INTEGRATING CONSUMER PREFERENCES INTO ONLINE ADVERTISING: DRIVERS OF CONSUMER TENDENCY TO ENGAGE IN ONLINE INTERACTION

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Abstract

Although the Internet is a highly interactive and personal medium, online advertising has yet to fully integrate consumer preferences into the communication process. One key consideration in this area is consumers' level of willingness to engage in interaction with advertisers. Using both qualitative and quantitative methods, the current research identifies and tests six factors that affect consumers' tendency to engage in interactive online communication – technology expertise, perceived value, perceived risk, time-pressedness, ease of computer access, and age. The current findings suggest the need to adapt advertising strategies to consumer needs instead of blindly increase the interactivity of online ads.

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The Internet plays an important role in many companies' marketing communication strategies, accounting for $18.5 billion in total spending in 2005 (Burns, 2006). Online advertising now ranges from directory listings of the early days to the more recent multimedia ads enabled by videostreaming. Although online advertising technology has advanced to a great extent, consumers' reaction toward online advertising did not improve over the years. To the contrary, banner ad click-through rates have steadily declined (Edwards, Li and Lee, 2002). Some intrusive online advertising formats have stimulated intense negative reactions from consumers (Edwards, Li and Lee, 2002, Elkin, 2004). Despite its start as an interactive advertising format that should draw consumers, online advertising now faces the danger of becoming another "push" media and being rejected by consumers as with traditional advertising.

These developments run against the trend of integrated marketing communications (IMC). IMC purports the coordination of marketing activities to form a purposeful dialogue with stakeholders (Duncan 2002), which implies the participation of consumers and a need to take consumer preferences into consideration. As a result, two-way interactive communication *with* (rather than *to*) consumers should be at the center of marketing communication efforts (Duncan and Moriaty, 1998). The same thinking is reflected in relationship marketing, which treats consumers as a partner in the marketing process and advocates a more intimate approach to marketing (Vargo and Lusch, 2004). This suggests that, for advertising to be truly effective to today's more wary and demanding consumers, it needs to put consumers back into the equation and empower them while getting the message across. This issue is especially critical to online

advertising, as it is considered the most interactive form of advertising and has the potential of leading the advertising industry toward the right direction.

Although academic researchers recognize the important role of consumers in the marketing process, existing research on online advertising has mostly followed the route of traditional persuasion research and has yet to reflect a collaborative approach. Even research on interactivity usually examines unidirectionally whether it works on consumers during the persuasion process and ignores the importance of considering consumer preferences *before* an advertising strategy is formulated. As a result, existing research offers limited guidance to online advertisers on how consumer preferences should be incorporated into interactive online advertising.

In an effort to fill this gap, this article argues that consumers have varying degrees of online interaction tendency and that it is imperative to consider this tendency in devising marketing communication strategies. Through both qualitative and quantitative studies, this research aims to discover what drives some consumers to willingly interact with companies online while other consumers are much more resistant to online interaction. By identifying the drivers of online interaction tendency, the current research can help marketing managers recognize the facilitators and obstacles to forming an interactive dialogue with consumers through the online channel, and subsequently help companies adapt their advertising strategies according to the target markets' communication preferences.

BACKGROUND

Consumers as Active Participants in the Advertising Process

While traditional marketing communication strategies focus mostly on conveying information to consumers and persuading consumers, recent theories argue for a much more

active and powerful role of consumers in marketing (Stewart and Pavlou, 2002, Vargo and Lusch, 2004). Consumers are no longer just receivers at one end of the communication continuum but instead actively participate in the marketing process, including the development and distribution of advertisements. As a result, consumers co-construct the meaning of marketing messages and develop a more effective personal relationship with companies. Reflecting this line of thinking, Duncan and Moriaty (1998) argue that the key to communicating effectively with consumers is a two-way exchange built on balance, symmetry, and reciprocity. This calls for attention to consumers' needs and preferences in marketing communication. It advocates building long-term relationship with consumers at their willingness rather than pushing products to consumers to create near-term sales.

Evidence of the need to attend to consumers' needs and preferences can be gleaned from research on the general attitude toward advertising and advertising avoidance. Studies in these areas show that advertising forms that are forced onto consumers without regard to their choices are generally received negatively (Shavitt, Vargas and Lowrey, 2004). Ads in such forms are more likely to be avoided (Speck and Elliott, 1997) and tend to have adverse effects on brand recall and subsequent attitudes (Mehta, 2000). These negative effects have been attributed to the intrusiveness of ad exposure, the disruption of normal communication, and the ensuing annoyance (Shavitt, Vargas and Lowrey, 2004, Speck and Elliott, 1997). Supporting these academic findings, the advertising industry has witnessed in recent years the steady decline of dependence on TV commercials, an advertising form that has been consistently rated as the most negative by consumers due to its intrusive and pushy nature (Mittal, 1994, Shavitt, Vargas and Lowrey, 2004). Advertisers are now resorting to much softer approaches such as product placement in TV programs and are shifting their focus to less offensive media such as print

media and the Internet. Taken together, academic and industry evidences both point to a need to incorporate consumers' communication preferences into advertising.

The Role of the Internet

As a newly emerged advertising medium, the Internet has the most potential for incorporating consumer preferences into the advertising process and overcoming the negative denotation that comes with traditional media advertising. It is an interactive medium that allows two-way communication between consumers and advertisers (Hoffman and Novak, 1996). With a diverse set of online advertising tools, advertisers can engage in effective multi-stage communication with consumers. For example, with the initial help of banner ads or search engine listings, companies can pull interested consumers to their websites for rich product information and immersive brand experience. The use of online communities can further deepen consumers' identification and relationship with the brand. At each step of the process, consumers can actively participate by offering feedback to companies and by controlling the information they receive. Some online advertising formats, such as search engine advertising, deliver highly targeted advertising messages to consumers right when they need the information. All of this contributes to potentially better understanding and incorporation of consumer needs and preferences, which should lead to more effective marketing communication.

In the meantime, the same characteristics of the Internet media also present unique challenges to advertisers. The interactive capability of the Internet endows consumers with more control. As a result, they tend to be more demanding and to be less tolerant of forced communication from advertisers. The more goal-oriented and high-involvement nature of Internet media use also means that disruption by advertisements will create more annoyance among consumers. Since some online advertising formats such as interstitials force consumers to

deviate from their main goals to respond to the ads, they have been found to create reactance among consumers and to lead to negative perceptions of the advertiser and the advertised products (Edwards, Li and Lee, 2002, Wegert, 2006).

This equivocal nature of interactive communication is reflected in the interactivity literature. Although some existing studies have found interactive ads to be more persuasive than non-interactive ads (e.g., Fortin and Dholakia, 2005, Sundar, Kalyanaraman and Brown, 2003), other studies have revealed no or even negative effects of interactivity on persuasion (e.g., Bezjian-Avery, Calder and Iacobucci, 1998, Coyle and Thorson, 2001, Lohtia, Donthu and Hershberger, 2003). Consequently, researchers have pointed out that interactivity may not be advantageous across all consumers and/or all situations (Liu and Shrum, 2002). These conflicting findings show the intricacies of interactive communication and a need to consider how individual consumers may react to interactive advertising messages differently according to their own needs.

The key consideration for an online advertiser is to maximize the benefits of the self-selected and interactive nature of the online media, and in the meantime avoid offensive and excessively interactive advertising messages to consumers who do not want to interact. The first step toward this direction is to understand how much consumers are willing to use the Internet in an interactive fashion (rather than as a passive information source as with traditional media) and what drives their desire to do so. To answer these questions, this research starts with a qualitative study to identify the drivers of online interaction tendency. These drivers are then tested in a large-scale survey.

ANTECENDENTS OF ONLINE INTERACTION TENDENCY – A QUALITATIVE STUDY

Method

To identify what affects consumers' tendency to engage in interactive online communication, a series of semi-structured interviews were conducted. Each interview lasted between 30-60 minutes and included questions on general Internet usage patterns as well as considerations related specifically to interactive online behavior. The respondents consisted of a convenience sample of 26 Internet users identified through personal contact with snowballing techniques. As this stage of the research is still exploratory in nature, the use of such a convenience sample is considered appropriate (Cooper and Schindler, 2006). Later, a large-scale survey is conducted to validate the findings from this qualitative study, as will be described later in the paper. Besides the qualitative interviews, a review of the relationship marketing literature and related communication and consumer psychology research was also conducted to identify possible factors. The final set of antecedents contains six main factors and fits well into an ability-motivation-opportunity framework similar to the advertising information processing model proposed by MacInnis and Jaworski (1989). Each of the factors is described in turn below.

Antecedent in the Ability Domain

Technology expertise. To communicate online and to utilize the interaction mechanisms provided, consumers need to possess a certain level of technology expertise. During the interviews, consumers repeatedly mentioned their Internet/computer skills as a facilitator of online interaction or the lack of such skills as a barrier to online interaction. For example, in reporting an incident of online purchase, a consumer described how the frustration of not understanding the technical terminologies led her to abandon the attempt. This suggests that

consumers without the required technology expertise are likely to feel frustrated and will not be able to take full advantage of the interactivity provided to them (Balabanis and Reynolds, 2001, Hoffman and Novak, 1996). These findings are in line with Novak, Hoffman, and Yi's (2000) discovery that consumers with low technology expertise are less likely to experience an enjoyable state of flow when faced with the challenges of navigating through the Internet. Furthermore, being afraid of doing something wrong to the computer may limit these consumers' interaction. These can all contribute to a reluctance to engage in online interaction. When consumers with low technology expertise are exposed to interactive online advertising formats such as advergames, they are less likely to find such ads appealing and are unlikely to engage in the type of interaction desired by advertisers. Thus, technology expertise represents the technical skill boundary that limits a consumer's level of interaction tendencies. This is presented in the following hypothesis:

H1: A lower level of technology expertise will lead to a lower level of willingness to interact online.

Antecedents in the Motivation Domain

Perceived value. To be willing to interact online, consumers must see value in such actions. Here perceived value is defined as the perceived ability of online interaction to help fulfill a consumer's goals. The respondents from the qualitative interviews offered various reasons for engaging in interactive behavior online, such as convenience, time-saving, immediacy, and social fulfillment. In academic research, perceived value is an important component of the Technology Acceptance Model proposed by Davis (1989). Davis, Bagozzi and Warshaw (1989) found that perceived usefulness is the most important predictor of people's intention to use a new information technology, and this finding has been replicated in various

other settings, including consumers' adoption of online tools and consumers' intention to shop at an online store (Gentry and Calantone, 2002, Koufaris, 2002). Within the arena of dyadic communication and relationships, value perception is considered a key contributor to the decision to engage in interactive relationship-oriented behavior. Sheth and Parvatiyar (1995), for example, proposed that consumers are more prone to engage in relational market behavior if the behavior brings values such as efficiency and risk reduction. In an online environment, Ko, Cho, and Roberts (2005) found that consumers' needs for convenience and social interaction and the perceived ability of the Internet to fulfill such needs have a positive impact on consumers' interaction intentions. Thus, higher perceived value should make a consumer more willing to interact online, which leads to the following hypothesis:

H2: The more value a consumer perceives online interaction to have, the more the consumer will be willing to interact online.

Perceived risk. While perceived value is a motivator of online interaction, perceived risk can deter a consumer from interacting online. Following Stone and Gronhaug (1993), perceived risk is defined as "subjective expectations of loss" (p. 42) as a result of interacting online. Research on traditional communication demonstrates a link between perceived risk and an individual's willingness to interact. When individuals perceive a certain situation to be uncertain and risky, they are likely to withdraw socially and exhibit a reluctance to engage in interaction (McCroskey, 1984, Neuliep and Ryan, 1998). Risk is a central topic to online marketing (Olivero and Lunt, 2004). On the Internet, face-to-face communication is replaced with screen-to-face communication. This virtual nature of the Internet brings uncertainty and risk to online communication and may prevent consumers from interacting more online. For example, an advertiser may attempt to elicit interaction from a consumer by sending a promotional email with

URLs linking to additional information. But if the consumer perceives clicking on such email links as risky, he or she is unlikely to take the further step even if there is some interest in the product. Indeed, studies by industry, government, and academic researchers all recognize perceived risk as a big obstacle to the expansion of e-commerce (Federal Trade Federal Trade Commission, 2000, Grabner-Kraeuter, 2002, Miyazaki and Fernandez, 2001, Olivero and Lunt, 2004). During the interviews, a consumer said that "My overall level (of interacting online) is hindered by my uncertainty of security over the Internet." Another consumer mentioned that "I always provide fake information to companies when I am not familiar with whom they are, or I have a gut feeling they may use my information to harm me." While all consumers are faced with risks online, different consumers may perceive risk to a different extent. For example, research has shown that the degree of an individual's privacy and security concerns vary with the individual's education (Burke, 2002), Internet experience (Miyazaki and Fernandez, 2001), and his or her general propensity to trust (Lee and Turban, 2001, Uslaner, 2000). The different degrees of concern can lead to variations in perceived risk and thus lead to different levels of willingness to engage in online interaction. Therefore:

H3: A higher level of perceived risk in online interaction will lead to a lower level of willingness to interact online.

Antecedents in the Opportunity Domain

Time-pressedness. Time-pressedness refers to a consumer's general lack of time in completing the tasks in daily life. Lack of time is a common syndrome of today's fast-paced lifestyle. This time-pressedness, felt to different degrees by different consumers, can have a double-edged effect on consumers' usage of the Internet. Consumers may use the Internet more because of its timesaving benefits (Alba, Lynch, Weitz, Janiszewski, Lutz, Sawyer and Wood,

1997). For example, instead of consulting daily newspaper and TV for availability of products and services, consumers can quickly research a large assortment of products on the Internet. The constant availability of the Internet also appeals to consumers with a tight schedule. However, two-way communication is highly engaging and time-consuming (Liu and Shrum, 2002). Although busy consumers may lean toward using the Internet to accomplish their daily tasks, their limited amount of time seriously constrains the opportunity for truly interacting online. Such consumers will be more reluctant to participate in involving forms of online interaction such as advertisers' viral marketing campaigns, even if they find the advertised product to be desirable. During the interviews, one respondent said: "I do not spend any time chatting online partly because I have no time (I work and go to school – both full time)". Another consumer expressed a similar sentiment stating "I would have interacted online more if I had the time to do so". Despite the motivation to interact online, these consumers lack the opportunity to do so. This leads to the following hypothesis:

H4: Higher time-pressedness will lead to a lower level of willingness to interact online.

Technology environment. Opportunities for online interaction are present when access to a computer with an Internet connection is made available. Without adequate access to a computer, a consumer will not be able to freely use the Internet whenever a need for interaction emerges. As a result, the consumer will have to resort to some other medium, such as the telephone. This impedes the use of the Internet as a main interaction channel. The type of Internet connection matters as well. For example, one consumer mentioned in the interview that "The cost of high speed internet access and associated hardware limits my activity on the Internet. Video streaming, online conferencing, etc. are not feasible for me at this time." In studies of interactivity, researchers have demonstrated that the speed of a communication

constitutes an important dimension of how interactive the communication is. A more synchronized communication leads to higher satisfaction and more positive attitude toward the communication target (Liu and Shrum, 2002). In reality, industry research shows that consumers who have a faster broadband Internet connection engage in a wider variety of activities than consumers with regular dial-up connections (Horrigan, 2003). Some of these activities, such as email and online chatting, are especially communication-oriented. Such differences between broadband and dial-up Internet users can be attributed partially to the fact that a constant-on broadband connection provides greater convenience than a dial-up connection. Not only does it provide the consumer more opportunities to interact online, its high connection speed also allows richer communication formats such as voice chatting and rich media advertising. This makes the Internet a better choice for substituting or complementing other communication channels (Daft and Lengel, 1986). When a consumer is regularly present in such a setting, his or her usage of the Internet for interaction purposes is likely to increase, and the consumer's willingness to interact online will be high. The above discussion leads to the following two hypotheses:

H5a: The ease of access to a computer will lead to a higher level of willingness to interact online.

H5b: The availability of a broadband Internet connection will lead to a higher level of willingness to interact online.

CONSUMER ONLINE INTERACTION SURVEY

Data Collection

To test the hypotheses identified through the qualitative interviews and the literature review, a mail survey of 1000 Internet users in the mid-Atlantic region was conducted. The consumers' information was obtained from an Internet user database of a commercial mailing list

company. Three waves of mailing were used, starting with a pre-notification letter, followed by the questionnaire with a cover letter, and finally a reminder postcard (Dillman, 2000). The consumers were also given the option to answer the survey online instead of returning the questionnaire. Of 973 deliverable surveys, 346 questionnaires were returned and 23 additional responses were received through the Internet, yielding a response rate of 38%. Follow-up phone calls were made randomly to consumers who did not respond to the survey to check for response bias. No significant difference was found between the consumers who responded to the survey and this latter group. Seven returned questionnaires had most questions blank and thus were not included in the data analysis. The final sample size was 362. This final sample included consumers with a wide age range, from 18-years-old up to 83-years-old. Overall, however, this sample was older than the general Internet population, with the median age being 47. Males and females were evenly distributed in the sample.

Measures

Online Interaction Tendency. Consumers' tendency to engage in interactive online communication was measured using the online interaction readiness scale developed by Liu (2006). The scale consists of 10 items measured on 7-point scales anchored by "strongly disagree" and "strongly agree". The items were related to perception and treatment of the Internet as an interactive medium and to the use of specific online interaction mechanisms such as instant messaging. An online interaction tendency score was derived by averaging each consumer's responses to the 10 items ($\alpha = .81$).

Technology expertise. The four-item self-reported technology expertise measure ($\alpha = .84$) was taken from Novak, Hoffman, and Yung (2000). Although these authors added two other

items to the original measure in their final survey, those two items did not show high reliability in pretests. Therefore, they were not included in the scale.

Perceived value. A perceived value measure was developed based on Parasuraman and Grewal's (2000) customer value framework and on the qualitative interviews discussed earlier. Since this research deals with the perceived value of online interaction rather than that of a specific product, the perceived value measure focuses on two of the customer values proposed by Parasuraman and Grewal (2000) – acquisition value and in-use value. Acquisition value in the current context refers to the benefits derived from online communication comparative to the cost of online communication. In-use value refers to the utility derived from engaging in online communication. Such utility can be both utilitarian and hedonic. Based on this framework, a total of six items were developed to measure perceived value (α = .88), including an item measuring the overall perceived value of online interaction. The items are listed in the appendix.

Perceived risk. A perceived risk scale was developed based on the risk measures from Stone and Gronhaug (1993) and Cheung and Lee (1999). Stone and Gronhaug's (1993) perceived risk scale pertains to product purchase, while Cheung and Lee (1999) studied perceived risk in online shopping. Their original items were reworded to reflect perceived risk in online interaction. Although Stone and Gronhaug's (1993) scale has six dimensions, the current research is concerned with the perceived psychological discomfort and anxiety consumers feel about online interaction. Thus, only the items for the psychological risk dimension were used. This focus on psychological risk is supported by Stone and Gronhaug's (1993) finding that all other five dimensions influenced overall risk perception through psychological risk. Pretests were conducted to ensure the clarity and reliability of the perceived risk measure, and the final scale contained five items (α = 0.87; see the appendix).

Time-pressedness. Consumers' time-pressedness was measured through the time dimension of the role overload scale developed by Reilly (1982). Three of the original items were deleted due to poor performance in pretests. The participants indicated to what extent they agree or disagree with each of the statements on a 7-point scale (α = .90).

Technology environment. Consumers' technology environment consists of two elements: ease of computer access and type of Internet connection. Ease of computer access was measured by asking consumers whether they have a computer available *for their use* most of the time. As to Internet connection, since many consumers often have Internet access both from work and from home, questions were asked on their Internet access both at home and at work, and the dominant mode of Internet connection (the connection they use most often) was used in the data analysis.

Methodology

The hypotheses were tested using structural equation modeling via LISREL8. A two-step approach was used, where the measurement model was first evaluated and the structural model was then estimated (Anderson and Gerbing, 1984). Because the two technology environment variables in the model were assessed with a single item, this analysis followed the recommended practice of fixing the loadings of these items on their latent constructs as the square root of the reliability, and the error variances of the constructs as (1- reliability)*observed variance (Bollen, 1989). A conservative reliability of 0.70 was used in this study. Sensitivity tests using both higher (.80 and .90) and lower (.60) estimates did not substantively affect the overall model.

Results

Consumer Online Interaction Tendency. Overall, the respondents indicated a relatively low level of tendency to interact online (M = 2.92). The individual scores ranged from 1.00 to

6.60. The low average score suggests that although the Internet is an interactive medium, consumers have yet to take full advantage of its interactive capabilities. It should be kept in mind, however, that the sample for this study was older than the general online population, which may have contributed to the lower willingness to interact online.

Model Fit. The measurement model showed a good fit. The chi-square of the model was 806.10 (*d.f.* = 385; $p < .001$), and the RMSEA was 0.074, which conforms to the recommended threshold of RMSEA no more than 0.08 (Hair, Anderson, Tatham and Black, 1998). The NNFI was 0.92, and the CFI was 0.93, both exceeding the recommended threshold of 0.90 (Hair, Anderson, Tatham and Black, 1998). All indicator loadings on their respective constructs were significant. The structural model was then estimated and also showed a good fit to the data, yielding a chi-square of 789.49 (*d.f.* = 384; $p < .001$) and RMSEA of 0.073. The NNFI for the model was 0.93, and the CFI was 0.94. Figure 1(a) shows the structural model with the estimated coefficients.

Insert Figure 1 about Here

Antecedents of Online Interaction Tendency. In the ability domain, it was hypothesized that a consumer's technology expertise will be positively related to the consumer's online interaction tendency (H1). Confirming the hypothesis, results showed a significant positive path from technology expertise to online interaction tendency ($\beta = .10$; $p < .01$). Similarly, perceived value also had a positive effect on online interaction tendency ($\beta = .47$; $p < .001$), supporting H2. The other motivation-related factor – perceived risk, however, did not show a significant impact, rejecting H3. Although one may conclude that consumers' desire to engage in interactive online communication is driven purely by the positive values they perceive from such interactions, it is

counter-intuitive that perceived risk would have no impact at all on online interaction tendency, given its significance in online consumer behavior as discussed earlier in the paper. A closer examination of the data revealed a rather high correlation between perceived value and perceived risk (r = -.49). It is possible that perceived value mediated the effect of perceived risk. This is supported by findings from existing research that perceived value of a product mediates the relationship between perceived risk associated with the product and willingness to purchase the product (Sweeney, Soutar and Johnson, 1999).

To test whether perceived value indeed mediated the effect of perceived risk on online interaction tendency, the procedure recommended by Brown (1997) on testing mediating effects of latent variables using structural equation modeling was followed. The original structural model was revised by adding an additional path from perceived risk to perceived value. The revised model yielded a chi-square of 809.33 ($d.f.$ = 389; $p < .001$) and RMSEA of 0.074. The NNFI for the model was 0.93 and the CFI was 0.94. The model coefficients are shown in Figure 1(b). In order to prove the mediating effect of perceived value, it is necessary to show that: (1) perceived risk has a significant impact on perceived value; (2) perceived value has a significant effect on online interaction tendency; (3) when controlled for perceived value, the effect of perceived risk on online interaction tendency is significantly reduced. As shown in Figure 1(b), perceived risk had a significant impact on perceived value (β = -.46; $p < .001$), and perceived value in turn significantly influenced online interaction tendency (β = .47; $p < .001$). For the third condition, LISREL estimate shows a significant total effect (including direct and indirect effects) of perceived risk on online interaction tendency (β = -.21, p = .002). The direct effect of perceived risk, on the other hand, was not significant (β = -.01; p = .86). The indirect effect of perceived risk through perceived value captured almost all of the effects of perceived risk. These

findings suggest that perceived risk did have a significant negative impact on the desire to interact online, as hypothesized in H3. However, its effect was exerted through reducing consumers' perceived value of online interaction.[1]

The opportunity domain consists of three antecedents: time-pressedness, ease of computer access, and availability of broadband Internet access. H4 hypothesized that a time-pressed consumer will have limited opportunities for online interaction and thus will have a low desire to engage in interactive online communication. This is supported by a significant negative effect of time-pressedness on online interaction tendency (β = -.11; p = .03). Easy access to a computer for one's use also had a significant impact on online interaction (β = .17; p < .001), supporting H5a. Contrary to H5b, having a broadband connection as the main way of accessing the Internet did not have a significant influence on online interaction tendency (β = .06; p = .08). In other words, having a slow Internet connection does not necessarily deter a consumer from interacting online. Among the respondents who mainly accessed the Internet through narrowband connections, 73.4% of them did not have Internet access at work or had only dial-up service at work, and 86% of them mainly accessed the Internet from their home dial-up connection. Without much exposure to high-speed Internet connection, these dial-up users may not have perceived the slow speed as a constraint in their online experience.

Demographic Variables. Although no explicit hypotheses were formed for demographic variables, identifying demographical influence on consumers' willingness to interact online can help advertisers with their selected targeting efforts. Three demographic variables were included in the survey: age, gender, and income. A regression was conducted with online interaction tendency as the dependent variable and the three demographic variables as the independent

[1] As shown in Figures 1(a) and 1(b), parameter estimates from the original model and the revised model are very similar. The results reported from this point on are all based on the revised model shown in Figure 1(b).

variables. Results suggest that only age had a significant impact on consumers' online interaction tendency ($\beta = -.21$; $p < .001$). The older a consumer is, the less likely the consumer is to engage in interactive online communication. This confirms earlier speculation that the relatively low levels of online interaction tendency among the sample may be partly attributed to the higher age of the sample.

DISCUSSION

Conclusions and Implications for Advertisers

Through qualitative interviews and a large-scale consumer survey, the current research identified the drivers of and barriers to consumers' tendency to engage in interactive online communication with advertisers. Findings show that skilled Internet users and consumers with ready access to a computer for their own personal use have a higher tendency to interact online. Perceived value also contributes to a higher desire to engage in interactive online communication. Perceived risk of online interaction, age, and a busy lifestyle all have a negative influence on willingness to interact online. However, the effect of perceived risk is mediated by reducing perceived value. Surprisingly, the availability of broadband Internet connection does not necessarily make consumers more open to interactive communication. This suggests that, at least when it comes to selecting an interactive vs. non-interactive online advertising form, the users' Internet connection type is not a critical consideration.

The results from this study have important implications for online advertisers. Although the Internet is a highly interactive medium, it does not mean consumers always want to engage in interaction with advertisers. The relatively low levels of online interaction tendency found in the consumer survey sample support this view. Thus, advertisers need to switch from a push mentality that often prevails in traditional advertising to a more adaptive online advertising

strategy that carefully considers consumers' preferences. More interactive advertising forms, such as highly interactive websites, advergames, and online viral marketing, are more appropriate for consumers who are experienced Internet users, have constant access to a personal computer, and have more free time in their hands. Such ads are also likely to be more effective for younger consumers. For consumers who are not quite technology-savvy or consumer who lead a busy lifestyle, more subtle online advertising, such as online sponsorship or an informative but straightforward website, may be more appropriate.

This study identifies perceived value as a critical contributor to consumers' desire to engage in online interaction. For advertisers, this means that they should try to enhance the value of their interactive online ads to reduce resistance from consumers and achieve higher effectiveness. For example, even for consumers who are generally unwilling to respond to online advertising, advertisers can match their ads to such consumers' goals by advertising when these consumers are in need of information. Placing relevant ads in a search engine according to what a consumer is looking for is a good example. Another tactic of enhancing perceived value is by reducing perceived risk. For example, an advertiser wishing to use online viral marketing should ensure that consumer privacy is protected and that the liability associated with recommending the product is low.

Future Research

The current research represents an initial step toward recognizing and understanding consumer preferences in the realm of interactive online advertising. Although the central idea of this paper is that companies need to adapt their online marketing to their customers' interaction preferences for maximum effectiveness, it does not mean firms cannot positively influence consumers' interaction preferences. Ideally, an advertiser wants its customers to be open to

interacting with them, either proactively or at the advertiser's initiation. Future research can study the ways in which consumers' online interaction tendency can be boosted, through customer relationship management strategies or potentially necessary government regulations. The ultimate goal is to protect and enhance consumer welfare as well as produce benefits for advertisers so that a win-win situation can be created.

Future research should also extend the current study to examine systematically how consumers' interaction preferences influence their response to online marketing efforts. An especially fruitful topic is the interaction between interactivity and online interaction tendency. As a differentiating characteristic that sets the Internet apart from traditional mass media, interactivity is considered to bestow power to this new medium (Hoffman and Novak 1996; Stewart and Pavlou 2002). However, some researchers have suggested that the interactive nature of the Internet may not always be beneficial to effective marketing (Liu and Shrum 2002), and this is reflected in the contradictory results found in the interactivity effects literature mentioned earlier. One contributing factor to this may be different consumers' online interaction tendency. Future research should study how a consumer's online interaction tendency affects the consumer's usage and preference of interactivity mechanisms. By incorporating consumers' online interaction preferences into interactivity research, such studies can help explain the conflicting findings in the literature and offer better guidance to online advertisers.

Appendix: Perceived Value and Perceived Risk Measures

Perceived Value:

1. The Internet is an indispensable communication tool.
2. I have benefited a lot from online interaction.
3. The ability to interact with companies and other individuals on the Internet is really valuable to me.
4. Communicating online has allowed me to accomplish my goals quickly.
5. I am really glad that I have learned how to use the Internet to communicate with others.
6. Online interaction brings me a lot of enjoyment.

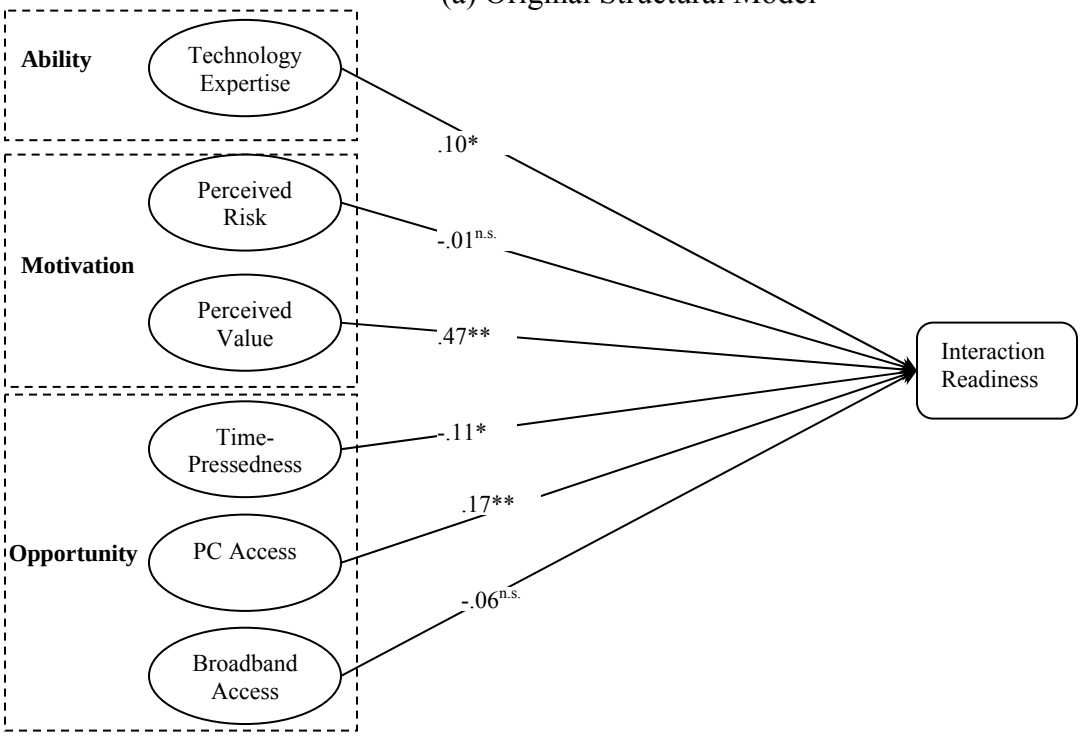
Perceived Risk:

1. Communicating on the Internet makes me feel uncomfortable.
2. I find it risky to communicate with businesses on the Internet.
3. The thought of online interaction makes me feel anxious.
4. I find it risky to communicate with other people on the Internet.
5. I feel nervous when interacting online.

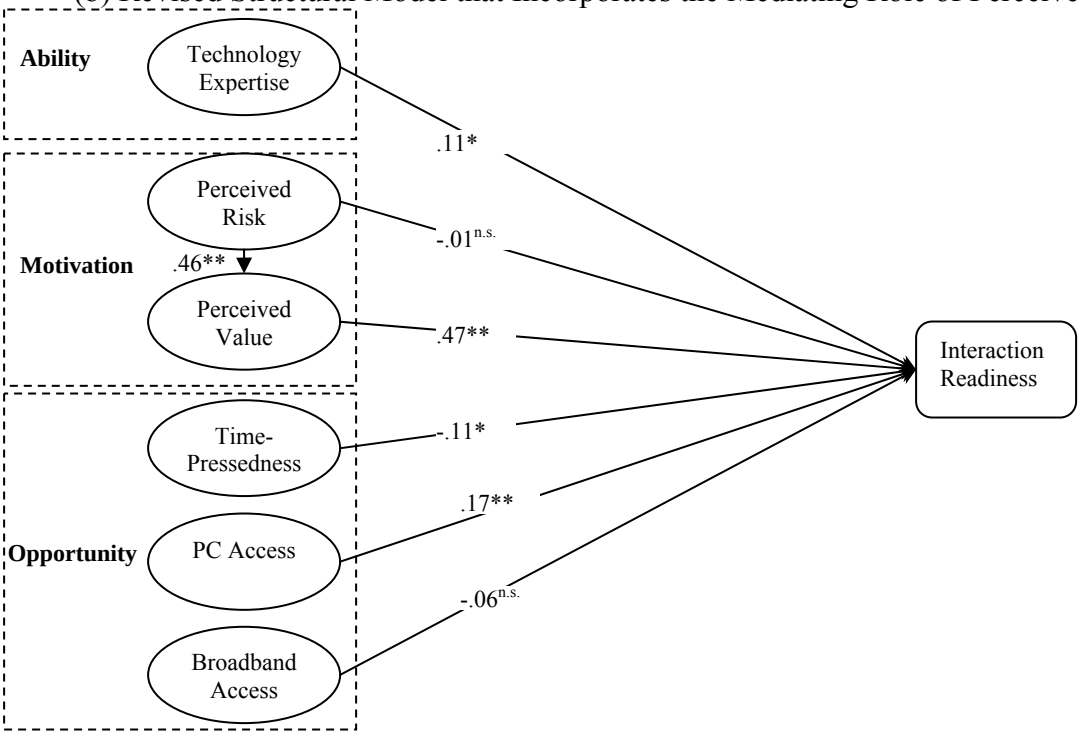
Note: The items were measured on 7-point scales anchored by "strongly disagree" and "strongly agree".

Figure 1. Antecedents and Consequences of Online Interaction Readiness

(a) Original Structural Model



(b) Revised Structural Model that Incorporates the Mediating Role of Perceived Value



Note: n.s.: Not significant; *: $p < .05$; **: $p < .001$

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