

# WHY DO PEOPLE AVOID ADVERTISING ON THE INTERNET?

Chang-Hoan Cho and Hongsik John Cheon

**ABSTRACT:** This study was designed to provide insights into why people avoid advertising on the Internet. Recent negative trends in Internet advertising, such as "banner blindness" and extremely low click-through rates, make it imperative to study various factors affecting Internet ad avoidance. Accordingly, this study builds a comprehensive theoretical model explaining advertising avoidance on the Internet. We examined three latent variables of Internet ad avoidance: perceived goal impediment, perceived ad clutter, and prior negative experience. We found that these constructs successfully explain why people cognitively, affectively, and behaviorally avoid advertising messages on the Internet. Perceived goal impediment is found to be the most significant antecedent explaining advertising avoidance on the Internet.

The purpose of this research is to engender a detailed explication of what drives ad avoidance on the Internet. Advertisers and marketers have become disenchanted with the Internet for many reasons (Lanctot 2002). As several studies have recognized that the proliferation of ads has caused consumers to avoid ads in traditional media (Zanot 1984), the cluster-bomb approach of ads on the Internet has also been cited as a reason for the trend toward declining consumer responsiveness to Internet ads. This negative trend becomes more apparent when we look at the continuously declining click-through rates (CTRs) of banner ads since the first banner ad appeared on the Internet in 1994. The CTR was 2% in 1995, and declined to .5% in 1998 (Nielsen 2000), whereas the industry average click-through rate as of June 2003 was .2 to .6% (MediaPost 2003). "Banner blindness," Internet users' tendency to avoid fixing their eyes on anything that looks like a banner ad, is another phenomenon referenced frequently to illustrate the negative aspects of Internet ads (Benway 1999). Because of these negative trends associated with Internet ads, it is imperative that we understand how consumers cope with Internet ads and what the reasons are behind ad avoidance among Internet users. This study could help both advertising scholars and practitioners understand a comprehensive theoretical model of advertising avoidance and develop various tools to decrease consumer ad avoidance on the Internet.

This research analyzes the causes and consequences of advertising avoidance examined in studies of traditional media.

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**Chang-Hoan Cho** (Ph.D., University of Texas at Austin) is an assistant professor of advertising in the College of Journalism and Communications, University of Florida.

**Hongsik John Cheon** (Ph.D., University of Florida) is an assistant professor, Department of Marketing and Finance, College of Business, Frostburg State University.

A comprehensive analysis of latent variables that reduce exposure to ad content on the Internet (i.e., avoidance of Internet ads) is provided. We assess the role of three latent variables that affect ad avoidance: perceived goal impediment, perceived ad clutter, and prior negative experiences. Cognitive, affective, and behavioral indicators of Internet ad avoidance are examined. The present study's objectives are threefold: (1) to understand how people avoid advertising messages on the Internet, (2) to detect various antecedents influencing Internet ad avoidance, and (3) to suggest ways to decrease advertising avoidance on the Internet.

## AD AVOIDANCE ON THE INTERNET

A variety of advertising forms exist on the Internet, such as buttons, banner ads, pop-up ads, paid text links, sponsorships, target sites, superstitials, e-mail ads, and so forth (Zeff and Aronson 1999). Since the first appearance of commercial banner ads on HotWired.com in 1994, banners have become the most prevalent advertising format on the Internet (Briggs and Hollis 1997). It is believed that the Internet is a convergent medium for all other media, that is, a hybrid of television, radio, newspapers, magazines, billboards, direct mail, and so forth (Miller 1996). Through the Internet, people can watch broadcast programs, listen to the radio, read newspapers, read direct e-mail ads, see scrolling banner ads, and so forth. The Internet can be used like traditional media for such purposes as access to information and entertainment.

Compared with traditional media, however, the Internet is believed to be a more goal-, task-, interactivity-, and/or information-oriented medium (Chen and Wells 1999; Eighmey

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1997; Korgaonkar and Wolin 1999; Li, Edwards, and Lee 2002). Advertising avoidance on the Internet might be different from that of traditional media in several ways. For example, many people still believe that the Internet is a tool or task-performing medium rather than an entertainment medium, which may make people avoid Internet ads more vigorously, especially when they have limited time to perform specific tasks. Second, Internet users are concerned with the speed of data access and retrieval (downloading time), which is less applicable to other traditional media. Internet users may have negative attitudes toward Internet ads when they perceive that Internet ads slow down the speed of data access. In addition, the Internet involves more two-way interactivity or voluntary action from consumers (e.g., clicking banners, hyperlinks, etc.), and thus, Internet ad avoidance might encompass intentional refraining from any further action (e.g., ignoring ads by intentionally not clicking any hyperlink). This is illustrated by low click-through rates (typically less than 1%) and banner blindness.

The extant research on ad avoidance has been mostly restricted to traditional media such as television, radio, newspaper, and magazines, and there has been limited academic research on Internet ad avoidance. Given that consumer responses to Internet advertising are disappointingly low, there may prove to be practical advantages to employing a theoretical framework to examine the reasons people avoid Internet ads.

### THEORETICAL MODEL

Based on extant communication, psychology and marketing theories, and research, we theorize that Internet users exercise ad avoidance on the Internet because of perceived goal impediment, perceived ad clutter, and prior negative experience. The conceptual explication of ad avoidance as a function of perceived goal impediment and perceived ad clutter stems from information theory (advertising as noise). Advertising avoidance is also theorized to be a function of prior negative experience. Theoretical justification for this association is derived from effects of prior knowledge and experience on consumer decision processes (Bettman and Park 1980). Cognition (*C*), affect (*A*), and behavior (*B*) are three ways in which consumers may respond to advertising stimuli (Vakratsas and Ambler 1999); therefore, we adopt the three components to develop three types of Internet advertising avoidance. The following sections explore the theoretical linkage of ad avoidance with its antecedent constructs and generate corresponding research hypotheses.

#### Perceived Goal Impediment

Ad avoidance can be caused by perceived goal impediment occasioned by advertising. Consumers are more likely to be

goal-directed when they use the Internet, and Internet ads are perceived to be more intrusive when compared with other media ads (Li, Edwards, and Lee 2002). When ads interrupt a consumer's goal, it may result in undesirable outcomes, such as aggravation, negative attitudes, and ad avoidance (Krugman 1983). When Internet ads are a significant source of noise or nuisance, hindering consumer efforts to browse Web content, they can disrupt consumer Web page viewing, distract viewers from the Web page's editorial integrity, and intrude on their search for desired information. For instance, consumers might feel that the navigation process to locate desired content is difficult on the Internet because Internet ads disrupt or intrude on their overall search for desired information, which may result in a retreat from the source of interference (i.e., ad avoidance). We therefore hypothesize that perceived goal impediment, indicated by consumer search hindrance, disruption, and distraction, may evoke ad avoidance on the Internet.

*H1: The greater the perceived goal impediment, the greater the advertising avoidance on the Internet.*

#### Perceived Ad Clutter on the Internet

Several studies on ad clutter suggest that the number of ads in a vehicle is closely related to perceived advertising clutter (Ha 1996; James and Kover 1992; Speck and Elliot 1997). Elliot and Speck (1998) define "perceived ad clutter" as a consumer's conviction that the amount of advertising in a medium is excessive. Ad clutter on the Internet can be operationalized as the number of banner ads, pop-up ads, advertorials, text links, and so forth, that appear on a single Web page (ad excessiveness). Consumer irritation with the number of ads on the Internet, or the perception that the Internet is exclusively an advertising medium (ad exclusiveness), should also logically contribute to the perception of advertising clutter. This perceived ad clutter might, in turn, lead to negative attitudes and subsequent ad avoidance.

*H2: The greater the perceived ad clutter, the greater the advertising avoidance on the Internet.*

#### Prior Negative Experiences

Consumer prior knowledge is known to influence the type and degree of information processing, such as systematic organization, comparisons, evaluation of brand, and purchasing behavior (Bettman and Park 1980; Russo and Johnson 1980). Information learned from experience is also known to have a strong and direct impact on attitudes and behavior (Fazio and Zanna 1981; Smith and Swinyard 1982). Consumers tend to rely on conclusions drawn from their personal experiences because they often value such learning and build internal at-



tributions about personal efficacy (Hoch and Deighton 1989). With Internet ads, prior negative experience can be indicated by dissatisfaction and perceived lack of utility and incentive for clicking on those ads. This negative experience may lead consumers to avoid the source of the negative experience (i.e., Internet ad avoidance). Based on this theory of learning from experience, we hypothesize that as negative experiences with Internet ads increase, the tendency to avoid those ads also increases.

*H3: The greater the prior negative experience, the greater the advertising avoidance on the Internet.*

### Types of Ad Avoidance

As mentioned earlier, cognition (C), affect (A), and behavior (B) are three elements of consumer attitudinal responses to advertising stimuli, although the order of responses (CAB, CBA, etc.) is influenced by other variables, such as involvement (Vakratsas and Ambler 1999; Vaughn 1986). In this study, we use all three components of consumer advertising responses in measuring Internet ad avoidance.

The cognitive component of ad avoidance consists of a consumer's belief about an object (e.g., Internet ads), which is evaluative in nature (Ajzen 1991). The more negative beliefs associated with Internet ads, the more unfavorable the overall cognitive component is presumed to be, leading to cognitive avoidance response (e.g., intentional ignoring of Internet ads). We view this intentional lack of attendance to Internet ads as being a separate and distinct form of cognitive choice. As such, this cognitive activity is defined as one component of Internet ad avoidance. A consumer's feeling or emotional reaction to an object (i.e., an Internet ad) represents the affective component of ad avoidance. Consumers who intensely dislike Internet ads are likely to increase their negative attitude toward Internet ads (Alwitt and Prabhaker 1994) and avoid the source of their displeasure. Thus, negative affect toward Internet ads is defined as a second component of Internet ad avoidance. We define the behavioral component of Internet ad avoidance as consumer avoidance actions other than lack of attendance. These actions may entail, for example, scrolling down Web pages to avoid banner ads, purging pop-up ads, clicking away from ad pages containing banners, and so forth.

### Causal Model

Based on information theory and learning from experience theory, we developed a theoretical causal model of ad avoidance on the Internet, which consists of three latent exogenous variables (i.e., perceived goal impediment, perceived ad clutter, and prior negative experiences) and one latent endogenous variable (ad avoidance).

## RESEARCH METHODOLOGY

The present study employed an on-line survey to collect the data because the paper's topic (Internet ad avoidance) is highly relevant to the medium (the Internet), and it enabled quick and accurate gathering of survey information with minimal cost compared with a traditional paper-and-pencil method (Kelley-Milburn and Milburn 1995; Rosen and Petty 1995). In addition, the on-line data gathering method can provide reliability and validity equivalent to traditional paper-and-pencil methods (Morris, Woo, and Cho 2003).

### Sample

Data for this study were collected in September 2002 from students enrolled in three large undergraduate courses at a large Southeastern university. Participants received extra credit for participating in the self-administered survey. A total of 266 participants completed the survey. College students, who comprise one of the largest Internet user segments, have acted as opinion leaders about Internet content, and thus, have been a lucrative consumer group for on-line marketers (Davis 1999). The use of a homogeneous student sample might yield different results from that found in the general population, however. For this reason, caution should be taken when interpreting findings generated by student participants.

### Instrument Construction

Four latent constructs are examined in this study: perceived goal impediment, perceived ad clutter, prior negative experiences, and ad avoidance. All are represented by composite indicators with multiple items, except for perceived ad clutter, which is represented by single-item indicators. All indicators were measured using seven-point Likert scales ranging from strongly disagree to strongly agree. (The Appendix presents the measurement items used in the study.)

The perceived goal impediment scale items ("search hindrance," "disruption," and "distraction") were taken from previously validated measures in the literature (Speck and Elliott 1997) and were modified to fit the context of Internet advertising. Elliot and Speck's (1998) work also inspired the indicators of perceived ad clutter (ad excessiveness, irritation, and exclusiveness). Adapted from Oliver's (1980) satisfaction scale and Davis, Bagozzi, and Warshaw's (1989) perceived negative usefulness/lack of utility scale, the prior negative experience scale was reworded to fit the context of Internet advertising. No adaptable preexisting scale was found for the perceived lack of incentive measure; therefore, a new three-item scale was constructed for this study. Three response variables were used to estimate ad avoidance on the Internet: cognitive, affective, and behavioral consumer ad avoidance.



**TABLE I**  
**Key Statistics**

| Latent variables          | Observed variables of items | Number | Mean | SD   | Confirmatory factor loadings |
|---------------------------|-----------------------------|--------|------|------|------------------------------|
| Perceived goal impediment | Search hindrance            | 3      | 5.67 | 1.16 | .85*                         |
|                           | Disruption                  | 3      | 5.09 | 1.42 | .88*                         |
|                           | Distraction                 | 3      | 5.12 | 1.22 | .79*                         |
| Perceived ad clutter      | Excessiveness               | 1      | 5.56 | 1.59 | .93**                        |
|                           | Exclusiveness               | 1      | 4.81 | 1.55 | .55**                        |
|                           | Irritation                  | 1      | 4.32 | 1.15 | .68**                        |
| Prior negative experience | Dissatisfaction             | 5      | 5.47 | 1.30 | .75*                         |
|                           | Perceived lack of utility   | 3      | 4.42 | 1.48 | .83*                         |
|                           | Perceived lack of incentive | 3      | 5.42 | 1.01 | .99*                         |
| Types of ad avoidance     | Cognitive                   | 8      | 5.65 | 1.29 | .81*                         |
|                           | Affective                   | 6      | 5.45 | 1.26 | .87*                         |
|                           | Behavioral                  | 4      | 5.76 | 1.04 | .80*                         |

\* Factor significance:  $p \leq .05$ .

\*\* Marginal factor significance:  $p \leq .06$ .

Not finding a predefined scale encompassing all three aspects of ad avoidance, we developed eight items to measure cognitive ad avoidance, six items for affective ad avoidance, and four items for behavioral ad avoidance (see the Appendix).

### Data Analysis

This study tested the study hypotheses, using structural equation analysis, by the method of maximum likelihood. LISREL VIII was used for performing data analyses.

## RESULTS

### Assumption Check

Prior to the main analysis, we validated several underlying assumptions for structural equation modeling (SEM)—normality, sampling adequacy, and no extreme multicollinearity (Hair et al. 1998)—and the assumptions were confirmed to be within acceptable boundaries.<sup>1</sup>

### Measurement Model

Key statistics (item means, standard deviations, confirmatory factor loadings, etc.) for all variables considered in the present study are provided in Table 1. Validation of the research instrument was performed by a confirmatory factor analysis (CFA), via LISREL's measurement model. Each scale was assessed for construct validity by examining the standard CFA factor loadings of its hypothesized items. It is proposed that each item should, for acceptable construct validity, have a minimum factor loading of ".60" for its hypothesized construct (Nunnally 1978). Eleven of twelve items met this

norm for the four constructs, and the one item that did not (Internet ad exclusiveness) had a loading of .55, but was still marginally significant with a  $p$  value of .06, and was therefore retained in the measurement model. Scale reliabilities were estimated using Cronbach's  $\alpha$ . In all four constructs, Cronbach's  $\alpha$  exceeded the standard acceptance norm of .70.

Figure 1 shows the visual description of the hypothesized model with corresponding statistics. For the perceived goal impediment construct, Internet ad disruption had a relatively higher factor loading (.88) than Internet ad search hindrance (.85) and Internet ad distraction (.79). This indicates that Internet ad disruption is most highly correlated with the perceived goal impediment construct. Internet ad excessiveness (.93) was more correlated with perceived ad clutter than Internet ad irritation (.68) and Internet ad exclusiveness (.55). Perceived lack of incentive on Internet ads (factor loading of .99) was most highly correlated with the prior negative experience construct, followed by perceived lack of utility (.83) and overall dissatisfaction (.75). Finally, behavioral ad avoidance (.80) had the lowest standardized factor loading of the ad avoidance construct, with cognitive ad avoidance (.81) next, and affective ad avoidance loaded the highest (.87). This result shows that the affective component of ad avoidance is the most significant in Internet ad avoidance.

### Structural Equation Model

Estimating goodness-of-fit for the hypothesized research model is the first step in model testing (see Figure 1). In our study, the  $\chi^2$  test is significant, and suggests that the estimated model does not fit well with the observed data. The  $\chi^2$  test is sensitive to sample size, however, and frequently leads to model



rejection. Therefore, Bentler and Bonnet (1980) suggested that a  $\chi^2$ /degrees of freedom ratio that does not exceed five indicates acceptable model fit (Bentler 1989; Bollen 1989); the ratio was estimated as 4.13 in our hypothesized model ( $\chi^2 = 198.41$ ,  $df = 48$ ). Additional goodness-of-fit measures are presented in Figure 1. Normed fit index (NFI) was .89, comparative fit index (CFI) was .91, and standardized root mean square residual (SRMR) was .07. Based on these measures, we can conclude that the model is quite satisfactory, despite the significant  $\chi^2$  statistic.<sup>2</sup>

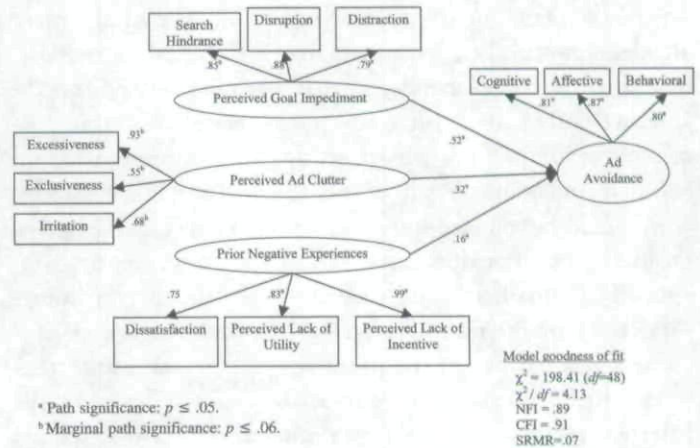
**Causal Model Analysis**

Examination of path significance for each association in our research model, and variance explanation ( $R^2$  value) for each path, was the second step in our model estimation. (Standardized path coefficients and path significances are presented in Figure 1.) As anticipated, we found significant effects of perceived goal impediment (H1), perceived ad clutter (H2), and prior negative experiences (H3) on Internet ad avoidance ( $p < .05$ ). In terms of relative importance of the predictive variables on the response variable, perceived goal impediment exhibited the strongest predicting power of Internet ad avoidance ( $\gamma = .52$ ), followed by perceived ad clutter ( $\gamma = .32$ ) and prior negative experiences ( $\gamma = .16$ ). The acceptable fit of this model generally supports the stated hypotheses, and that ad avoidance is composed of three componential variables.

**DISCUSSION**

The objective of this study was to provide insight into antecedents influencing advertising avoidance on the Internet and to test their proposed interrelationships. In pursuing that goal, a theoretical model of advertising avoidance was synthesized from the theoretical traditions of a representative body of diverse referent disciplines (see Figure 1). An on-line survey of Internet users was employed to validate much of the hypothesized model, and to suggest additional implications. Possible contributions of the present study are threefold. First, this study offers the first attempt to build a comprehensive theoretical model explaining advertising avoidance on the Internet. Second, it employs three antecedents of Internet ad avoidance, whereas previous studies have used only one or two antecedents. This yielded a significantly higher explained variance than previous ad avoidance studies on traditional media. It also reveals which antecedent is the most important in explaining ad avoidance on the Internet. Third, this study provides a new valid measurement of Internet ad avoidance with higher content validity, that is, it covers three aspects of ad avoidance—cognitive, affective, and behavioral ad avoidance. This differs from previous studies, which were limited to either cognitive or behavioral ad avoidance.

**FIGURE 1**  
**LISREL Analysis of Hypothesized Model of Ad Avoidance**



Note: NFI = Normed fit index; CFI = Comparative fit index; SRMR = standardized root mean square residual.

This study suggests that people avoid advertising messages on the Internet because of perceived ad clutter. The result is consistent with traditional ad avoidance studies (e.g., Elliott and Speck 1998). Although some consumers may continue to click on the Internet ads they find useful, many consumers choose not to because of an aversion to the amount of ads on the Internet. Information theory suggests that anything that impairs efficient interactivities between consumers and advertisers, such as placement, timing, and size of ads, can affect perception and be viewed as clutter. Therefore, Internet advertisers and publishers should understand that too much ad clutter on the Internet could reduce the collective effectiveness of Internet advertising.<sup>3</sup>

Prior negative experience was identified in this study as another determinant of ad avoidance on the Internet. This construct was considered for the first time in advertising avoidance research. The study result shows that past negative experience, indicated by overall dissatisfaction and perceived lack of utility and incentive, causes people to avoid the source of the negative experience, that is, Internet ad avoidance. It provides empirical support for "learning from experience" theory, applied to the context of Internet advertising. To develop consumer continuance intention for clicking Internet ads, it is essential to create consumer satisfaction toward ad services and increase perceived incentive and utility for clicking on banner ads. Collective efforts among various players in the Internet business to resolve avoidance triggers, such as regulating deceiving ad copy, spam, annoying forced exposure,<sup>4</sup> and so forth, may help this goal. More specifically, Internet marketers might try to build consumer loyalty to on-line advertisers by meeting consumer



expectations and building trust. For example, we see numerous banner ads that deliver exaggerated and deceiving messages (e.g., "You are the winner of \$1 million," "Click here for a free trip to Las Vegas," etc.) aiming to entice people to click on the banners, but these deceiving techniques might make avoidance worse (i.e., consumers may form negative attitudes toward the on-line brands and may not click any ads on the Internet). Therefore, on-line advertisers should avoid using deceiving techniques in their efforts to build consumer trust toward on-line brands. Another way to build and maintain such trust would be to make some meaningful connections between on-line and off-line domains—for example, by presenting images of off-line/brick and mortar stores, making customer service telephone numbers available, presenting other consumers' evaluations of the product/company, and so forth.

A third significant precursor for ad avoidance on the Internet was perceived goal impediment. People avoid Internet ads because they perceive that Internet ads impede their goals. This result is consistent with that of previous studies (e.g., Speck and Elliott 1997) on ad avoidance for traditional media. Communication research on traditional media has established a valid link between perceived goal impediment and ad avoidance, and confirmation of this link in the interactive advertising context further affirms the strength of this association. This suggests that on-line advertisers should attempt to identify interactive communication nuisances to reduce their interfering effects on consumer goals. The unexpected appearance of advertising messages on the Internet disrupts user tasks or goals and causes consumers to extensively avoid the noise. This may be especially true for more intrusive and unexpected advertising formats such as interstitials or pop-up ads. To reduce the perceived goal impediment, Internet advertisers might try several tactics. First, Internet advertisers might utilize less intrusive and unexpected advertising formats on the Internet, such as text-links displayed with keyword search results, sponsorships, opt-in ads, and so forth. Second, delivering highly targeted, customized, and context-congruent advertising messages through consumer profiling and systematic behavioral tracking may reduce perceived goal impediment and thus lessen consumer avoidance of ad messages. In other words, delivering the right message to the right people at the right time<sup>5</sup> might make consumers feel less disruption because the ad messages would be highly consistent with their goals or tasks and might not cause perceived goal impediment, or may even be of assistance to their Internet goals.

In terms of explained variance for ad avoidance, the three antecedent constructs explaining Internet ad avoidance (i.e., perceived goal impediment, perceived ad clutter, and prior negative experiences) accounted for 55.8% of the variance explained ( $R^2$  value) in the ad avoidance construct. This illustrates that each component contributes substantially and uniquely to ad avoidance on the Internet. Compared with

advertising avoidance in traditional media, the percentage of explained variance in the present study was significantly higher than that of previous studies (e.g., Speck and Elliot 1997): 29.3% for magazine ad avoidance, 26.5% for television, 26.4% for newspapers, and 37.3% for radio. This implies that the three antecedent constructs used to explain ad avoidance in the present study are more comprehensive and exhaustive than those of previous studies, so they more thoroughly account for the advertising avoidance phenomenon. In terms of the relative predictive power of each antecedent variable, the present study reveals that perceived goal impediment is the most important antecedent in advertising avoidance on the Internet. This finding is consistent with the assumption that the Internet is a more goal-oriented medium, and thus goal impediment caused by Internet ads is a significant concern among Internet users.

This study has several noted limitations. The first set of concerns relates to sampling issues. The sample size of 266 was relatively small considering the nature of the study (a survey of Internet users). In addition, the sample was limited to college students, who may exhibit different ad-avoidance patterns and reasons than those of other consumer segments. Therefore, it would be valuable to replicate the present study with a larger and more representative sample. Another concern is that the present study employed self-reported measurement of Internet ad avoidance without any actual observation of avoidance behaviors. Hence, it would be fruitful to conduct an experiment that directly measures actual avoidance behaviors on the Internet.

Second, although the present study provides valuable insights into ad avoidance on the Internet, further research will be needed to obtain a deeper understanding of Internet ad avoidance. The presence and importance of avoidance reasons may vary with specific user situations. For example, people who search for specific information in a limited amount of time may have different reasons for avoiding ads on the Internet (e.g., time pressure, irrelevant or nontargeted ads, no cognitive resources to devote to ads, etc.) than those who use the Internet to pass time or for pure entertainment purposes, and whose possible avoidance reasons may include "Internet ads are not fun, creative, exciting," and so forth. In addition, ad avoidance may vary depending on different formats of Internet ads (e.g., pop-up ads, banner ads, superstitials, text-links, etc.) because different formats may yield different perceived goal impediment, levels of intrusiveness, and so forth. Therefore, an area of future research of interest to both consumer researchers and Internet advertisers should be a comprehensive study examining the effects of different avoidance reasons, in various user situations, employing varying formats of Internet ads. The results of such research would help Internet advertisers design various interactive tools to reduce consumer ad avoidance on the Internet.



## NOTES

1. Skewness and kurtosis values for each item were within the range of  $\pm 1.96$ , Bartlett's test of sphericity index showed statistical significance ( $p < .01$ ), VIFs (variance inflation factors) of three predictor variables were less than 10.0, tolerance scores of the variables were larger than .10, eigenvalues were larger than .01, and condition indexes were less than 100.

2. An anonymous reviewer suggested that other theoretically meaningful paths could be included in the model that would result in achieving better fit. Following this suggestion, we added a theoretically meaningful path, that is, from "perceived ad clutter" to "perceived goal impediment." The association between the two constructs was derived from the assertions of Ha (1996) and Speck and Elliot (1997). We checked the difference in  $\chi^2$  between the original model and the modified model, and found that there is no statistically significant difference in  $\chi^2$  values:  $\chi^2$  was 198.41 ( $df = 48$ ) and 206.17 ( $df = 49$ ), respectively ( $p > .05$ ). Therefore, we decided to keep the hypothesized model.

3. An anonymous reviewer of this paper raised the question of how we can avoid ad clutter without reducing ad revenues. We believe that Web publishers can deliver a small number of highly targeted ads instead of a large number of untargeted spam ads, allowing users to be exposed to only the ads in which they are interested (e.g., opt-in ads, key word-generated ads in a search engine, etc.). This may not necessarily reduce ad revenues; Web publishers may charge more for targeted ads because they may generate higher click-through rates and favorite responses (e.g., on-line purchase, registration, etc.) than untargeted spam ads. Using a performance-based pricing system such as cost per click or cost per action, which is a growing pricing trend (MediaPost 2002), Web publishers may increase or maintain their ad revenues by delivering a limited number of targeted premium ads instead of untargeted cheap spam ads.

4. People cannot close or purge pop-up or interstitial ads; annoyingly, people are forced to be exposed to the ads.

5. Advanced behavioral tracking systems using cookie files are possible on the Internet through systematic log file analysis (which hyperlinks are clicked, which Web pages are viewed, which key word is typed into a search engine, time of use, geographical location of users, etc.). For example, if a user types a specific key word (e.g., golf) into a search engine, Web publishers can deliver ads for golf-related products with geographic selectivity (e.g., ads for local golf shops).

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## APPENDIX

## Measurement Items

## Internet ad avoidance

## "When I visit Web sites,"

*Cognitive ad avoidance*

- I intentionally ignore any ads on the Web.
- I intentionally don't put my eyes on banner ads.
- I intentionally don't put my eyes on pop-up ads.
- I intentionally don't put my eyes on any ads on the Web.
- I intentionally don't pay attention to banner ads.
- I intentionally don't pay attention to pop-up ads.
- I intentionally don't pay attention to any ads on the Web.
- I intentionally don't click on any ads on the Web, even if the ads draw my attention.

*Affective ad avoidance*

- I hate banner ads.
- I hate pop-up ads.
- I hate any ads on the Web.
- It would be better if there were no banner ads on the Web.
- It would be better if there were no pop-up ads on the Web.
- It would be better if there were no ads on the Web

*Behavioral ad avoidance*

- I scroll down Web pages to avoid banner ads.
- I close windows to avoid pop-up ads.
- I do any action to avoid ads on the Web.
- I click away from the page if it displays ads without other contents.

## Perceived goal impediment

## "When I am surfing the Internet,"

*Search hindrance*

- Internet ads make it harder to browse Web pages.
- Internet ads slow down Web page downloading.
- Internet ads make Internet navigation difficult.

*Disruption*

- Internet ads disrupt my viewing of Web pages.
- Internet ads disrupt the reception of desired content.
- Internet ads intrude on my search for desired information.

*Distraction*

- Internet ads distract me from the editorial integrity of Web pages.
- Internet ads infringe on my control.
- Internet ads interrupt the flow of an editorial unit.

## Perceived ad clutter

## "When I am surfing the Internet,"

- I think the amount of advertising on the Internet is *excessive*.
- I think the amount of advertising on the Internet is *irritating*.
- I think the Internet is *exclusively* an advertising medium.

## Prior negative experiences

*Dissatisfaction*

- I am dissatisfied with my decision to click Internet ads.
- My choice to click Internet ads is a wise one.
- I am *not* happy with my earlier decision to click Internet ads.
- My experience with clicking Internet ads is very *unsatisfactory*.
- I think I do the right thing by deciding to click Internet ads.

*Perceived lack of utility*

- Clicking Internet ads does not help me improve my personal performance.
- I think that my Internet ad use does not improve my productivity.
- In my opinion, clicking Internet ads increases my effectiveness in managing information.

*Perceived lack of incentive*

- No incentive is offered for the continued clicking of Internet ads.
- Continued clicking of Internet ads provides no benefit.
- I am not given any incentive for my loyalty and continued use of the service after clicking Internet ads.

Note: Each item was measured using a seven-point Likert scale ranging from strongly disagree to strongly agree.



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