). Furthermore, in a social network site, advertisements are displayed in an environment that is designed and controlled by the receiver of the message and is considered a personal space (Kelly, Kerr and Drennan 2010). It is therefore possible that users react negatively to personalized advertising on SNSs, because they may perceive personalization as disruptive or invasive, and hence more irrelevant than advertising in other online environments.

Because of the growing occurrence of personalization in this unique user-to-user ecosystem and the blurring lines between user and marketing content, the effects of personalized advertising through social networking sites warrant specific academic attention (Taylor, Lewin and Strutton 2011). The first purpose of the current study is to investigate how advertising personalization impacts consumer responses (attitude toward the brand and click intention) to advertisements on social networking sites. The second purpose is to investigate the role of perceived ad relevance as a mediator between ad personalization on SNSs and consumer responses.

Even though the positive effects of personalization through perceived relevance have often been confirmed in prior (non-SNS) studies, the literature seems to lack an understanding of *under what circumstances* personalized ads can be (most) effective (Noar, Harrington and Aldrich 2009). More specifically, we will investigate the moderating role of the attitude towards the site on the relationship between ad personalization and consumer responses. The attitude toward the website has been shown to influence consumer responses in other digital environments (Bruner and Kumar 2000, Chen, Clifford and Wells 2002, Cho 1999, Goldsmith and Lafferty 2002, Stevenson, Bruner and Kumar 2000). However, this study is the first to our knowledge to investigate its effect on personalized advertising messages. We will argue that a positive attitude toward the social network site reinforces the positive effects of personalized advertising. We present the results of two experiments, set in a Facebook context in which we test the effects of ad personalization, perceived personal relevance, and the attitude toward Facebook on consumers' brand attitude and click intention.

LITERATURE REVIEW

Advertising Personalization and Consumer Responses

Advertising can be placed on a continuum ranging from no personalization, over rather general personalization or customization (e.g., sending local bridal shop ads to women whose relationship status is "engaged"), to full personalization (completely tailored or addressed to a particular individual based on his or her name, previous searches, web page visits, viewed content, or friends with connections to specific pages, groups, or applications) (Arora et al. 2008, Hawkins et al. 2008, Hoy and Milne 2010).

Previous research in other digital environments has shown that personalization improves advertising effectiveness (Arora et al. 2008, Kalyanaraman and Sundar 2006, Pavlou and Stewart 2000, Tam and Ho 2005). Two meta-analyses (Noar, Benac and Harris 2007, Sohl and Moyer 2007) conclude that personalized messages are generally more effective than non-personalized messages in terms of being more memorable, more likeable and sparking behavioral change. For

example, personalization of a direct marketing message induces a better advertising response rate (Howard and Kerin 2004). Research by Abrahamse et al. (2007) showed that households exposed to a personalized message were more likely to adopt energy-saving behavior than participants in a control group.

Petty, Barden and Wheeler (2002) build upon the Elaboration Likelihood Model (ELM) (Petty and Cacioppo 1986) to explain how tailoring or personalization can change attitudes and subsequent behavior. The ELM describes two routes to attitude formation in response to persuasive messages, the central and the peripheral route (Petty and Cacioppo 1986). Consumers are likely to process via the central route when they are motivated and able to process this message. Peripheral processing, on the other hand, takes place when motivation and ability to process are low. In the logic of the ELM, personalization should benefit attitudes and behavior both under high and low elaboration (Petty, Barden and Wheeler 2002). Under conditions of high elaboration, perceived personalization can lead to biased message processing because personalized arguments could be perceived as stronger than non-personalized arguments. At the same time, under conditions of low elaboration, perceived personalization can serve as a heuristic cue that leads to a (albeit weak) positive attitude change.

The Mediating Role of Perceived Relevance

Several prior studies have examined the underlying mechanism of personalization effects (Kalyanaraman and Sundar 2006, Rimer and Kreuter 2006, Tam and Ho 2006). Researchers have proposed and tested several mediators for favorable personalization effects, such as self-referent thinking (Hawkins et al. 2008, Tam and Ho 2006), perceived uniqueness (Franke and Schreier 2008) and feelings of accomplishment (Franke, Schreier and Kaiser 2010). Based on a review by Noar, Harrington and Aldrich (2009), increased personal relevance is identified as the primary mediator of positive personalization effects in many prior studies (Sundar and Marathe 2010). This idea is also consistent with the Elaboration Likelihood Model (ELM) (Petty, Barden and Wheeler 2002, Petty and Briñol 2010, Petty and Cacioppo 1986).

Consumers tend to see a personalized message as more self-relevant, because it uses information about themselves (Kalyanaraman and Sundar 2006, Kim and Sundar 2008, Tam and Ho 2005, Zeng, Huang and Dou 2009). This idea is in line with self-referencing, i.e. the extent to which a consumer relates information to oneself (Tam and Ho 2006). Self-referencing can have a positive effect on attitudes under both central processing and peripheral processing (Hawkins et al. 2008, Romeo and Debevec 1992). Under peripheral processing, self-referencing can be used as a decision aid ('The product will be good, because the advertisement is personalized for me.')(Tam and Ho 2006). At the same time, due to self-referencing, readers could also be more motivated to process personalized messages (and thus follow a more central route). When a message is perceived as more personally relevant, for example because it is personalized, it does not only lead to greater attention, but also to greater elaboration, message processing, and ultimately, persuasion (Bright and Daugherty 2012, Cho 1999, Noar, Harrington and Aldrich 2009, Rimer and Kreuter 2006, Tam and Ho 2005). For example, Rimer and Kreuter (2006) argue that greater perceived relevance is the driver for personalized messages to generate more behavioral changes. Dijkstra (2005) found that enhancing standard smoking cessation materials with even a minimum amount of personal information increased the perceived relevance of the communications (e.g., "directed at you personally", "takes into account your personal situation") and number of smoking quit attempts.

Especially in the context of online social networking sites, personal relevance seems a crucial condition in order for persuasion to occur in response to personalized messages, as one of the most important reasons for advertising avoidance in social network sites is a lack of perceived relevance (Kelly, Kerr and Drennan 2010). As argued above, personalized advertising messages should be perceived as more relevant. Taylor, Lewin and Strutton (2011) found that self-brand congruity and ad informativeness (related to relevance) positively influence users' attitude toward social network advertising. Therefore, if advertising personalization manages to increase the perceived relevance of the advertisement, this should result in more positive consumer responses (Figure 1).

A typical approach adopted by prior studies is to manipulate and compare the effect of two types of message, i.e. personalized versus non-personalized ones (Noar, Harrington and Aldrich 2009, Tucker 2014). However, a number of studies have indicated that actual personalization (as manipulated by researchers) and perceived personalization (the degree to which a consumer perceives a match between a message and him-or herself) do not automatically match (e.g. Bettman, Luce and Payne 1998, Kramer, Spolter-Weisfeld and Thakkar 2007, Simonson 2005). It is important that consumers perceive a message to be tailored to their needs and preferences, before any favorable personalization effect can take place (Kramer 2007). Consequently, perceived personalization is a more relevant construct than actual personalization (Kramer 2007, Kramer, Spolter-Weisfeld and Thakkar 2007). Therefore, in the current research we manipulate personalization by creating one personalized advertisement based on gender and one non-personalized advertisement, in order to induce variance in perceived personalization. However, as suggested by prior research, we use the measure of perceived personalization in our analyses.

We therefore expect:

H1: Consumers who perceive an advertisement on a social network site as more personalized will have a more positive a) attitude toward the brand and a more positive intention to b) click the advertisement. This effect is mediated by perceived relevance.

The Moderating Role of the Attitude toward the Social Network Site

Research indicates that positive personalization effects on consumer responses are influenced by moderating factors (see meta-analysis by Noar, Benac and Harris 2007). For example, the effectiveness of e-mail personalization is likely to decrease with high personalization when consumers do not see a legitimate reason why their personal information is used (White et al. 2008). Also, highly personalized messages may not generate desirable responses from consumers who possess interdependent or collectivist tendencies (Kramer, Spolter-Weisfeld and Thakkar 2007).

In the present paper, we propose that consumers' attitude toward a social network site moderates their responses to personalized advertising on this site. Prior online research shows that a better attitude toward a website leads to a better brand attitude and purchase intention for embedded advertising (Stevenson, Bruner and Kumar 2000). Particularly for social networking sites, research shows that Facebook users who have a favorable attitude toward Facebook are more likely to purchase products that are advertised there (Wen, Tan and Chang 2009). Lee and Ahn (2013) show that students who perceive Facebook as more trustworthy are also more likely to participate in a binge drinking prevention page on this site.

We propose that the positive effects of personalization and the attitude toward the social network site will reinforce each other (see Figure 1). Consumers with a positive attitude toward

the social network site may transfer this positive feeling toward embedded advertising. Fans of the social network site might find advertising on this site more informative or more entertaining in general, especially when the advertising is personalized. This should result in more positive consumer responses to the advertisement. Users who have a relatively more negative attitude toward the social network site may question the legitimacy of personalized advertising messages or the motives behind it.

H2: The positive effects of perceived personalization of advertisements on a social network site on the a) attitude toward the brand, and intention to b) click the advertisement is stronger for consumers with a more positive attitude toward the social network site than for consumers with a negative attitude toward this site.

STUDY 1

Experiment Design

We conducted a between-subjects online experiment with two experimental conditions, in which we exposed a student sample to a fictitious Facebook home page. As mentioned, we manipulated personalization with one generic and one personalized condition based on gender, in order to induce variance in perceived personalization.

There are three types of advertising on Facebook (AdEspresso 2014). The simplest one is a domain advertisement. This type of advertising is shown on the right hand side of the screen, next to the user's news feed. In the classification of the Interactive Advertising Bureau (2012), this type of advertising corresponds to a 'medium rectangle' display advertisement. A second type is the Page Post Link or Newsfeed Ad, which includes a bigger image with text and a link description. In June 2014, a third format was released: the multi-product ad, through which an advertiser can promote several products and use up to three pictures. The present study tests the first type of advertisement.

The page was programmed in HTML to mimic an actual Facebook page and was filled with fictitious posts and activities that were identical for all participants. To make the page feel more natural, respondents were also asked to provide their own name and the names of five friends, which were inserted into the page via piped text in the HTML code. On the right hand side of the page was a medium rectangle display advertisement for a fictitious brand of perfume (Confiance), as can be found on a real Facebook page. We selected perfume because we thought this was a popular, affordable product with the target group. This product is also (increasingly) important in (online) sales (Euromonitor International 2014, Nielsen 2014). A fictitious brand was used to avoid potential confounds of prior brand attitudes. Depending on the condition, the advertisement was either personalized ("For men with confidence" or "For women with confidence", depending on the gender of the respondent) or generic (not personalized) ("Confiance").

Participants

The study was conducted among students because they are among the heaviest users of Facebook (Hoy and Milne 2010). We recruited undergraduate and graduate students from a Belgian university via e-mail invitations containing a link to the online questionnaire. Participants

($n = 155$) ranged in age from 17 to 29 years old ($\bar{X} = 21.3$, $SD = 2.59$) and 29.7% of the sample was male.

Procedure and measures

The questionnaire started with a welcome screen, with instructions on how to fill out the questionnaire. Participants could proceed through the questionnaire at their own pace. They had to indicate their gender, age and education level and were asked to fill in their own name as well as the names of five friends before continuing to the experimental stimulus. Participants were randomly assigned to one of the two experimental conditions. Then, they were asked to complete the rest of the survey.

Participants rated the perceived degree of personalization of the ad ('the information was fully tailored to my personal profile'). The mean and standard deviation for this measure indicate that there is indeed at least a certain degree of variance in the perceived personalization of the advertisements ($\bar{X} = 2.42$, $SD = 1.51$). We also measured the perceived relevance of the ad (2 items, e.g., 'the information in the advertisement was relevant/useful', $\alpha = .937$) (Ahluwalia, Unnava and Burnkrant 2001), the attitude toward the advertised brand (Ab) (4 items, e.g. 'I like the brand', $\alpha = .787$) (Lee 2000), click intention for the ad (CI) (6 items, e.g. 'It is likely that I will click this ad', $\alpha = .941$) (Chen, Clifford and Wells 2002), and participants' attitude toward Facebook (4 items, e.g. 'I think using Facebook is a good way to spent my time', $\alpha = .735$) (Chen and Wells 1999). All constructs were measured by means of 7-point Likert scales or semantic differentials. Construct scores were computed by calculating the average of the items per construct for use in further analyses.

Results

To test our hypotheses, we analyzed the data using Hayes' approach (2013) (model 5) with 1000 bootstrap samples (Figure 1). We conducted two separate analyses for the two dependent variables, attitude toward the brand (Ab) and click intention (CI). In these two models, the perceived degree of personalization was entered as a continuous independent variable, the attitude toward Facebook as a moderator, and the perceived relevance of the advertisement as a mediator, all mean-centered. Specifically, this model tests a) whether the indirect effect of perceived personalization on Ab and CI through perceived relevance is significant (H1), and b) whether the direct effect of perceived personalization on Ab and CI is significantly moderated by the attitude toward Facebook (H2). Due to the highly feminine sample, we entered the gender of the respondent as a covariate in our analyses.

The results show a significant positive effect of perceived personalization on the mediator, perceived relevance ($\beta = .586$, $p < .001$) (Table 1). In addition, perceived relevance has a positive and significant effect on Ab ($\beta = .288$, $p < .001$) and CI ($\beta = .419$, $p < .001$). Importantly, the indirect effect of perceived personalization through perceived relevance is positive and significant for both Ab (.169, 95% CI = [.103; .258]), and CI (.246, 95% CI = [.155; .373]). These results support H1: the more a Facebook advertisement is perceived as personalized, the more relevant it is perceived, and the more positive the consumers' attitude toward the brand and click intention. The results for Ab and CI suggest indirect-only mediation (Zhao, Lynch and Chen 2010): there was no direct effect of perceived personalization on Ab and CI when the mediator perceived relevance was added to the model. No significant interaction effect of perceived

personalization and the attitude toward Facebook on Ab ($\beta = .023$, $p = .541$) or CI ($\beta = .051$, $p = .197$) was found. H2 is rejected.

Insert Table 1 about here

Discussion

The results of Study 1 confirm our expectation that perceived personalization positively affects consumer responses by increasing the perceived relevance of a Facebook ad. At the same time, our second hypothesis – a moderation effect of attitude toward Facebook – was rejected. The results for H1 suggest indirect-only mediation. This means that the direct effect of perceived personalization on brand attitude and click intention is no longer significant when accounting for perceived relevance. In terms of the ELM, this would suggest central processing: perceived personalization works by increasing the motivation to process, because the advertisement is considered more relevant. There is no direct effect of perceived personalization as a peripheral cue. The ELM predicts that people are more motivated to process an advertisement for a high involvement product than for a low involvement product (Franke, Keinz and Steger 2009, Kalyanaraman and Sundar 2006). A follow-up study ($N = 60$) indicates that perfume is indeed relatively high in involvement ($M = 5.42$, $SD = .80$). This might also explain why our second hypothesis was rejected. The attitude toward Facebook might serve as a more peripheral cue which does not exert any effect in case of a high involvement product. When processing a lower involvement product, on the other hand, consumers may be more likely to take the Facebook context into account as a peripheral cue (Noar, Harrington and Aldrich 2009, Petty and Briñol 2010). Therefore, the effects of personalization and of the attitude toward the Facebook context may be different for high and low involvement products (Tam and Ho 2005). That is why we conducted a second study, in order to test the robustness of the findings of H1, and to see whether H2 would be supported from a product with lower involvement. The follow-up Study indicated that vacuum cleaners are significantly lower in involvement ($M = 4.64$, $SD=.56$) than perfume ($t(26) = 2.98$, $p = .006$).

STUDY 2

Experiment Design

A second online experiment was set up in order to test our hypotheses for a lower involvement product. Participants were randomly assigned to rate three products (out of a list of twelve) on the seven-point semantical differential scale of Zaichkowsky (1985). The design and procedure of this second study are identical to Study 1, except that we designed advertisements for a vacuum cleaner. We again used a fictitious brand, Dust Devil. The advertising message was, again, either personalized ('Because men know what is important' or 'Because women know what is important' based on the gender of the respondent) or not personalized ("Dust Devil").

Participants and Measures

Respondents were again undergraduate and graduate students recruited from a Belgian university, via an e-mail containing a link to the questionnaire, and randomly assigned to one of the two conditions. In total, 153 respondents with an age ranging between 18 and 30 (\bar{X} = 21.7, SD = 2.56) participated in the experiment. 25.5% of the respondents were male. The measures are the same as in Study 1. All Cronbach's alphas were higher than .78. For this study, the mean for perceived personalization was 2.17 with a standard deviation of 1.49.

Results

The same procedure as in Study 1 was used to test the hypotheses (Table 2). The results again show a significant positive effect of perceived personalization on perceived relevance (β = .379, p < .001) and of perceived relevance on Ab (β = .254, p < .001) and CI (β = .316, p < .001). Perceived personalization also has a positive significant direct effect on CI (β = .206, p < .001), but not on Ab (β = .078, p = .211). Importantly, we again find a significant indirect effect of perceived personalization through perceived relevance for Ab (.096, 95% CI = [.047; .180]) and CI (.120, 95% CI = [.054; .223]), supporting H1. The results suggest indirect-only mediation for Ab and complementary mediation for CI (Zhao, Lynch and Chen 2010). Contrary to Study 1, we find a significant interaction effect of perceived personalization and the attitude toward Facebook on CI (β = .107, p = .003), although the effect on Ab is not significant (β = -.001, p = .971).

Insert Table 2 about here

We inspected the conditional direct effects of perceived personalization on CI for different values of participants' attitude toward Facebook (Figure 2), which are provided by the PROCESS macro (Hayes 2013). We examine the effect of perceived personalization on CI separately for low, moderate and high values of the Attitude toward Facebook. The significant moderating effect on CI is found for both a moderate (β = .206, p < .001) and a positive (β = .345, p < .001) attitude toward Facebook, but not for a less positive attitude toward Facebook (β = .066, p = .412). Thus, the conditional direct effects for a moderate and a positive attitude toward Facebook show that there is a significant moderating effect for these levels of participants' attitude toward Facebook on the relation between personalization and click intention. H2 is confirmed for CI, but not for Ab.

Insert Figure 2 about here

Discussion

The results of Study 2 support the results of Study 1 that perceived personalization positively affects consumer responses by increasing the perceived relevance of a Facebook ad. In contrast with the results of Study 1, we do also find a residual direct effect of perceived personalization on click intention. This supports the idea that personalization also works as a peripheral cue ('The product will be good, because the advertisement is personalized for me.') (Tam and Ho 2006), especially in the context of lower involvement products.

Furthermore, contrary to Study 1, respondents' attitude toward Facebook further moderated the effect of perceived personalization on click intention in this study. The positive effect of perceived personalization is only significant for individuals with a moderate to positive attitude toward Facebook. This finding indicates that the attitude toward Facebook serves as a peripheral cue, which will be relatively more important for a lower involvement product. In sum, while Study 2 supports the idea that advertising personalization on Facebook exerts a positive effect on ad responses, the study also suggests that different processing mechanisms are at the basis of these positive effects for relatively high and low involvement products.

GENERAL DISCUSSION

The purpose of this study was to investigate the effect of perceived advertising personalization on a social network site, Facebook, on the attitude toward the advertised brand and click intention, taking into account the mediating role of perceived relevance and the moderating role of the attitude toward Facebook. As such, the proposed moderated mediation model contributes to a better understanding of whether and when personalized ads can be more effective than non-personalized ads on a social network site.

In line with previous research in other contexts (Arora et al. 2008, Pavlou and Stewart 2000, Tam and Ho 2005), (perceived) personalization has a positive effect on consumer responses. It should be noted that the ads in our study used a very general personalization based on gender. Through Facebook, advertisers can personalize their advertisements to a much higher degree. It is therefore interesting to note that even this general form of personalization already induces positive effects, as long as it is perceived as personalized by consumers. This is consistent with the findings of Dijkstra (2005) and Webb, Hendricks and Brandon (2007) that even minimal degrees of personalization, or the mere prime of personalization, are sufficient to induce positive effects.

The results of the mediation analysis indicate that the effect of personalization on consumer responses occurs mostly indirect-only, through perceived relevance. As suggested in the literature (Petty, Barden and Wheeler 2002), personalized advertising seems to increase message processing by enhancing the perceived relevance of the message. This result signals that personalized advertising on social network sites can indeed be effective, but only insofar as they are indeed perceived by users as more relevant (Kramer 2007).

The differences between Study 1 and Study 2 are consistent with differences in the processing of the advertisements due to involvement, based on the ELM. For higher involvement products, personalization seems to work more centrally, by increasing the perceived relevance of the advertisement. There is no remaining residual direct effect, nor is this effect moderated by the attitude toward Facebook. For lower involvement products, however, there seems to be a more peripheral effect at play as well. In Study 2, both the direct effect of perceived personalization on click intention was significant, and the effect of personalization was further enhanced by a positive attitude toward Facebook. This finding suggests that users indeed use their attitude toward the website as a peripheral cue. While processing an advertisement for a high-involvement product such as perfume, the Facebook context might not be taken into account. However, for a low-involvement product (such as a vacuum cleaner in our study) consumers will incorporate peripheral cues, such as the Facebook context.

The lack of interaction with the attitude toward Facebook in Study 1 might also partly be due to a ceiling effect. Evidence for this ceiling effect can be seen in the effect sizes: the effect size of

the main effect of perceived personalization is much larger in Study 1 than in Study 2. One explanation might be that personalization fits a high involvement product better than it does low-involvement products. Indeed, a personally relevant message is most likely processed centrally when personal involvement is high (Noar, Harrington and Aldrich 2009). Taylor, Strutton and Thompson (2012) found that product category involvement directly affects the self-enhancement value of a message. It may be that for a high involvement product the motivation to process the advertisement is already so high that the positive effect of perceived personalization cannot be further increased by a positive attitude toward Facebook. This is also in support of prior findings that consumers who feel strongly about a product type are more likely to talk to others about that product or share the message (Taylor, Strutton and Thompson 2012).

IMPLICATIONS

Theoretical Contributions

The findings of the present study offer a number of theoretical contributions. The research partly fills the existing knowledge gap concerning advertising in a social network site context. This study experimentally tests how personalized advertising is processed and the circumstances in which the effect of personalization differs. Using the Elaboration Likelihood Model as a base, the proposed model was tested for two products differing in product category involvement. For both products a positive effect of personalized advertising on brand attitude and click intention was found. This effect was stronger in Study 1 with a higher involvement product than in Study 2, which is consistent with the ELM. Previous research also shows that a higher product involvement leads to more positive consumer responses for personalized advertising (Gordon, McKeage and Fox 1998, Kalyanaraman and Sundar 2006).

The positive effects of perceived personalization can almost fully be attributed to the mediating role of personal relevance. If a personalized message is perceived as personally relevant, responses to the message are more positive. This result is in line with the ELM, because personal relevance is believed to enhance motivation to process. This motivation is one of the key constructs in the ELM.

Furthermore, there was a difference in the processing mechanism for low and high involvement products. In case of a high involvement product, the attitude towards the SNS does not moderate the effect of personalization. However, for the low involvement product, the attitude toward Facebook can reinforce the effects of perceived personalization. The findings from this study suggest that the attitude toward Facebook can serve as a peripheral cue to enhance the effect of personalization on consumer responses.

The results of this study also help to shed light on the findings of previous studies (e.g. Maslowska, Smit and van den Putte 2011) who did not find significant effects of personalization on consumers responses. This could be due to two reasons. First, a number of these studies used the manipulated actual personalization as a 0/1 variable in their analysis. Because actual and perceived personalization do not automatically match (Bettman, Luce and Payne 1998, Nisbett and Wilson 1977, Simonson 2005), we used the perceived personalization as a basis for our analyses. Other authors have already argued that messages that are intended to be personalized can actually be interpreted by consumers as generic (Kramer, Spolter-Weisfeld and Thakkar 2007). Our findings indicate that perceived personalization has a significant, positive effect on

consumer responses because it increases personal relevance. Using actual personalization as an input might not be sufficient. We recommend future researchers to include perceived personalization in their analyses. Second, the results of this study indicate that for low involvement products, there is no significant effect of perceived personalization for users with a relatively negative attitude toward Facebook. Therefore, studies that have tested personalized advertising without any context, or on a website which was not positively evaluated by respondents, will indeed have more difficulty to uncover positive effects of personalization. We recommend future researchers to either select positive contexts or at least measure the attitude toward the context.

Managerial Implications

Our results provide guidelines for practitioners. Personalized advertising on social networking sites leads to more positive consumer responses than non-personalized advertising. This is mainly because personalized ads are perceived as more relevant. When an ad is perceived as personally relevant, the attitude toward the brand and click intention will improve. It is especially important that consumers recognize personalized advertisements as personalized. If there is no accordance between the consumer's characteristics, interests, etc., the advertisement will not be relevant, and consumer's responses will not improve. This is more outspoken for a high-involvement product than for a low-involvement one. For low involvement products, perceived personalization also has a direct positive effect on click intention. Thus, in any case, brand managers should try to design their advertisements so that they will be perceived as personalized by their target audience. The results indicate that even a very general form of personalization, based on gender (which is something brand managers can easily apply) already induces positive effects, as long as consumers indeed recognize the advertisement as being more personalized. Thus, especially in case of high-involvement products, advertisers should personalize their messages in such a way that they are perceived as particularly personally relevant. At the same time, brand managers should exert personalization efforts with care, because research indicates that when consumers are aware of personalization techniques, many consider this behavior as a violation of their privacy (Tucker 2014, Turow et al. 2009).

Brand managers should also consider which social networks to place their personalized advertising on. SNSs that are better liked can reinforce the positive effect of perceived personalization. For a low involvement product, users with a moderate to positive attitude toward the site are more likely to click on a personalized ad. For a high involvement product, the attitude toward the social network site does not exert a significant effect. Therefore, it might be interesting, especially for advertisers of low involvement products, to know the attitude toward the social network site they are advertising on and to select those sites that are well-liked by their target groups. Advertisers of high involvement products are less restricted by this limitation, and could therefore also opt for less popular sites, if advertising through these sites is cheaper, for example.

SUGGESTIONS FOR FUTURE RESEARCH

In the two experiments in the present study, we investigate products belonging to two opposite quadrants of the Rossiter and Percy Grid (Bergkvist and Rossiter 2008, Rossiter and Percy 1997).

Percy and Rossiter (1992) have proposed a two-by-two matrix based on two dimensions: the level of perceived risk (product category involvement) and buying motivation (hedonic or utilitarian). Hedonic products (e.g. designer clothes, sports cars, perfume, etc.) are used because of the aesthetic or sensory experience, for amusement, fantasy or fun. Utilitarian products (e.g. microwaves, personal computers, vacuum cleaners, etc.) are used for accomplishing functional or practical tasks (Wen, Tan and Chang 2009). Typically, hedonic products are evaluated on subjective characteristics, such as shape, taste or looks, while utilitarian products are more cognitively evaluated: consumers will focus on objective characteristics (Dhar and Wertenbroch 2000). The advertised product in our first study (perfume) fits in the high involvement hedonic product category. The second product (vacuum cleaner) can be placed in the low involvement utilitarian category. It is important for further research to test products that represent other quadrants in the Rossiter-Percy Grid. The effect of involvement and hedonic-utilitarian products should, in other words, be disentangled. This can be especially important when one considers the motivations for using SNSs. SNS users primarily use SNSs to pass time and for amusement (Ku, Chu and Tseng 2013, Quan-Haase and Young 2010), which is different from, for example, websites. As such, hedonic product advertisements may be more congruent with consumers' motives (and thus perhaps more easily perceived as self-relevant) than ads for utilitarian products, because SNS users are not looking for information.

Second, the current study was conducted with a student sample. Even though this is a highly relevant sample to study advertising effects in social network sites, and especially Facebook (Hoy and Milne 2010), the robustness of the model could be tested in different samples as well.

Future research should also examine other potential moderators of personalization effects on social network sites. For example, personality traits - such as the need for uniqueness (Maslowska, van den Putte and Smit 2011), privacy concerns (Maslowska, van den Putte and Smit 2011, Sheng, Nah and Siau 2008, Sundar and Marathe 2010, Yu and Cude 2009), need for cognition (Tam and Ho 2005), self-referent thinking (Hawkins et al. 2008, Tam and Ho 2006), extraversion and conscientiousness (Chiu et al. 2007), and the attitude toward personalization could be investigated.

The present study includes attitude toward the brand and click intention as the dependent variables. While models like the Theory of Reasoned Action and the Theory of Planned Behavior (e.g. Ajzen 2002) posit that attitudes and behavioral intentions are important antecedents of actual behavior, and this is confirmed in many studies (e.g., Armitage and Conner 2001, De Cannière, De Pelsmacker and Geuens 2009), the relationship between intention and behavior is not perfect (e.g. Sheeran 2002, Van Ittersum 2012). Future research should consider including measures of actual behavior, such as clicking, purchasing or ad forwarding or other word-of-mouth behavior.

Because of technical limitations, in the present study participants were exposed to a static Facebook page. Although the Facebook pages were adjusted to mimic a real Facebook home page, the lack of interactivity could have influenced the results. The external validity of the experiment could be improved by using an interactive or even a real social network environment.

We used only one type of personalization, based on gender. This means that our ad was only slightly personalized. Even though results by Dijkstra (2005) and Webb, Hendricks and Brandon (2007) suggest that even minimal degrees of personalization, or the mere prime of personalization, are sufficient to induce positive effects, effects could have been stronger with more "extreme" forms of personalization. For example, degrees of personalization can be placed on a bipolar linear continuum framework between "no personalization" and "full personalization" (completely tailored or addressed to a particular individual) (e.g., Arora et al. 2008; Hawkins et al. 2008). Future research could examine these different degrees of personalization to test

whether they would have an impact on consumer responses in a different way. It is likely that higher degrees of personalization would lead to negative responses, especially in SNSs, because advertisements are displayed in an environment that is considered a personal space (Kelly, Kerr and Drennan 2010). Research on webcare (van Noort and Willemsen 2012), for example, indicates that consumers value proactive brand communications on brand-generated, but not consumer-generated platforms. It is therefore possible that users react more negatively to higher degrees of personalized advertising on SNSs, because they may perceive personalization as disruptive or invasive, and hence more irrelevant than advertising in other online environments. It would therefore be interesting to more explicitly compare consumer responses to personalized advertising on SNSs to other online environments.

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FIGURES

Figure 1: Conceptual framework

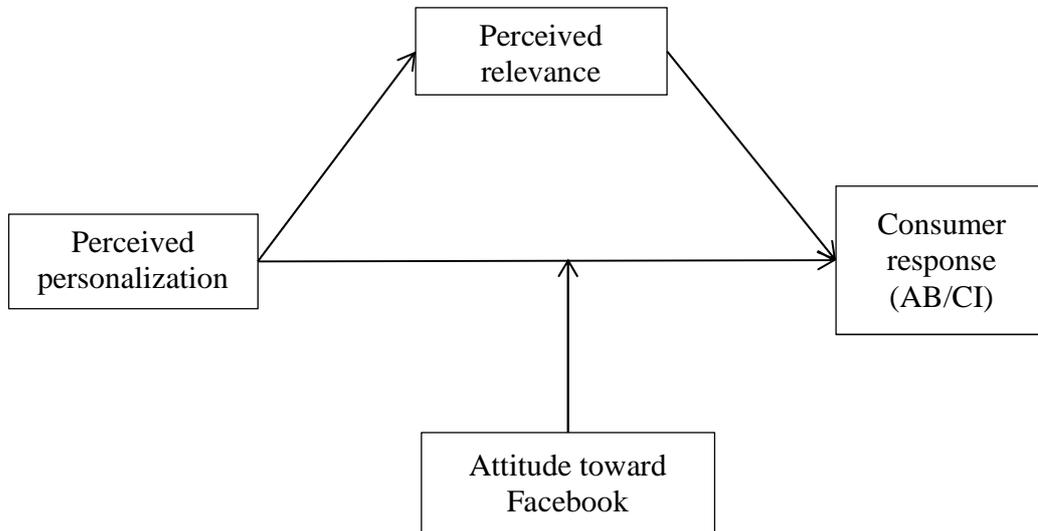
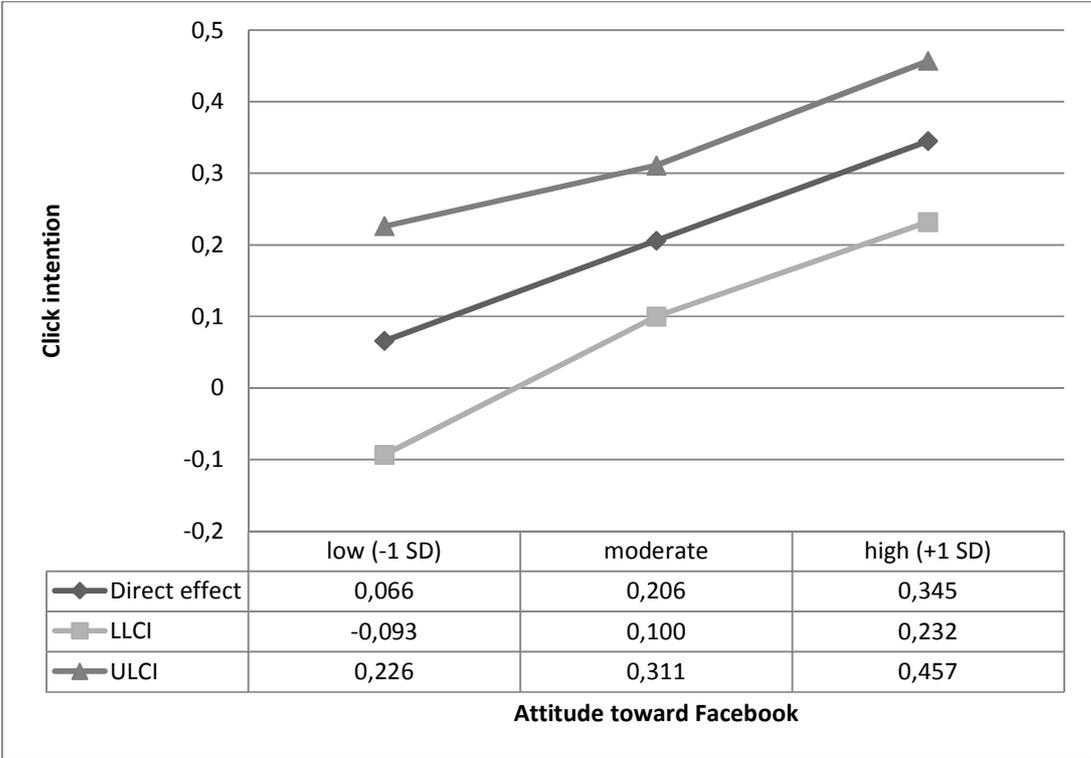


Figure 2: Conditional direct effect of perceived personalization on click intention (Study 2)



Notes: LLCI = lower limit confidence interval; ULCI = upper limit confidence interval

TABLES

Table 1 Standardized Regression Weights (Study 1)

	Perceived relevance	Ab	CI
Perceived personalization	.586***	.073	.023
Attitude toward Facebook	-	.026	.132*
Perceived personalization * Attitude toward Facebook	-	.023	.051
Perceived relevance	-	.288***	.419***
Gender	-	.193	-.052
R ²	.401	.285	.386

Note: *** $p \leq .001$, ** $p \leq .010$, * $p \leq .050$

Table 2 Standardized Regression Weights (Study 2)

	Perceived relevance	Ab	CI
Perceived personalization	.379***	.078	.206***
Attitude toward Facebook	-	-.003	.064
Perceived personalization * Attitude toward Facebook	-	-.001	.107**
Perceived relevance	-	.254***	.316***
Gender	-	-.129	-.067
R ²	.176	.161	.438

Note: *** $p \leq .001$, ** $p \leq .010$, * $p \leq .050$