

STAY AWAY FROM ME

Examining the Determinants of Consumer Avoidance of Personalized Advertising

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ABSTRACT: This study attempts to identify the potential determinants of advertising avoidance in the context of personalized advertising media, including unsolicited commercial e-mail, postal direct mail, telemarketing, and text messaging. Using a self-administered survey ($n = 442$), the proposed model is tested with structural equation modeling analysis. The findings indicate that while ad skepticism partially mediates the relationship between ad avoidance and its three determinants (perceived personalization, privacy concerns, and ad irritation), both privacy concerns and ad irritation have a direct positive effect on ad avoidance. However, increased perceived personalization leads directly to decreased ad avoidance.

Today, the advanced development of information-processing technology allows advertisers to shift the focus of their efforts from traditional mass advertising to personalized advertising to deliver messages tailored to individual preferences. In this study, we define personalized advertising as a form of customized promotional messages that are delivered to each individual consumer through paid media based on personal information (such as consumers' names, past buying history, demographics, psychographics, locations, and lifestyle interests). Personalized advertising has provided more opportunities for advertisers in customer relationship management due to its advantageous characteristics regarding the availability of one-to-one marketing communication, segmentation/targeting of prospective audiences, and the ability to obtain measurable responses in direct marketing communication campaigns (Kim et al. 2001). Many personalized advertisements are considered to be unwelcome, however, and therefore elicit advertising avoidance. Consumers have often used various ad avoidance tools, such as blocking online advertisements, filtering e-mail, and subscribing to do-not-call, do-not-mail, or do-not track programs. It is estimated that more than half of all American households use ad-blocking technologies (e.g., spam filters) to avoid unwanted commercial messages via e-mail (Forrester Research 2006). Recently, Mozilla (2011) reported that Adblock Plus, a function available on Firefox Web browser, is used by

approximately 13 million people. Consumers have registered more than 198 million telephone numbers on the do-not-call list (Federal Trade Commission 2011).

Over the past five decades, there has been a well-articulated body of academic research on advertising avoidance (Abernethy 1990; Bellman, Schweda, and Varan 2010; Nuttall 1962; Rich, Owens, and Ellenbogen 1978). In particular, potential determinants of advertising avoidance across traditional (e.g., Speck and Elliott 1997) and online media (e.g., Cho and Cheon 2004; Edwards, Li, and Lee 2002) have emerged as an important focus of research inquiry to provide insights that may suggest strategic ways to decrease advertising avoidance. However, little scholarly attention has been paid to the underlying factors that drive advertising avoidance in the context of personalized media. The current research will attempt to provide an integrated theoretical approach to resistance for understanding the dynamics of consumer avoidance of personalized advertising. Resistance can be conceptualized as an outcome, a process, and a motivation (Knowles and Linn 2004; Tormala and Petty 2004). Of these standpoints of resistance, the dominant view is the motivation to resist. Brehm's (1966) psychological reactance theory suggests that people are motivated to resist change when they perceive that their personal freedoms are threatened.

The purpose of this study is to examine the key factors that can influence personalized advertising avoidance. This study also aims to investigate how such underlying processes may differ across a variety of advertising formats, including unsolicited commercial e-mail, direct mail, telephone calls, and text messages. An understanding of what drives personalized ad avoidance can not only help advertising scholars develop a comprehensive theoretical framework of ad avoidance that goes beyond traditional mass advertising, but can also help practitioners fine-tune their direct marketing communication strategies in an effort to decrease consumer avoidance of personalized advertising.

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BACKGROUND

Personalized Advertising and Related Issues

Personalization in marketing and advertising is no longer a novel phenomenon (Stewart and Ward 1994). Using consumer information such as demographics, locations, and lifestyles, marketers can select personalization strategies ranging from mass customization/personalization to one-to-one marketing to satisfy consumers' needs (Vesanen and Raulas 2006). Several scholars have attempted to define "personalization" in the context of marketing. Despite such efforts, it appears that coming to an agreement on the definition is not an easy task, as personalization means something different to each marketer (Vesanen 2007).

For the purpose of the current study, we distinguish the differences among personalized marketing, promotion, and advertising. Personalized marketing, as defined by Gillenson (2000), refers to "marketers offering customers specific products for their consideration based on the consumer information" (p. 21). This definition focuses more on what marketers offer (products or services). As such, personalization in the marketing context involves tailoring the product differently for each consumer while retaining the principle of mass production (Goldsmith and <<AU: SPELLED FREIDEN IN REF. LIST—WHICH IS CORRECT?>> Frieden 2004). For example, within the application of personalized marketing, customer rating systems provide product recommendations to customers by matching their interests with product content (i.e., content-based system) or by using overlap of preference ratings to combine "like-minded" customers' opinions (i.e., collaborative system) (Cheung et al. 2003). Personalized promotions, on the other hand, can be a wide array of communicative activities whose purpose is to make individually customized offers. As suggested by Zhang and Wedel (2009), personalized promotions are primarily funded by consumer products companies based on special agreements, such as customized coupons and consumer loyalty programs. They are also provided to selected households in a covert manner and are not easily observed by competitors. While the lines between promotion and advertising are blurred in today's marketplace, personalization in advertising gives more weight to commercial messages that are customized to each individual consumer. Such messages encompass, but are not limited to, product special offers and product recommendations based on individual consumers' preferences and personal information (Kramer 2007).

The focus of the current study is on personalized commercial messages sent via direct marketing and telemarketing communication media without permission. Among a variety of advertising media, four major types of personalized advertising media were selected for the study: (1) unsolicited commercial

e-mail (spam; any commercial electronic communication message sent by marketers without consumer permission to correspond) (Morimoto and Chang 2006); (2) direct mail (any unsolicited postal mail piece in which companies have the intent of selling products or services to consumers) (Morimoto and Chang 2006); (3) telemarketing calls initiated by marketers for sending commercial messages to consumers with regard to outbound calls; and (4) text messages (wireless commercial messages that are sent to consumers' cellular phones, pagers, and personal data assistants [PDAs] by advertisers) (Petty 2003).

Some issues should be taken into consideration in the discussion of personalized advertising. First, personalized advertisements may not necessarily be addressed to individual consumers since they may be sent to a subset of consumer groups based on information such as location. This is particularly applicable to promotions using mobile phones (e.g., text messaging) due to geo-location technologies such as Global Positioning System (GPS) and/or Cell of Origin (COO) that allow marketers to localize cell phone users (Bauer et al. 2005).

Another point is that personalized ads can be sent to consumers who do not necessarily provide permission to marketers directly. In the United States, the CAN-SPAM Act requires marketers to provide consumers with information on how to opt-out from mailing lists and unsolicited commercial e-mail (Federal Trade Commission 2009a). As for postal direct mail, the Direct Marketing Association offers a service called DMA Mail Preference for a small fee. This service allows consumers to refuse subscriptions to mailing lists for unsolicited commercial mail. The direct mail categories to which the service is applicable are credit offers, catalogs, magazine offers, and other mail offers such as donation requests, bank offers, and retail promotions (Direct Marketing Association 2011a). However, the service does not apply to mailings from organizations that do not use the DMA's Mail Preference Service (Federal Trade Commission 2009b). Regarding telemarketing, the National Do Not Call Registry allows consumers to limit telemarketing calls they receive. However, this is applicable only to calls from telemarketers covered by the registry, and telemarketers have up to 31 days from the date of registration to stop calling (Federal Trade Commission 2009b). In addition, the Gramm-Leach-Bliley Act states that financial institutions that issue their own credit, such as banks, credit unions, real estate appraisers, insurance companies, automobile leasing companies, and retailers, must provide consumers with a detailed privacy notice and the opportunity to opt-out before they share nonpublic personal information with third parties (Direct Marketing Association 2011b). On a state level, California Civil Code Section 1798.83 requires businesses to "disclose types of personal information they share with third parties, and if a consumer requests, they must provide the information shared with other businesses as well as the names

and addresses of parties with whom the information is shared” (Lustigman 2007, p. 3). However, notwithstanding federal, state, and industry regulations, consumers may still receive personalized ads from marketers because they may have previously opted-in with other marketers or the marketers who send personalized ads may not be subjected to the regulated fields. As a result, the third party can have access to consumer information and personalize ads based on the information provided. In such a case, consumer responses may be negative because they may perceive such targeting efforts as *too* personal (White et al. 2008).

Despite such concerns, personalized advertising provides benefits to both consumers and marketers. For consumers, it enables a quick focus on what they really want because relevant communication messages are based on their preferences, minimizing the time that consumers spend searching for information through an entire product assortment to find precisely what they want (Srinivasan, Anderson, and Ponnaveolu 2002). For marketers, personalized advertising will be more cost effective as compared with traditional mass advertising because it has the potential to distribute highly tailored commercial messages to an individual consumer who has been identified as a viable prospect in the target market (Kim et al. 2001). In addition, personalized advertising plays a central role in customer relationship management. Vesanen (2007) stated, “the urge to personalize is largely driven by the expected benefits of one-to-one marketing and customer relationship management” (p. 409).

While personalization is attractive for advertising and marketing practices, it is not without drawbacks. Early work found no effects of personalized mailings on response rates (Weilbacher and Walsh 1952). More recent research shows that consumers have negative attitudes toward personalized ads when they feel that the ad message is not well targeted to them. As suggested by Pavlou and Stewart (2000), consumers tend to receive only relevant messages that are most likely to generate purchases or other desired responses. Tsang, Ho, and Liang (2004) found that consumers generally have negative attitudes toward personalized mobile advertising (text message-based), which, in turn, negatively impacts their behavior, suggesting that mobile advertising messages should not be sent to consumers without prior permission. In this respect, personalized advertising has the potential to raise issues of privacy invasion because most marketers rely on consumer databases for developing more relevant and targeted messages. Recognizing the importance of privacy concerns, personalized advertising itself may trigger negative responses to advertising, such as ad avoidance.

THEORETICAL FRAMEWORK AND HYPOTHESES

Abundant research has demonstrated the phenomenon of resistance to persuasion and the psychological mechanisms by which it works. Across numerous studies, resistance is conceptualized as an outcome, a process, and a motivation of attitude changes (Knowles and Linn 2004; Tormala and Petty 2004). There are many important things to note, the first being that resistance as an outcome refers to the absence of attitude change, or even attitude change away from the message position (e.g., advertising avoidance) (Johnson et al. 2004; Tormala and Petty 2004). Second, Knowles and Linn (2004) have asserted that resistance is viewed as a sequential process of attitudinal response to pressures for change. Adopting the tripartite model of attitude formation, resistance could be formed through affective (“I don’t like it”), cognitive (“I don’t believe it”), and behavioral (“I won’t do it”) processes. Finally, resistance has been used to describe the motivation to resist unwanted influence or protect the existing attitude. In light of the motivational desire for resistance, Knowles and Linn (2004) identify four different but possibly related components of resistance, including reactance, distrust, scrutiny, and inertia. Among these faces of resistance, the concept of reactance represents the affective and motivational sides of resistance to persuasion (Brehm 1966; Knowles and Linn 2004). Though resistance and reactance do not theoretically overlap, the precise definition of these terms remains somewhat elusive and they are often used interchangeably in the literature (Knowles and Linn 2004).

Acknowledging the importance of reactance as an integral element of resistance, psychological reactance theory (Brehm 1966; Brehm and Brehm 1981) provides a richer understanding of how and why people resist unwanted advertising persuasion. This theory postulates that whenever people perceive that a free behavior is restricted or eliminated, they tend to experience reactance and are motivated to modify their attitudes and behaviors to reaffirm their freedom and autonomy. That is, reactance arises from external threats to one’s freedom of choice. In one demonstration, Edwards, Li, and Lee (2002) use psychological reactance theory to examine negative responses to pop-up ads, indicating that ad intrusiveness triggered by forced exposure leads to advertising avoidance. Similarly, personalized advertising may result in consumer reactance with respect to advertising avoidance because ad messages containing too much personal information often threaten consumers’ perceived ability to avoid being closely observed by the firms (White et al. 2008).

In considering the issue of privacy invasion, highly personalized ad messages may raise consumer fears about loss of freedom to control the use of private information. For example, consumers who receive personalized messages from unknown

advertisers may perceive their personal information as being abused (Okazaki, Li, and Hirose 2009). If ad messages are perceived as too personal, then consumers are likely to experience a reactance state because they suspect that the right of autonomous choice to handle their private data would be threatened and invaded by unknown advertisers or third parties. There is evidence that consumers tend to experience psychological reactance in response to highly personalized messages when they feel constrained by the sense of being too identifiable or observable by companies (White et al. 2008). In sum, personalized advertising has the potential to threaten consumers' perceptions of freedom to control how personal information is used and thereby may result in greater reactance.

Drawing on theoretical frameworks of resistance (Knowles and Linn 2004) and reactance (Brehm 1966; Brehm and Brehm 1981), we will develop a conceptual model of personalized ad avoidance that integrates a series of motivational factors, including perceived privacy concerns, ad irritation, perceived personalization, and skepticism toward personalized advertising.

Advertising Avoidance

Understanding why people avoid advertising has been a long-standing issue of inquiry for both researchers and practitioners in the domains of advertising and marketing. Advertising avoidance has been cited as one of the greatest obstacles for advertisers. According to Speck and Elliott (1997), ad avoidance is characterized as "all actions by media users that differentially reduce their exposure to ad content" (p. 61). There has been a great deal of research on ad avoidance across different media. Many early studies have examined the causes and consequences of ad avoidance, emphasizing traditional media such as television, radio, magazines, and newspapers. For instance, Clancey (1994) articulates that people can remove a television commercial from their attention by ignoring the ad (cognitive avoidance), leaving the room (physical avoidance), or switching channels (mechanical avoidance). Zapping television commercials is related to zapping radio ads (Heeter and Greenberg 1985), and flipping through television channels is also similar to flipping through magazine and newspaper pages (Bellamy and Walker 1996). Speck and Elliott (1997) found that the predictors of ad avoidance in television, radio, magazines, and newspapers include demographic characteristics (e.g., age and income), media-related variables (e.g., overall media exposure advertising perceptions (e.g., ad irritation), and communication problems (e.g., search hindrance). Recent research has focused on ad avoidance on the Internet. Cho and Cheon (2004) found that perceived goal impediment, perceived ad clutter, and prior negative experiences can lead consumers to avoid advertising on the Internet.

According to Cho and Cheon (2004), ad avoidance has three components of consumer advertising responses: cognition, affect, and behavior. The cognitive component of ad avoidance refers to a consumer's belief about an object. The affective component of ad avoidance represents a consumer's feeling or emotional reaction to an object. The behavioral component of ad avoidance refers to a consumer's actions to avoid an object. In the context of personalized advertising, these three elements of ad avoidance may lead consumers to intentionally ignore any personalized ads (cognitive ad avoidance), avoid any personalized ads if they hate the ads (affective ad avoidance), or discard any personalized e-mail ads immediately without opening them (behavioral ad avoidance).

Skepticism Toward Advertising

Ad avoidance can be caused by consumer skepticism toward advertising. According to Obermiller and Spangenberg (1998), skepticism toward advertising is defined as a tendency to disbelieve the informational claims of advertising. It is argued that skepticism toward advertising is a stable characteristic of consumers that plays a role in responses to advertisements (Obermiller and Spangenberg 1998, 2000). In light of current knowledge, Knowles and Linn (2004) assert that one of the most prominent facets of resistance is a general distrust of persuasive stimuli manifested by consumer skepticism. As such, people are likely to become guarded and wary when faced with a proposal, offer, or message to change because they are aware of the persuasive intent that makes them engage in biased processing.

Virtually all advertising claims have some degree of disbelief because consumers recognize that advertisers have specific motives, such as persuading consumers and selling products (Mangleburg and Bristol 1998). According to the Persuasion Knowledge Model (PKM; Friestad and Wright 1994), consumers have developed beliefs about the tactics (e.g., advertising and other promotional programs) that advertisers use to try to persuade them, and thus become more skeptical of such tactics over time. Extant literature has provided empirical evidence supporting the extent of skepticism as a determinant of reactance responses to pervasive advertising attempts. For instance, Obermiller and Spangenberg (1998) found that more skeptical consumers evaluated advertised offers more negatively than did less skeptical consumers. Obermiller, Spangenberg, and MacLachlan (2005) found that consumers with high skepticism like advertising less, rely on it less, and thus tend to avoid advertisements (e.g., more zipping through/zapping television commercials). Consistent with the notion of persuasion knowledge, consumers may perceive advertisers' claims of customization to their personal preferences as attempts to persuade and manipulate (Simonson 2005). Taken together, it is expected that those who are high in ad skepticism

are inclined to avoid advertising since consumer skepticism toward personalized advertising reflects a general distrust of advertiser tactics, which include using their name and other personal information. Accordingly, the following hypothesis is presented.

H1: Personalized advertising skepticism will be positively related to personalized ad avoidance.

Perceived Privacy Concerns

As mentioned earlier, personalized advertising has the potential to raise consumer privacy concerns because customizing communication messages in advertising is based on consumer information. With the rapid advances of information processing and communication technologies, most marketers collect and track personal information about specific consumer purchase histories and characteristics to identify the best prospects, customized advertising, and promotion strategies; implement highly targeted direct-marketing efforts; and establish reward and loyalty programs (e.g., Dolnicar and Jordaan 2007; Hughes 2005; Phelps, Nowak, and Ferrell 2000).

However, information privacy is a key concern for consumers (Gurau, Ranchhod, and Gauzente 2003; Nowak and Phelps 1992). In a legal context, the notion of privacy refers to “the right to be left alone” (Warren and Brandeis 1890, p. 205). Taking into account the multidimensional nature of privacy, Burgoon et al. (1989) define it as “the ability to control and limit physical, interactional, psychological, and informational access to the self or one’s group” (p. 132). Central to the definition of privacy is the issue of privacy concerns (Paine et al. 2007; Westin 1967). Adopting Westin’s (1967) terminology of privacy, perceived privacy concerns are defined here as the degree to which a consumer is worried about the potential invasion of the right to prevent the disclosure of personal information to others. Many public opinion surveys have revealed that the majority of American consumers are concerned about what companies know about them, how companies obtain and use personal information, and the accuracy of the information used (Equifax-Harris 1995, 1996; Harris-Equifax 1992; for a review, see Phelps, Nowak, and Ferrell 2000). In an online environment, for example, Pew Internet and American Life Project (2008) reports that 95% of American consumers said it was important to control who has access to their personal information and they are concerned about online privacy. Pew Research Center also reports that approximately 40% of individuals who have managed their personal information online indicate that they worry about how much information is available about them (Madden and Smith 2010).

In applying the principles of psychological reactance theory in an advertising context, it can be argued that resistance occurs if advertising is perceived as intending to direct or

control one’s choices. Nowadays, many consumers feel that they have little control over the volume of e-mails, direct mail pieces, and phone calls intruding into their daily lives (Dolnicar and Jordaan 2007). Given the potential utility of information-processing technology designed to intrude in a consumer’s private domain, personalized advertising could make consumers perceive their privacy as threatened and thus evoke greater resistance since they are likely to object to advertising practices that involve keeping track of and storing their personal preferences (Simonson 2005).

A considerable amount of research has examined attitudinal and behavioral consumer reactions that stem from privacy concerns. For example, Milne and Boza (1999) find that privacy concerns are negatively related to purchase behavior and trust and perceived information control. In addition, Sheehan and Hoy (1999) reveal that as privacy concerns increase, consumers are likely to have negative behavior responses to online advertising, such as providing incomplete information to Web sites, requesting removal from e-mailing lists, or sending highly negative messages (i.e., a “flame”) to online advertisers sending unsolicited e-mail. Dolnicar and Jordaan (2007) show that the vast majority of consumers intend to take action (e.g., requesting removal of information or supporting privacy protection policies) when they suspect that their personal information is not protected.

These preceding results support our prediction that high privacy concerns will result in ad skepticism (e.g., distrust advertising claims or suspect the intent of the advertiser) and ultimately ad avoidance (e.g., ignore ads intentionally or request removal from e-mailing, mailing, and telephone lists) in personalized media. Thus, the following hypotheses are proposed.

H2: Perceived privacy concerns will be positively related to personalized advertising skepticism.

H3: Perceived privacy concerns will be positively related to personalized ad avoidance.

Perceived Ad Irritation

Perceived ad irritation is defined here as consumers’ perceptions of the extent to which advertising is causing displeasure and momentary impatience (Aaker and Bruzzone 1985). Prior research has indicated that there are several factors that may trigger perceived ad irritation, such as ad content and execution. Consumers are likely to be irritated when ad content is untruthful, exaggerated, or confusing, when there are too many ads, or when the same ad appears too frequently (Aaker and Bruzzone 1985; Edwards, Li, and Lee 2002).

Beyond these factors, ad irritation results in unfavorable attitudes toward advertising (Fennis and Bakker 2001; Morimoto and Chang 2006) and thus negatively affects the

value of advertising (Ducoffe 1995, 1996). According to psychological reactance theory, people are often inclined to react against persuasive messages perceived as dissatisfying their need for self-determination and control (Brehm 1966; Burgoon et al. 2002). We propose the extension of the theoretical position. If consumers feel they lack control over their personal information posed by personalized advertising, they are likely to have irritating experiences that could contribute to cognitive or behavioral components of resistance, including ad skepticism and avoidance. Empirical evidence in support of this argument shows that perceived ad irritation strongly influences skepticism toward the advertising medium in the context of unsolicited commercial e-mail (Morimoto and Chang 2009). Li, Edwards, and Lee (2002) show that ad irritation directly influences both cognitive and behavioral aspects of ad avoidance. Their findings are in accordance with Speck and Elliott's (1997) study, indicating that ad irritation is highly associated with ad avoidance. Proceeding from what has been discussed above, the following hypotheses are proposed:

H4: Perceived ad irritation will be positively related to personalized advertising skepticism.

H5: Perceived ad irritation will be positively related to personalized ad avoidance.

Perceived Personalization

Since personalized advertising is the optimal execution of customization that interlinks marketers and consumers, it is imperative to clarify the concept of personalization. Over the past few decades, the concept of personalization has been given a considerable amount of attention in marketing and advertising literature. There are several conceptual definitions of personalization among scholars. Peppers and Rogers (1997) define personalization as the process of using a customer's information to deliver a targeted solution to that customer. According to Imhoff, Loftis, and Geiger (2001), personalization is "the ability of a company to recognize and treat its customers as individuals through personal messaging, targeted banner ads, special offers on bills, or other personal transactions" (p. 467). Roberts (2003) conceptualizes personalization as the process of preparing an individualized communication for a specific person on the basis of stated or implied preferences.

Given that personalized advertising is often perceived as a threat to consumers' freedom to have control over their private information, does personalized advertising always yield consumer reactance? For example, personalized advertising usually provides an "opt-out" option for receiving future promotional offers. If consumers are aware of this option, reactance to personalized advertising is likely to be alleviated because they may have a sense of regaining control over their personal information. Prior research has further asserted

that consumer reactance to personalized messages can be determined by whether the perceived utility of the advertised products or services offsets the psychological costs of receiving inappropriate personal messages (White et al. 2008). To illustrate, Wendlandt and <<AU: SPELLED SCHRADER IN REF. LIST—WHICH IS CORRECT?>> Shrader (2007) found that perceived utility (e.g., some rewards and benefits from the restricted freedom) significantly decreases consumer reactance against the loyalty program.

Similar to the concept of perceived utility that involves valuable benefits from personalized advertising, perceived personalization is essential for optimizing advertising messages that match consumer interests and preferences. As such, perceived personalization is closely associated with advertising relevance. Xu (2006) suggests that the personalization of content is the most effective way to prevent mobile advertising from being perceived as intrusive and irritating. Since well-made personalized ad messages contain useful information, advertising itself can be valuable. Accumulated empirical evidence has shown that the ad information value is diminished to the extent that consumers are skeptical of advertising (Obermiller and Spangenberg 1998). Furthermore, when ads are perceived as useful and valuable, they elicit lower avoidance responses from consumers (Pasadeos 1990). Therefore, it is expected that perceived personalization may evoke less skepticism toward advertising and ad avoidance in a context of personalized media.

H6: Perceived personalization will be negatively related to personalized advertising skepticism.

H7: Perceived personalization will be negatively related to personalized ad avoidance.

METHOD

Procedures

We collected the data through an online survey-based procedure. The self-report questionnaire took between 30 and 40 minutes to complete. Participants were randomly assigned to a questionnaire that covered one of the four personalized ad media, including unsolicited commercial e-mail, direct mail, telemarketing, and text message ads. A Random Link Generator was used to randomize questionnaire distribution. Preceding this, the pooled data of all of the personalized ad media were analyzed to test the proposed model.

Samples for the main study were college students attending a large state university in the southeastern United States. Despite the fact that the sampling criteria may be a potential limitation to the generalization of the results, students are one of the largest Internet and mobile phone user segments and thus are an important target group for direct marketers.

Alloy Media and Marketing (2009) claims that, in total, eight million college students can be reached either by direct mail pieces or e-mail, and the National Mail Order Association (2009) also indicates that college students make up a market worth \$100 billion for direct marketers. As these examples illustrate, college students are becoming an important market for direct marketers. Furthermore, the use of a homogeneous student sample might help reduce error variance, resulting in a stronger test of theory (e.g., DuFrene et al. 2005; Malhotra and King 2003).

Examinations of the proposed model were undertaken using structural equation modeling (SEM). SEM allows for the simultaneous estimation of both direct and indirect effects. In particular, this technique provides advanced information about testing for the mediational relationships among latent constructs, controlling for measurement error (Kline 2005).

Measurement Instruments

Using seven-point Likert scales (1 = strongly disagree and 7 = strongly agree), five latent constructs—ad avoidance, ad skepticism, perceived privacy concerns, ad irritation, and perceived personalization—were measured in this study. First, ad avoidance was measured with a five-item scale derived from Cho and Cheon (2004) and Elliott and Speck (1998). Ad skepticism was measured with a nine-item scale adopted from Obermiller and Spangenberg (1998). Perceived privacy concerns were measured with a six-item scale derived from Dolnicar and Jordaan (2007). Perceived ad irritation was measured with an eight-item scale used by Fritz (1979). Finally, perceived personalization was measured by a five-item scale adopted from Srinivasan, Anderson, and Ponnnavolu (2002). All items used in this study were slightly modified to fit the context of each personalized ad medium. An initial version of the questionnaire was pretested with a convenience sample of 20 college students to refine the measurement instruments. Based on suggestions from the pretest respondents, the wording of two items for perceived personalization were found to be confusing and adjusted to make them easier to understand. With the exception of two items, no major measurement problems emerged from the pretest.

Participants

The initial sample consisted of 467 college students (27.5% male and 72.5% female) enrolled in large introductory courses at a major U.S. university. Participants who completed the survey were given extra course credit as an incentive. Respondents' ages ranged from 18 to 31 years, with an average age of 20.4 years. In the context of personalized advertising, the respondents estimated that they received approximately 87.5 spam, 32.4 direct mail pieces, 1.4 telemarketing calls, and

1.8 text messages per week, on average. After missing data ($n = 25$) were treated with listwise deletion, a total of 442 observations (unsolicited commercial e-mail = 113, direct mail = 110, telephone call = 110, and text message = 109) were used to analyze the pooled data.

RESULTS

Measurement Model

The hypothesized relationships were tested with Amos 16 by using a two-step procedure. For a two-step approach to structural equation modeling, a confirmatory factor analysis (CFA) of the measurement model was first conducted to evaluate whether the measurement items had the appropriate properties to represent each construct. After achieving a satisfactory fit in the measurement model, the structural model was estimated (Anderson and Gerbing 1988). As Close et al. (2006) suggest, this method allows for rigorous testing of measurement reliability and validity before subjecting the structural model to tests of fit.

Prior to the main analysis, several underlying assumptions for SEM were checked and verified (e.g., normality, linearity, no extreme multicollinearity, and sampling adequacy) (Hair et al. <<AU: CITED AS 1998 IN REF. LIST—WHICH IS CORRECT?>> 1988). In particular, the normality assumption was satisfied because all Skewness and Kurtosis values associated with each item were within the range of ± 1.96 ($-1.53 < \text{all Skewness values} < 1.04$; $-1.24 < \text{all Kurtosis values} < 1.67$). Since the normality assumption was met, the maximum likelihood estimation method was employed for the CFA in the study. Overall goodness-of-fit indices were satisfactory: $\chi^2(480) = 1179.7$ ($p < .001$), GFI (goodness-of-fit) = .86, CFI (comparative fit index) = .93, SRMR (standardized root mean residual) = .05, and RMSEA (root mean square error of approximation) = .06. Given that the measurement model revealed a good fit, measurement respecification, which refers to a process of adding or deleting estimated parameters from the original model (Hair et al. 1988), was not performed.

In this study, reliability and validity were evaluated using the pooled data across four personalized ad media. For internal reliability, Cronbach's α coefficients were calculated for all items of each construct. Results indicated that all the scales were considered to be reliable (Cronbach's α s for privacy concerns = .86, perceived personalization = .93, ad irritation = .91, skepticism toward personalized advertising = .94, and personalized advertising avoidance = .89). In the next step, convergent validity was evaluated by examining the factor loading for statistical significance (Sujan, Weitz, and Kumar 1994). As indicated in Table 1, all factor loadings were statistically significant ($p < .05$) within an acceptable range (from .24 to .96). Furthermore, the average variance extracted (AVE)

TABLE I
Summary of Measurement Model Statistics

Constructs	Measurement items	Mean	SD	Factor loadings
Ad avoidance	1. I intentionally ignore any personalized advertising on [MEDIA TYPE].	5.72	1.41	.84*
	2. I hate any personalized advertising on [MEDIA TYPE].	5.62	1.45	.96*
	3. It would be better if there were no personalized advertising on [MEDIA TYPE].	5.46	1.53	.84*
	4. I discard (throw away, hang up) personalized advertising on [MEDIA TYPE] immediately without opening (reading, listening) it.	5.51	1.57	.62*
	5. I have asked marketers to take me off their e-mail (mailing, telephone) lists.	4.61	2.19	.24*
Ad skepticism	1. We can depend on getting the truth in most personalized advertising on [MEDIA TYPE]. (R)	5.48	1.33	.76*
	2. Personalized advertising's aim is to inform the consumer. (R)	4.38	1.56	.56*
	3. I believe personalized advertising on [MEDIA TYPE] is informative. (R)	4.93	1.47	.74*
	4. Personalized advertising on [MEDIA TYPE] is generally truthful. (R)	5.04	1.37	.87*
	5. Personalized advertising on [MEDIA TYPE] is a reliable source of information about the quality and performance of products. (R)	5.23	1.37	.90*
	6. Personalized advertising on [MEDIA TYPE] is truth well told. (R)	5.34	1.38	.88*
	7. In general, personalized advertising on [MEDIA TYPE] presents a true picture of the product being advertised. (R)	5.32	1.35	.88*
	8. I feel I have been accurately informed after viewing (reading, listening to) most personalized advertising on [MEDIA TYPE]. (R)	5.26	1.42	.87*
	9. Most personalized advertising on [MEDIA TYPE] provides consumers with essential information. (R)	5.24	1.38	.83*
Privacy concerns	When I receive personalized advertising on [MEDIA TYPE],			
	1. I feel uncomfortable when information is shared without permission.	6.08	1.39	.65*
	2. I am concerned about misuse of personal information.	5.82	1.31	.77*
	3. It bothers me to receive too much advertising material of no interest.	5.9	1.34	.63*
	4. I feel fear that information may not be safe while stored.	5.48	1.38	.81*
	5. I believe that personal information is often misused.	5.54	1.25	.81*
Ad irritation	6. I think companies share information without permission.	5.48	1.4	.63*
	When I receive personalized advertising on [MEDIA TYPE], I think it is . . .			
	1. Negative.	4.75	1.60	.73*
	2. Irritating.	5.84	1.49	.77*
	3. Pointless.	5.16	1.73	.75*
	4. Unappealing.	5.65	1.50	.83*
	5. Regressive.	4.79	1.49	.79*
	6. Unattractive.	5.11	1.53	.81*
Perceived personalization	7. Vulgar.	3.61	1.75	.59*
	8. Awful.	4.35	1.76	.76*
	1. This personalized advertising on [MEDIA TYPE] makes purchase recommendations that match my needs.	2.57	1.46	.82*
	2. I think that this personalized advertising on [MEDIA TYPE] enables me to order products that are tailor-made for me.	2.59	1.48	.88*
	3. Overall, this personalized advertising on [MEDIA TYPE] is tailored to my situation.	2.55	1.51	.92*
	4. This personalized advertising on [MEDIA TYPE] makes me feel that I am a unique customer.	2.29	1.55	.76*
	5. I believe that this personalized advertising on [MEDIA TYPE] is customized to my needs.	2.45	1.47	.89*

Notes: Each question was rephrased in accordance with the media type: unsolicited commercial e-mail, direct mail, telephone call, and text message. All items were measured using a seven-point "strongly disagree/strongly agree" scale. (R) after an item indicates that it was reversed for inclusion in the model. Factor loading is based on standardized estimates.

* $p < .05$.

TABLE 2
Correlation Matrix of Constructs

Constructs	AVE	1	2	3	4	5
1. Ad avoidance	.557	1				
2. Ad skepticism	.663	.48	1			
3. Privacy concerns	.520	.50	.35	1		
4. Ad irritation	.572	.56	.46	.33	1	
5. Perceived personalization	.731	-.46	-.47	-.28	-.49	1

Notes: Average variance extracted (AVE) was calculated based on the formula provided by Fornell and Larcker (1981). $AVE = \frac{\sum (\text{standardized factor loading}^2)}{\sum (\text{standardized factor loading}^2) + \sum (\text{measurement error})}$.

was calculated for rigorous testing of measurement validity. Fornell and Larcker (1981) asserted that the average variance extracted (AVE) should be greater than the recommended .50 to achieve convergent validity. As shown in Table 2, it was found that the AVE values were greater than .50 for all constructs (.520 < all AVE values < .731), thus providing strong evidence of convergent validity.

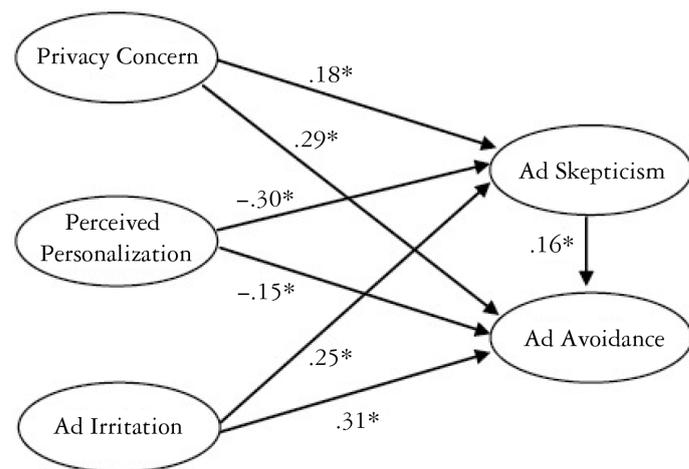
Discriminant validity was assessed by comparing the AVE estimates for each construct with the square of the parameter estimates between the two constructs. According to Fornell and Larcker (1981), discriminant validity is achieved if the AVE of each construct exceeds the square of the standardized correlations between the two constructs. All AVE estimates (.557 and .663 for ad avoidance and ad skepticism, respectively) were greater than the squared correlations between all constructs (e.g., $.48^2 = .23$). Thus, both convergent validity and discriminant validity were established.

Full Structural Model and Hypothesis Testing

The structural model was analyzed using the maximum likelihood estimation method. To determine whether the hypotheses were supported, each structural path coefficient was examined with fit indices of the proposed model. Guided by Hu and Bentler (1998), we used multiple fit indexes to ensure that multiple aspects of full structural model fit could be captured. Overall, the fit indices showed a good fit for the model: $\chi^2(485) = 1283.2$ ($p < .001$), GFI = .84, CFI = .92, SRMR = .05, and RMSEA = .06.

Each of the path coefficients was statistically significant ($p < .05$) in the predicted direction. That is, all hypothesized paths and directions are supported. As indicated in Figure 1, skepticism toward personalized advertising is positively related to personalized ad avoidance (H1). Perceived privacy concerns were found to increase skepticism toward personalized advertising (H2) and have a positive impact on personalized ad avoidance (H3). In addition, perceived ad irritation positively affects skepticism toward personalized advertising (H4) and personalized ad avoidance (H5). Finally, the results indicated

FIGURE 1
Proposed Model



Notes: $\chi^2(485) = 1283.2$ ($p < .001$), GFI = .84, CFI = .92, SRMR = .05, and RMSEA = .06.

GFI = goodness-of-fit index; CFI = comparative fit index; SRMR = standardized root mean residual; RMSEA = root mean square error of approximation.

* $p < .05$.

that perceived personalization is negatively related to skepticism toward personalized advertising (H6) and personalized ad avoidance (H7). Thus, H1, H2, H3, H4, H5, H6, and H7 were supported.

Testing the Mediation Effects Using Bootstrapping

Following Cheung and Lau's (2008) procedure, a bootstrapping analysis with Amos was also performed to test the mediation effects of latent constructs. Specifically, we tested the significance of indirect effects by examining the bias-corrected (BC) 95% confidence intervals. In this study, 5,000 bootstrap samples with replacements drawn from the original data set were requested (Preacher and Hayes 2008).

TABLE 3
Testing for Mediation with Bootstrapping

Path	Estimate	SE	BC 95% CI	
			Lower	Upper
PVC → AAV	.29**	.07	.17	.43
IRR → AAV	.31**	.07	.18	.44
PSL → AAV	-.15**	.05	-.26	-.05
PVC → ASK → AAV	.03**	.02	.01	.07
IRR → ASK → AAV	.04**	.02	.01	.08
PSL → ASK → AAV	-.05**	.02	-.10	-.01

Notes: BC = bias corrected; CI = confidence interval; SE = standard error; PVC = privacy concerns; AAV = ad avoidance; IRR = ad irritation; PSL = perceived personalization; ASK = ad skepticism.

There were 5,000 bootstrap samples. All estimates are standardized.

** $p < .01$.

As shown in Table 3, significant indirect effects of ad skepticism emerged for perceived privacy concerns on ad avoidance (standardized estimate = .03; BC 95% confidence intervals = .01 to .07; $p < .01$), perceived ad irritation on ad avoidance (standardized estimate = .04; BC 95% confidence intervals = .01 to .08; $p < .01$), and perceived personalization on ad avoidance (standardized estimate = -.05; BC 95% confidence intervals = -.10 to -.01; $p < .01$). Furthermore, the direct paths from perceived privacy concerns, ad irritation, and perceived personalization to ad avoidance were statistically significant ($p < .01$). Thus, the findings provide evidence for partial mediation of ad skepticism.

Competing Models

The final step of the model validation process is to compare the proposed model with a series of competing models, which serve as alternative explanations to the proposed model, in an attempt to demonstrate that no better fitting model exists. This is particularly important in structural equation modeling because a proposed model can be shown only to have acceptable fit, but acceptable fit alone does not guarantee that an alternative model will not fit better or equally well (Hair et al. 1998). Therefore, it is suggested that “the strongest test of a proposed model is to identify and examine competing models that represent truly different hypothetical structural relationships” (Hair et al. 1998, p. 591).

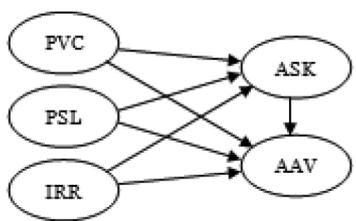
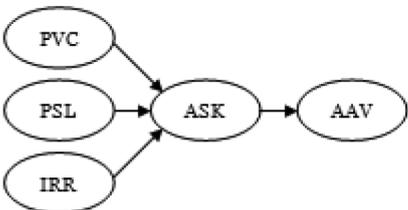
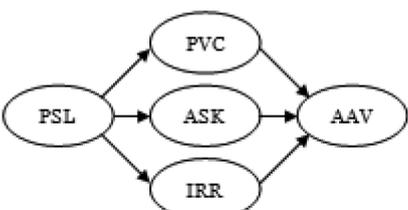
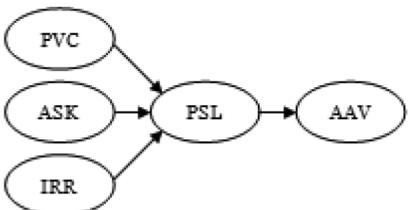
In this study, we propose three alternative models based on theoretical justification and empirical evidence. The first competing model (CM1) rules out the direct effects of privacy concerns, ad irritation, and perceived personalization on advertising avoidance to see whether the influence of early latent variables (e.g., privacy concerns, ad irritation, and perceived personalization) is fully mediated by ad skepticism. As

detailed earlier, the tripartite model of resistance advocated by Knowles and Linn (2004) implies that the key stages of consumer resistance are presented in the order of affective (“I don’t like it”), cognitive (“I don’t believe”), and behavioral (“I won’t do it”) factors. It is important to note that the fundamental cognitive component of resistance is normally associated with a general distrust of persuasive stimuli represented by consumer skepticism.

On the other hand, the second competing model (CM2) is proposed to see whether perceived personalization has an indirect effect on advertising avoidance through privacy concerns, ad skepticism, and ad irritation. As the third competing model (CM3), it is equally plausible that perceived personalization mediates the effects of privacy concerns, ad skepticism, and ad irritation on ad avoidance. It could be justified by the general principles of acquisition-transaction utility theory (Thaler 1985), which suggest that consumers’ purchase probabilities depend on the perceived benefits (e.g., personalization) compared with the perceived costs (e.g., privacy concerns, ad irritation, and ad skepticism). Given that perceived personalization is a function of consumer’s expected utility, it may play a critical role in the psychological processes of advertising avoidance.

Table 4 indicates the proposed model and other competing models with simple path diagrams, standardized path coefficients, and goodness-of-fit measures. Compared with these competing models, the proposed model has the best fit when taking into consideration the AIC (Akaike’s information criterion), SRMR, and RMSEA. In other words, smaller values of AIC, SRMR, and RMSEA are indicative of better-fitting models. In this study, the AIC for the proposed model was 1443.16, while the AIC was 1561.01 for CM1, 1502.64 for CM2, and 1568.87 for CM3. Respectively, the proposed model is lowest on the SRMR (.05) and the RMSEA (.06).

TABLE 4
Goodness-of-Fit Indices in Competing Models

Model	Diagrams of competing Model	χ^2 (df)	GFI	CFI	SRMR	RMSEA	AIC
PM		1283.2 (485)	.84	.92	.05	.06	1443.16
CM1		1415.0 (488)	.83	.91	.09	.07	1561.01
CM2		1358.6 (489)	.83	.92	.09	.06	1502.64
CM3		1422.9 (488)	.83	.91	.09	.07	1568.87

Notes: GFI = goodness-of-fit index; CFI = comparative fit index; SRMR = standardized root mean residual; RMSEA = root mean square error of approximation; AIC = Akaike's information criterion; PM = proposed model; PVC = privacy concerns; PSL = perceived personalization; IRR = ad irritation; ASK = ad skepticism; AAV = ad avoidance; CM = competing model.

Although other fit indices show identical results across the competing models, the AIC, SRMR, and RMSEA measures truly provide strong evidence supporting that the proposed model is the best model that explains the underlying process of personalized advertising avoidance.

Multiple-Group Comparison in Personalized Ad Media

As a post hoc analysis, we also examined how the interplay of advertising avoidance with its antecedents differs across the different personalized ad media using a multigroup approach. The pooled data was divided into separate covariance matrices for unsolicited commercial e-mail ($n = 113$), direct mail ($n = 110$), telephone call ($n = 110$), and text message ($n = 109$), and was used as input for the multiple-group analysis. Due to the limited sample size of each personalized ad medium,

we performed multigroup path analysis instead of structural equation modeling (Kline 2005). Unconstrained models, where all paths are free to vary across the personalized ad media, were generated to be used as a basis of comparison. After the unconstrained models were run simultaneously, without invariance of path coefficients, each gamma (i.e., all paths from exogenous variables to endogenous variables), as well as β path (i.e., all paths among endogenous variables) was tested individually for equivalency by fixing each path coefficient in one group to be equal to another one by one. Next, a χ^2 difference test method was used to examine the path coefficient differences across the personalized ad media. Given that the χ^2 difference test provides significant results, the path coefficients were significantly different across ad media.

As shown in Table 5, there was a significant difference, $\Delta\chi^2$ ($df = 1$) > 3.84, in path coefficient of perceived privacy

TABLE 5
Multiple-Group Path Coefficients Across Personalized Ad Media

Path	Media type				χ^2 difference ($\Delta df = 1$)					
	SPAM	DM	TELE	TEXT	$\Delta\chi^2$ (SPAM Versus DM)	$\Delta\chi^2$ (SPAM Versus TELE)	$\Delta\chi^2$ (SPAM Versus TEXT)	$\Delta\chi^2$ (DM Versus TELE)	$\Delta\chi^2$ (DM Versus TEXT)	$\Delta\chi^2$ (TELE Versus TEXT)
ASK → AAV	.17*	.11	.16*	.27*	.23	.04	.45	.06	4.26*	.65
PVC → AAV	.44*	.26*	.39*	.32*	4.87*	.08	.76	3.86*	.81	.98
PVC → ASK	.11	.09	.21*	.19*	.04	1.19	.58	1.56	.87	.19
IRR → AAV	.36*	.35*	.05	.22*	.01	5.89*	1.48	5.59*	1.56	1.39
IRR → ASK	.19*	.14	.27*	.39*	.08	.59	4.61*	1.12	4.99*	.68
PSL → AAV	-.27*	-.15*	-.15*	-.05	1.66	1.66	3.40*	.00	.22	.22
PSL → ASK	-.25*	-.33*	-.24*	-.36*	.16	.01	.74	.27	.24	1.01

Notes: SPAM = unsolicited commercial e-mail; DM = direct mail; TELE = telephone call; TEXT = text message; ASK = ad skepticism; AAV = ad avoidance; PVC = privacy concerns; IRR = ad irritation; PSL = perceived personalization.

If $\Delta\chi^2 (df = 1) > 3.84$, the path coefficient difference between two groups are significant ($p < .05$).

* $p < .05$.

concerns \times personalized ad avoidance between unsolicited commercial e-mail and direct mail ($\Delta\chi^2 = 4.87$ at $p < .05$), as well as between direct mail and telephone call ($\Delta\chi^2 = 3.86$ at $p < .05$). In addition, the path coefficient of perceived ad irritation \times personalized ad avoidance between unsolicited commercial e-mail and telephone call ($\Delta\chi^2 = 5.89$ at $p < .05$), as well as between direct mail and telephone call ($\Delta\chi^2 = 5.59$ at $p < .05$), was significantly different. The path coefficient from perceived ad irritation to ad skepticism was also significantly different between unsolicited commercial e-mail and text message ($\Delta\chi^2 = 4.61$ at $p < .05$), as well as between direct mail and text message ($\Delta\chi^2 = 4.99$ at $p < .05$). It is interesting to note that the difference of path coefficient from skepticism toward personalized advertising to personalized ad avoidance was statistically significant between direct mail and text message ($\Delta\chi^2 = 4.26$ at $p < .05$). Overall, most path coefficients were steady across the four personalized ad media. Regarding unsolicited commercial e-mail, the perceived privacy concerns \times skepticism toward personalized advertising path was not significant. Similarly, in the context of direct mail, the path coefficients of skepticism toward personalized advertising \times personalized ad avoidance, perceived privacy concerns \times skepticism toward personalized advertising, and perceived ad irritation \times skepticism toward personalized advertising were not statistically significant. Finally, the path of perceived ad irritation \times personalized ad avoidance for telemarketing calls was also not significant.

DISCUSSION

This study attempts to identify potential antecedents of personalized advertising avoidance. As the importance of message customization in advertising rises, assessing the knowledge of the effect of personalization on advertising responses is critical to developing effective communication campaigns. From a theoretical standpoint, our results advance understanding of the psychological processes of advertising avoidance in the context of personalized media that have not been investigated before, whereas prior research has focused on predictors of advertising avoidance in traditional media (e.g., Speck and Elliott 1997) or on the Internet (e.g., Cho and Cheon 2004; Edwards, Li, and Lee 2002). Recognizing the nature of advertising avoidance associated with resistance as an outcome, we suggested a series of motivational factors from an integrative perspective of resistance and reactance, namely, perceived privacy concerns, ad irritation, perceived personalization, and skepticism toward personalized advertising. Since personalized advertising could intrude into consumers' private domains, consumers tended to perceive their personal information as threatened, became annoyed and distrustful of persuasive efforts, and therefore avoided such messages. At the same time,

perceived personalization in ads appeared to make consumers less resistant to ads.

Following the sequential process of resistance formation suggested by Knowles and Linn (2004), our proposed model is established through affective (perceived privacy concerns, ad irritation, and perceived personalization), cognitive (personalized ad skepticism), and behavioral (personalized ad avoidance) stages. The findings of this study provide insights into understanding the mechanisms invoked under different personalized media formats and identifying determinants of personalized ad avoidance.

In essence, our findings shed new light on the importance of perceived privacy concerns and personalization of ad messages in building a comprehensive theoretical model of personalized advertising avoidance. They demonstrate the mediating role that ad skepticism partially plays in affecting the causal relationships between ad avoidance and its three antecedents (perceived personalization, privacy concerns, and ad irritation). The interrelationships among latent constructs also indicate significant differences across unsolicited commercial e-mail, postal direct mail, telemarketing, and text messaging. Several reasons can be considered for these phenomena.

One of the most notable findings is the predominant influence of personalization. When advertisements are personalized to specific customers, skepticism toward the ads tends to be lower. This is consistent with previous findings that targeted advertising efforts result in more favorable attitudes toward the advertisement (Aaker, Brumbaugh, and Grier 2000). A possible explanation is that personalization may create a sense of having previous contacts with advertisers in the mind of consumers, hence easing the negative perceptions toward advertisements in general. As Morimoto and Chang (2006) suggest, consumers tend to have less negative feelings toward messages/ads from marketers with whom they had previous business interactions (e.g., purchase and correspondence). Specifically, by addressing consumers' names on ads, such negative advertising responses may be eased to some degree. Also, by personalizing ads for specific consumers, advertisers may be able to enhance their credibility because consumers may see that they have made additional efforts to target them more precisely. As a result, personalization can lead to less negative perceptions toward ads compared with nonpersonalized and mass-targeted ads.

It is noteworthy that consumers may resist an entire related set of traditions, promotions, and marketplace activities. According to Close and Zinkhan (2007), market resistance is conceptualized as "an opposition to traditions in the marketplace, with the purpose of creating new behaviors" (p. 256). Related to anticonsumption, market resistance is apparent when people do not engage in the marketplace behaviors or rituals (e.g., Valentine's Day) associated with a particular market (Close and Zinkhan 2009). The process of market

resistance may be partially attributed to the economic, social, cultural, and marketing communication environments (Close and Zinkhan 2007). In this sense, advertisers need to take consumers' market resistance into account in their execution of highly personalized advertising.

Consistent with previous findings (e.g., Dolnicar and Jordaan 2007; Milne and Boza 1999; Nowak and Phelps 1992; Sheehan and Hoy 1999), this study confirmed that privacy concerns can influence consumers' perceptions toward advertising practices as well as behavioral intentions. However, the effect of privacy concerns is smaller than that of personalization. This may be explained by the sample. Compared with older generations, younger generations, including college students, are more likely to use multiple Internet media simultaneously, since the Internet has been available to them as a communication medium while growing up. They may be more comfortable conducting business transactions online, and therefore their online privacy concerns may be relatively lower. Personalization, compared with privacy concerns, has become a stronger indicator of ad skepticism.

Although the use of student samples is sometimes criticized, students are a prime consumer group for online businesses (Harris Interactive 2002; McAllister and Turow 2002) and the current study examines online/mobile platforms such as spam and text messages with this particular audience. College students are also said to respond to online ads (Electronic Advertising and Marketplace Report 2000), and therefore can be considered a target audience for personalized advertising. In this regard, the use of student samples in the current study can be justified, and the results found in the study are certainly applicable to audiences of personalized advertising. Similar outcomes may be found when individuals have had more experiences with online business transactions/interactions.

The findings from the current study confirmed the significant effect of perceived ad irritation on both ad skepticism and ad avoidance. While ad skepticism partially mediated the relationship between irritation and avoidance, perceived ad irritation had a direct effect on avoidance. According to a recent report of Vizu Answers (2008), the largest driving factor to avoid advertising is a general sense of irritation (29%), followed by a lack of trust (i.e., ad skepticism) (19%).

We found a strong correlation between perceived ad irritation and ad avoidance, which sheds light on the major determinant of ad avoidance. The higher the perceived ad irritation, the greater the consumer avoidance of personalized advertising. Our results are in accordance with previous research suggesting that feelings of irritation have a significant impact on ad avoidance (e.g., Li, Edwards, and Lee 2002; Speck and Elliott 1997). Note that this does not necessarily mean that high degrees of ad avoidance result in high levels of irritation. In other words, perceived ad irritation can predict ad avoidance, but ad avoidance does not automatically connote the existence

of irritation. This is because ad avoidance may be attributed to people's habitual behavior activated by automated cognitive processes rather than elaborate decision processes (i.e., a decision based on attitudes and intentions) (Aarts, Verplanken, and Knippenberg 1998). Indeed, advertising avoidance in personalized media is executed on a repetitive basis and thus may become habitual without causing irritation.

Furthermore, it is possible to argue that the process of psychological reactance (Brehm 1966; Brehm and Brehm 1981) may take place, as predicted by Edwards, Li, and Lee (2002), in the case of pop-up ads. A similar process was also found with regard to unsolicited commercial e-mail (Morimoto and Chang 2009). Because consumers think that these personalized advertising media are irritating since they can intervene their cognitive tasks, they may avoid ads even if they are addressed to them in order to regain control over processing.

The multiple-group analysis took this study one step further to better understand how the process of personalized ad avoidance differs across the advertising media. While the paths of perceived privacy concerns \rightarrow ad avoidance, and perceived personalization \rightarrow ad skepticism were all significant across the four advertising media, the other paths show differences. For instance, the path between ad skepticism and ad avoidance in direct mail was insignificant, and specifically, the path comparison between direct mail and text messaging turned out significantly different. Unlike the other advertising media studied in the current study, text messaging does cost money for consumers to receive, resulting in a more hostile perception toward ads sent via that medium. On the other hand, postal direct mail is considered to be easier to avoid compared with electronic forms of advertising media such as unsolicited commercial e-mail (Morimoto and Chang 2006), and therefore, the difference of the path coefficients between ad skepticism and ad avoidance across electronic media was not significant. For unsolicited commercial e-mail and direct mail, the paths of perceived privacy concerns \rightarrow ad skepticism, and perceived ad irritation \rightarrow ad avoidance were insignificant, whereas these two path coefficients were significant for telemarketing and text messaging. As suggested by Newell, Pilotta, and Thomas (2008), one's usage of a medium is at the expense of using other media, and this audience group may be more engaged in text messaging compared with postal mail and e-mail. As a result, they may encounter more personalized advertisements sent via text messages, leading to more negative responses.

It is interesting to note that with regard to the path between perceived irritation and ad avoidance, telemarketing did not show any significant effect compared with the other three ad formats. Meanwhile, the paths from privacy concerns to skepticism and from irritation to skepticism were significant for telemarketing. This may be because the sample we selected may use cell phones more often than regular telephones, and telemarketers tend to contact landlines. In addition, the

national do-not-call list hinders marketers from contacting consumers without prior permission. While participants generally perceive such calls from advertisers negatively, they may not necessarily have to deal with them on a regular basis, and therefore the influence of perceived irritation on avoidance of personalized telemarketing calls was insignificant for this sample.

SUGGESTIONS FOR FUTURE RESEARCH AND CONCLUSIONS

This study aimed to map out the conceptual model of consumers' tendency in avoidance of personalized advertising, such as unsolicited commercial e-mail, text messages, postal direct mail, and telemarketing, to provide a general understanding of the influence of privacy concerns, personalization, and perceived irritations by these advertising media. However, the generalizability of the findings from this study may be limited because we used a student sample. Further research is needed to replicate the conceptual model on nonstudent samples with a broader age spectrum to enhance external validity. On the other hand, as more and more advertising media become available due to technological advancement, the amount of ads consumers receive also increases, meaning that ad clutter is going to remain a major concern for advertisers to effectively communicate with consumers. One way to overcome the challenge is personalization to make consumers feel that messages are relevant to them. Therefore, this study helps both academics and practitioners to take the first step of understanding the influence of personalization on advertising-related variables in conjunction with privacy concerns. However, more research in this area is certainly called for as more new advertising media, particularly in digital form, are emerging.

Acknowledging the importance of personalization in reducing advertising avoidance, one fruitful avenue for future research is to examine whether our proposed model can be applied to the social media environment (e.g., Facebook, Twitter, and Foursquare). For example, Facebook's instant personalization feature allows any Web site to retrieve personal information about a user's friends on the site. Foursquare, a location-based service, alerts consumers about personalized offers available nearby. However, such social media tools could raise privacy concerns about misuse of personal information. With this idea in mind, a possible research question we propose is: If consumers feel their privacy is invaded, how and why do they resist personalized advertising tactics embedded in social media?

We also suggest for future studies that attempt to manipulate the degree/types of personalization in ad messages to rigorously examine the influence that personalization has across different media platforms on consumer responses (possibly in an experimental setting), as this study found that the

level of influence varied across different media. For example, the degree/types of personalization can be manipulated by (1) use of customer's name, (2) providing product recommendations based on keyword searches (e.g., Google AdWords) or previous purchase information, and (3) a combination of the first two factors. Based on this idea, another possible research question for future research can be stated as: Which types (or degrees) of personalized advertising facilitate the least degree of perceived privacy concerns, ad irritation, ad skepticism, and ad avoidance? In addition, future research needs to examine conditions under which consumers are more or less reluctant to receive personalized ads by using well-controlled experiments. Specifically, it is noteworthy to investigate how formation of personalized advertising avoidance differs between opted-in and opted-out consumers.

Taken together, this line of research holds great promise for contributing to both academia and industry, since the customization of ad messages is becoming popular in the field of advertising. At the same time, the technological advancements that allow marketers to implement personalized advertising strategies are also changing the traditional definition of advertising, such as one-way communication targeted toward mass audiences. Hence, academics are also encouraged to revisit the definition of *advertising* to accommodate the changes taking place on the practical front. Some keywords used in the traditional definition of advertising, such as "mass audiences" and "one-way communication," may require some modification/extension because, depending on the media choice, personalized advertising can be considered a combination of traditional advertising (nonpersonal) and personal selling. Thus, promotional elements in the marketing mix are more integrated and the boundaries among these elements are becoming blurred for personalized advertising. It is hoped that this study provides not only a general picture of advertising responses toward personalized advertising messages, but also some food for thought for more investigation on decreasing advertising avoidance.

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