Internet Advertising Formats and Effectiveness

Hairong Li, Michigan State University
John D. Leckenby, The University of Texas at Austin

An invited Chapter for Thorson & Schumann

October 2004

Hairong Li is Associate Professor in the Department of Advertising at Michigan State University. John D. Leckenby is Everett D. Collier Centennial Chair in Communication in the Department of Advertising at The University of Texas at Austin.

Internet Advertising Formats and Effectiveness

The issue of internet advertising effectiveness is part of the broader question about the effectiveness of advertising in general. As a result, internet advertising effectiveness should be examined in a similar fashion as traditional advertising. However, internet advertising is different from traditional advertising in that the internet has capacities to extend the function of advertising far beyond what traditional media are able to accomplish. For example, consumers can click on a banner ad for an e-book, check the table of contents or review others' comments, place an order, and download the e-book to their computers, all through the internet. None of traditional advertising media could offer such a combined channel capacity of communication, transaction and distribution. The expanded function of internet advertising comes from its horizontal integration of three key marketing channel capacities (communication, transaction and distribution) and vertical integration of marketing communications, including advertising, public relations, sales promotion and direct marketing (Li 1999).

In order to better understand the effectiveness of internet advertising, therefore, we must examine unique characteristics of the internet advertising formats and develop new criteria by which the effectiveness of internet advertising can be assessed. For these purposes, this chapter will (1) review criteria of effectiveness of advertising in general and develop a set of new criteria of internet advertising effectiveness, (2) provides a typology of internet advertising formats and review research on the formats and effectiveness of internet advertising, and (3) discuss the directions for future internet advertising research.

Conceptualization of internet Advertising Effectiveness

Definitions

The internet provides the means for "interaction" between buyers and sellers to such a degree that some have suggested this is the defining characteristic of the internet (Leckenby and Li, 2000). This interaction can be "human-machine," "machine-machine," and "human-message," among others. "Interactive Communication" refers to, for example, "human-message" interaction where the user relates to and, in some cases, modifies the message with which he/she is interacting. Clicking on a banner ad represents a low level of interaction of this nature while choosing an ending among many for an online movie represents a higher level of interactive communication with a message.

"Interactive Media," on the other hand, refers to a carrier of messages which provides for the possibility of interaction with messages conveyed in that medium. So, the internet including the Web is an interactive medium which provides for the possibility of interactive communication with messages. However, the internet is but one of many interactive media. Mobile phones and interactive kiosk are also interactive media. This chapter will deal exclusively with the internet and not other interactive media. However, the "convergence" which is rapidly taking place between notebook computers, personal digital assistants, mobile phones, and cable television, for example, make such distinctions less clear. So, in the future, it is likely that many of the format issues discussed in this chapter, although specifically dealing with the internet, may apply as well to other interactive media and communication forms.

While it may be the case that any discussion of advertising effectiveness in general will apply to the internet, it may also be the case that any departures from general understanding of advertising effectiveness issues may be due to the special characteristics of interactivity

associated with the internet. In particular, there has been a special interest in delineating "advertiser-controlled" versus "consumer-controlled" aspects of the internet stemming from interaction issues (Rodgers and Thorson, 2000).

Objectives and Effectiveness

Any discussion of advertising effectiveness necessarily must involve the role of objectives in advertising management contexts. Objectives serve several functions in management. First, they provide direction in decision making by serving as criteria. If one of three alternative media plans must be selected, then the best of the three plans will be the one that performs best on a selected criterion.

Objectives also serve the function of providing a means by which results can be evaluated. How well did the campaign perform? This question can only be answered with respect to some pre-determined objective and the accompanying criterion or criteria. What is meant by "well"? Did the campaign do well in generating profits for the firm? Or did the campaign do well with respect to increasing the number of individuals in the target market who were aware of the brand?

Finally, and importantly, objectives force those involved to gain a deeper understanding of the processes underlying their particular problems. Reasonable advertising objectives cannot be set without knowledge about how the advertising process works. So, there are two interleaved issues in advertising management in general: (1) Setting Objectives and (2) Measuring Advertising Results. These two issues are joined through the use of "Criteria of Effectiveness."

Criteria of Effectiveness

Because of their central role in linking objective setting and measuring results, criteria of effectiveness have had a long history in promotion in general and advertising in particular. In 1898, Elmo St. Lewis (Barry, 1987, p. 252) was the first to propose a systematic way of discussing criteria of effectiveness. He did so in the personal selling context with his "Attention, Interest, Desire, and Action" or AIDA model. Since that time, discussion of criteria has centered on this basic idea in one form or another.

There have been several notable developments in the history of criteria after the original ideas of Elmo St. Lewis. First, was the work of Lavidge and Steiner in 1961 in which they postulated a "hierarchy of effects" in a stair-step fashion with attention leading to interest leading to conviction to desire and finally to action (Lavidge and Steiner, 1961). Importantly, they also categorized these elements into the three broader categories of "Cognition," "Affection," and "Conation." "Conation" was then a popular term for behavior or behavioral intentions but has since largely been supplanted by "Behavior" as the organizing term. For the first time, the criteria of effectiveness were linked to the areas of interest in the field of social psychology, thereby linking the literature in that large field to the issue of criteria in advertising and related fields. Lavidge and Steiner postulated, in general, that cognition leads to affection which, in turn, leads to conation. The process was also thought to be largely inevitable. That is, if the first was established, others would follow in their natural order—with some help along the way, of course, by the advertiser.

"Cognition" is a word hard to translate into English but vaguely means "knowing." It concerns the knowledge in a person's mind and how that is obtained. "Affection" refers to both emotional and attitudinal aspects of meaning, liking and disliking, for example. Finally,

"Behavior" refers to observable acts on the part of persons or, at minimum, their stated intentions to act (Behavioral Intentions). There was surprisingly little empirical evidence, if any, to show such a hierarchy of effects other than through anecdotal evidence. It was Palda who conducted the first study to examine this hypothesis empirically (Palda, 1966). His study shows little or no correlation between cognitive, affective, and behavioral criteria of effectiveness for the major convenience brands he studied. It was not until the work of Ray and his colleagues (Ray, 1973) that the empirical evidence for such propositions as those advanced by St. Lewis in 1898 was finally discovered. Ray found evidence for the existence of three different orderings of the hierarchy elements in his work. He called these the "Learning Hierarch" (C-A-B), the "Dissonance Hierarchy" (B-A-C) and, finally, the "Low-Involvement Hierarchy" (B-C-A). His work was based, in part, on the earlier work of Festinger (1957) on dissonance in the 1950's and on Krugman's (1965) work on low involvement in television commercial exposure. It should be noted that there are more than three different permutations of three the three elements. What about the other orderings not found empirically by Ray?

Finally, in the 1970's Robertson (1971) made the following observations: (1) the consumer may make decisions in a "non-rational" manner. That is, he/she may not secure, process or carefully evaluate all the available information; (2) there is not a specified sequence of stages which must occur as in Lavidge and Steiner's view. Any such model must make allowances for consumers to "skip" stages; and (3) the model must also provide feedback loops because such a process will not necessarily be linear and one-dimensional.

The traditional view of the criteria, cognition, affection and behavior, is shown in Figure 1. This can be contrasted with the ideas developing in the late 1960s as outlined above. In Figure 2, the venn diagram illustrates the non-linear and overlapping nature of the three criteria of

effectiveness: Cognition, Affection, and Behavior. There is no one pre-determined "starting

criterion" or "ending criterion." Furthermore, it is possible to have more than one criterion

developing at the same time as illustrated by the mutually non-exclusive nature of this diagram

with respect to the three criteria.

Figure 1

**The Traditional CAB "Hierarchy of Effects" Model**
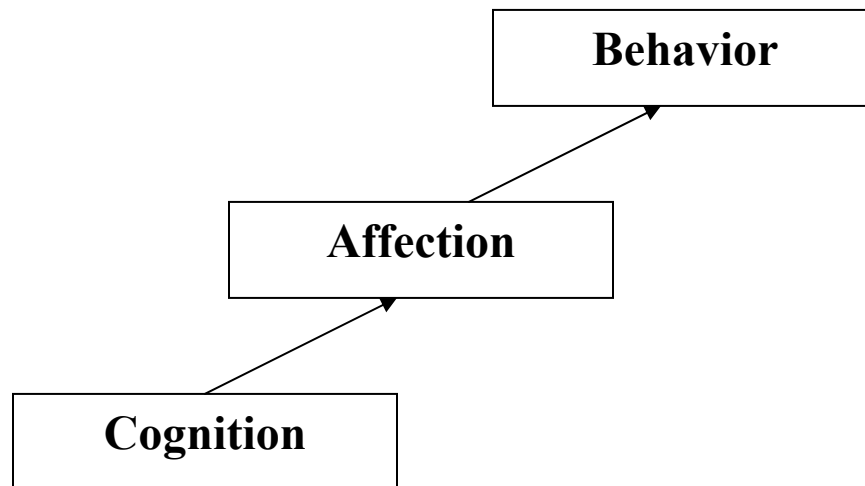
One author, for example, posited that a full-blown emotional response to a stimulus such as an ad

consisted of a physiological, affective and cognitive response occurring simultaneously (Kreshel,

1984). Goose bumps are physiological or behavioral in nature, labeling of an emotional response,

"I feel great!" is a cognitive activity while concluding one likes something is affective in nature,

"I like this feeling."

It should be noted that since at least 1977 (Young, 1977), advertising practitioners have

recognized the importance of setting objectives and measuring the effectiveness of messages

using all three criteria, C and A and B, rather than just one or two of them. A full view of the

effectiveness of the message requires that it be measured on all three dimensions.

Figure 2

Venn Diagram of Contemporary CAB Criteria
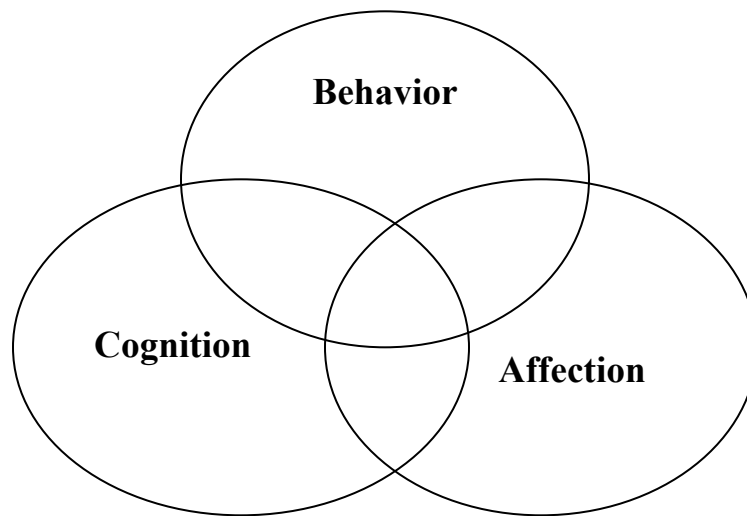
So, in advertising management, objectives and results are both determined in the context

of the criteria of effectiveness as shown in Figure 2. Any question about the effectiveness of

internet message formats will need to be addressed in this general context. However, as noted

earlier, there are questions surrounding the concept of interactivity which require refinement of

the generally accepted criteria concepts discussed above.

Criteria and Interactivity

Although there are undoubtedly many aspects of communication of messages using the

internet that may require extended thought about advertising effectiveness, one outstanding issue

is that of "control." That is, how much of the communication surrounding an ad in the internet is under the volition of the "user" and how much is under the control of the "advertiser"? Leading scholars dealing with effectiveness early on in the development of internet advertising pointed to this issue. In their seminal article, Pavlou and Stewart (2000) drew this distinction in the following terms: (1) Process Control and (2) Outcomes. By "Process Control" these authors refer to the parts of the process of communication through the internet which is largely under the control of the user or consumer of the message. They defined this concept as follows:

> Control process measures focus on when and with what consequences consumers and marketers choose to use particular interactive advertising media and advertising content. The focus of such measurement in an interactive advertising context is consumers' use of various media and desire for particular kinds of information toward the end of determining the appropriateness of various interactive media for different types of advertising under various other conditions (Pavlou and Stewart, 2000).
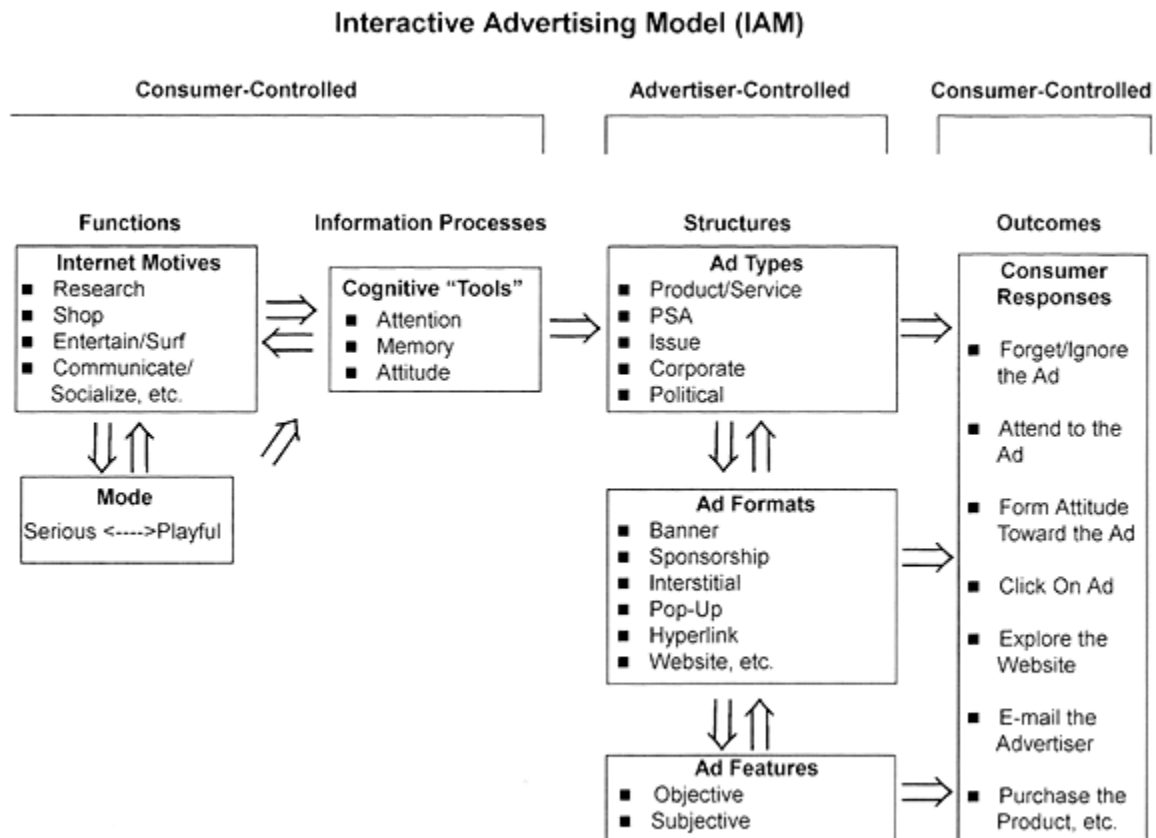
The focus here is on the user deciding whether or not to be exposed to the message and the manner and time of the exposure.

Rodgers and Thorson (2000) draw a similar distinction in their IAM (internet Advertising Model) model. A primary element of their model, which is designed to explain the communication process consumers follow in relation to messages on the internet, is that some of these processes are "advertiser-controlled," while others are "consumer-controlled." While it can be said that the consumer controls magazine ad exposure by deciding or not deciding to open the magazine, the authors in this case are referring to more "extensive control" on the part of the consumer than is possible through other media types such as magazines. The IAM model is shown in Figure 3.

Both the above studies draw the issue of "control ownership" as the basic concern providing the difference between internet advertising effectiveness measurement and that in

other media. Therefore, it is plausible to suggest that any general model of advertising

effectiveness relating to the internet will need to take account explicitly of this factor.

Figure 3

Interactive Advertising Model (IAM)

Consumer-Controlled		Advertiser-Controlled	Consumer-Controlled

Functions	Information Processes	Structures	Outcomes
Internet Motives ■ Research ■ Shop ■ Entertain/Surf ■ Communicate/ Socialize, etc.	**Cognitive "Tools"** ■ Attention ■ Memory ■ Attitude	**Ad Types** ■ Product/Service ■ PSA ■ Issue ■ Corporate ■ Political	**Consumer Responses** ■ Forget/Ignore the Ad ■ Attend to the Ad
Mode Serious <---->Playful		**Ad Formats** ■ Banner ■ Sponsorship ■ Interstitial ■ Pop-Up ■ Hyperlink ■ Website, etc.	■ Form Attitude Toward the Ad ■ Click On Ad ■ Explore the Website ■ E-mail the Advertiser
		Ad Features ■ Objective ■ Subjective	■ Purchase the Product, etc.

Source: Rodgers and Thorson (2000)

Criteria and Control Ownership

Control ownership is not so much about outcomes as it is about the process of

communication (Pavlou and Stewart, 2000). In this sense, the measurement of advertising

10

effectiveness can be thought of in terms of two distinct aspects: (1) Process Control; and (2) Results.

These two sets can be thought of as different but also complementary in their focus. First, "Control Process" measures concern primarily media choice, information search, and the attention to and processing of information. These measures are first and foremost concerned with the manner in which users construct and control their relation to messages on the internet. Second, the "Results" measures concern the outcomes of consumers having been exposed to messages on the internet. The ad is the independent or mediating variable while standard CAB measure such as attention, memory, knowledge, attitudes and intentions become the dependent variables.
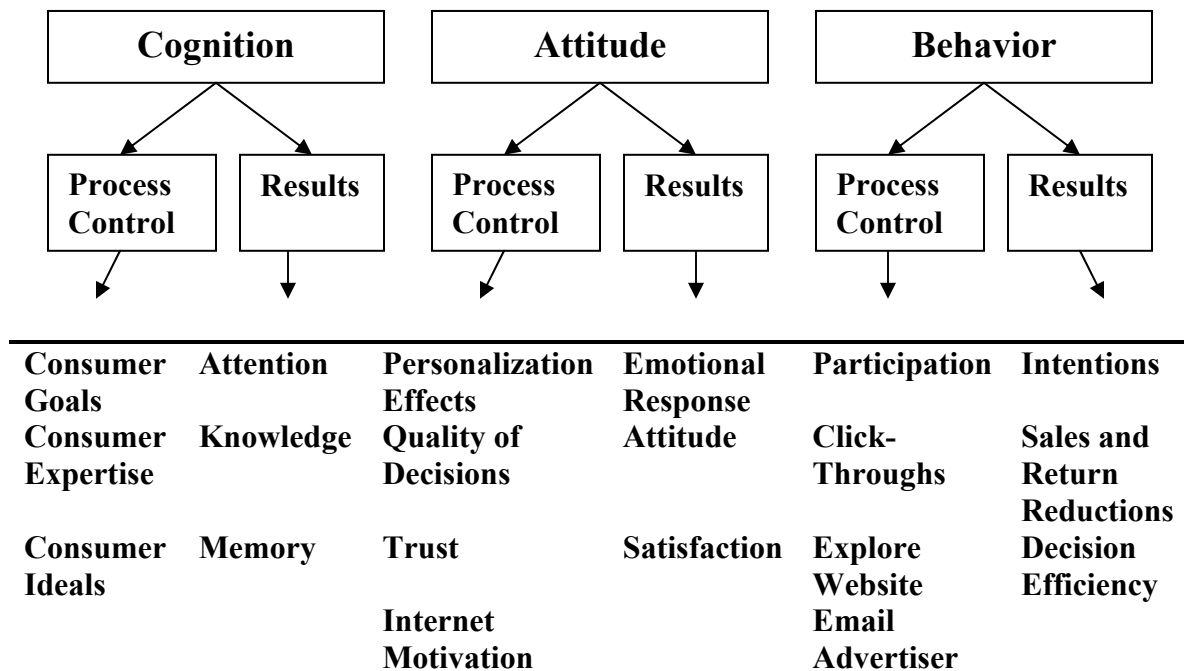
Of course, both Process Control and Results are partially under the control of the advertiser who constructs the message and partially under the control of the user of the message, the recipient. Regardless of the degree of control in either end, it is essential that both "control ownership" aspects be tracked and measured so that a well-rounded view of the effectiveness of internet advertising can be obtained. Each of these two control ownership dimensions can be considered operating under any or all of the three dimensions of effectiveness, Cognition, Affection and Behavior. Figure 4 shows some examples of effectiveness measures categorized by CAB dimensions and Control Ownership dimensions.

In Figure 4, suggestions are made with respect to measures which might be under the control of either the user or the advertiser that would indicate the control of the messaging process. So, for example, interactivity will be low on the part of the user if the user does not possess expertise about surfing the internet; this is largely a cognitive function. Personalization effects on the part of the advertiser are likely to lead to affective responses and interactions on

11

the part of the user during the messaging process. And active participation in the message

process as a behavioral response depends on the willingness of the consumer to participate and

on the formats designed by the advertiser to encourage such participative behavior. The measures

listed in Figure 4, as examples, under Results are largely the standard measures of advertising

effectiveness categorized by CAB criteria.

Figure 4

CAB Criteria of Effectiveness by Control Ownership
With Measurement Examples

Cognition		Attitude		Behavior	
Process Control	**Results**	**Process Control**	**Results**	**Process Control**	**Results**
Consumer Goals	Attention	Personalization Effects	Emotional Response	Participation	Intentions
Consumer Expertise	Knowledge	Quality of Decisions	Attitude	Click-Throughs	Sales and Return Reductions
Consumer Ideals	Memory	Trust	Satisfaction	Explore Website	Decision Efficiency
		Internet Motivation		Email Advertiser	

Given the conceptualization of internet advertising effectiveness outline above and shown

in Figure 4, the following sections of this chapter will consider the classification and

effectiveness of various internet advertising formats.

Formats and Effectiveness of Internet Advertising

Internet advertising has been in a constant evolution since its debut in the early 1990s. In one of the earliest internet advertising books, Strangelove (1994) documented several ad formats, including electronic mailing lists, Usenet newsgroups, signature files, free electronic newsletters, software samples, electronic brochures, and storefronts on the Web. Popular ads were postings to Usenet newsgroups such as "misc.forsale" and "biz.marketplace." In 2003, Interactive Advertising Bureau (IAB 2004) measured the revenues of nine formats of internet advertising: keyword search, banner ads, classifieds, sponsorships, rich media, email, slotting fees, interstitials and referrals.

There are dramatic changes in the use of internet advertising formats, as shown in Table 1. For example, banner ads gradually declined from 56 percent in 1998 to 21 percent in 2003. Sponsorships observed a similar decrease from 33 percent in 1998 to 10 percent in 2003. On the other hand, rich media gained from 2 percent in 2002 to 8 percent in 2003, and the greatest rise is for keyword search, from 1 percent in 2002 to 35 percent in 2003, becoming the leading format of internet advertising.

Beyond these formats measured by IAB, internet advertisers also have adopted other new formats, such as three-dimensional visualization and brand integration in internet movies and online games. These formats further blur the distinction between advertising and marketing communications and represent one of future internet advertising tends. This section reviews the characteristics of major formats of internet advertising and research on their effectiveness.

Table 1
Internet Advertising Revenues by Ad Format: 1998-2003
(Percent)

	1998	1999	2000	2001	2002	2003
Banner ads	56	56	48	36	29	21
Sponsorships	33	27	28	26	18	10
Interstitials	5	4	4	3	5	2
Email	-	2	3	3	4	3
Classifieds	-	-	7	16	15	17
Rich Media	-	-	2	2	5	8
Keyword search	-	-	1	4	15	35
Referrals	-	-	4	2	1	1
Slotting fees	-	-	-	8	8	3
Other	6	11	3	-	-	-
Total	100	100	100	100	100	100

Source: IAB, 1999-2004.

Banner Ads

Banner ads (also called display ads) are one of the popular formats of internet advertising. They often made of text and graphics, either static or animated. Internet Advertising Bureau specified eight standard banner sizes in 1996 and expanded standard banner sizes to 14 in 2001, in recognizing advertisers' needs for larger ads and greater impact. Banner ads have been used primarily for direct response, and their click-though rates declined from an average of 3 percent in the mid-1990s to 0.5 percent in the early 2000s (AdKnowledge 2000, cited in Meskauskas 2001) and to 0.28 percent in the first quarter of 2003 (DoubleClick 2003).

In one of the early studies of banner ad effects, Briggs and Hollis (1997) used a proprietary system to measure the impact of banner ads, and they found that even without click-through, banner ads resulted in heightened ad awareness, brand perceptions and attitudinal shifts for apparel and technology brands. Their findings confirmed the dual role of banner ads in both direct response and image building though the latter was then often overlooked.

14

More studies were conducted to explore the impact of banner ad characteristics, such as size, animation, incentives and emotion of banner ads. Li and Bukovac (1999) examined the recall, click-throughs and response time as functions of banner ad type (static or animated), banner ad size (small and large) and user mode (surfing or seeking) in a lab experiment. The results indicate that animated banner ads cause better recall and faster click-throughs than static banner ads and large banner ads generate higher and faster click-throughs than small banner ads although no effect of user mode was found. Xie, Donthu, Lohtia and Osmonbekov (2004) analyzed 8,098 real world banner ads and found that the click-through rates were affected by incentives and the impact of incentives was enhanced by positive emotions in banner ads; however, ads with negative or no emotions seem to work better only when no incentives are offered. More recently, Sundar and Kalyanaraman (2004) investigated the effects of animation speed of banner ads, and they found that fast-animation speeds to be more attention grabbing and able to elicit greater physiological arousal, particularly when contrasted with slow-animation speeds.

Sponsorship

Online sponsorship involves placements of the sponsor's identify (corporate logo or brand name) in sponsored Web sites to build good-will more than traffic to its site. Meenaghan (1983) defined sponsorship as "the provision of assistance either financial or in kind to an activity by a commercial organization for the purpose of achieving commercial objectives." Gardner and Shuman (1988) considered sponsorship as "investment in causes or events to support corporate objectives (for example, by enhancing corporate images) or marketing objectives (such as increasing brand awareness)." (p. 44) Sponsorship achieves these goals by

creating and maintaining in the consumer's mind an association between the brand and an event that the target consumer values highly (Crimmins & Horn, 1996). Like traditional sponsorship taking advantage of an event or activity, online sponsorship benefits from the user's visitation and positive dispositions toward sponsored Web sites. For example, pharmaceutical companies in 1998 spent about half of their online advertising dollars sponsoring health Web sites (Neff, 1999).

Research on online sponsorship has explored factors that affect the effectiveness of this format of interactive advertising. Rodgers (2004) investigated the impact of online sponsor relevance from an association perspective. By sponsor relevance Rodgers means a match between sponsors and sponsees in terms of shared semantic features, as a travel service sponsoring the travel section of a Web site. The results indicate that relevant sponsors are more likely than irrelevant sponsors to elicit stronger recall, brand evaluations and purchase intentions. Rifon, Choi, Trimble and Li (2004) examined the perceived corporate motive of online sponsors and the results suggest that a good fit of the company and the cause it sponsors generates consumer attributions of altruistic sponsor motives and enhances sponsor credibility and consumer attitude toward the sponsor. Although conducted from different theoretical perspectives, these studies all imply that it is essential for a company to select a fit event, cause or activity to sponsor and the perceived fit affects the effects of online sponsorship.

Interstitials

Although accounting for a relative small portion of internet advertising revenues, interstitials include pop-ups and pop-unders are the most controversial format of internet advertising. Interstitials are perceived to be intrusive because they put audiences in a forced

exposure mode (Cho 2000). In traditional media, TV commercials are an example of forced exposure because they normally interrupt an audience's viewing process either within or between programs. On the other hand, newspapers ads are examples of voluntary exposure because readers may or may not look at them whenever reading a newspaper. The internet has the capacity to display ads in both voluntary and forced exposure modes. Banner ads are normally viewed in a voluntary fashion like magazine ads though there are complaints about their ubiquity as eyesores on the Web, which cause some users to use ad-blocking filters to avoid the display of banner ads in their browsers (Dalton, 1998).

Forced exposure ads are often perceived to be intrusive, resulting in negative response such as feelings of irritation and ad avoidance (Li, Edwards and Lee 2002, Edwards, Li and Lee 2002). Edwards et al (2002) found in an experimental study that perceived intrusiveness in interstitials is a function of the viewer mode and ad characteristics. That is, viewers can be in a goal-directed, searching mode or a mindless surfing mode, and they are likely to perceive a pop-up ad to be less intrusive when they are in a surfing mode than in a searching mode. For viewers in the same mode, forced exposure ads are likely to be perceived to be less intrusive if they are editorially congruent, informative and entertaining than otherwise.

Forced exposure ads such as interstitials, pop-ups and pop-unders are on decline in recent years as increased resistance of internet users, decreased acceptance of major internet service providers and wider adoption of ad-blockers. However, these intrusive ads are expected to continue in use as more innovative ways are developed to deliver them (Olsen 2004).

17

Rich Media

Rich media is a generic term for a variety of highly interactive, visually influential internet advertising formats. With vector-based graphics, streaming audio and video, and Java-powered interactivity, rich media ads deliver enhanced impact and result in improved user response. Most rich media ads are displayed in a voluntary exposure mode so that they are generally acceptable for most internet users. The premise of rich media ads lies in the assumptions that messages appealing to multiple perceptual systems are better perceived than those that call on single or fewer perceptual systems, and that high quality messages (e.g., vividness or distinctiveness) are more effective than low quality messages (Reeves and Nass 1998). However, the visual impact of rich media ads is often positively related to the amount of information, which in turn, determines the size of an ad. The larger and richer an internet ad, the longer time it takes to download and display on the computer screen. The increasing use of rich media ads is partially attributable to the proliferation of broadband internet in the U.S. households.

Rich media ads are found to be more effective than banner ads in professional studies. According to eMarketer news (2002), a June 2002 DoubleClick study of 400 million rich media found that the click-though rates of rich media ads averaged at 2.4%, six times higher than conventional online ads at 0.4%. A study by Dynamic Logic (2002) of 320 on-line campaigns and 338,184 interviews indicated that the average lift in message association was 21 percent for graphic ads, 37 percent for flash-based ads and 44 percent for rich media ads. Message association refers to the ability of a consumer to link a brand to a specific message and lift is the difference between users who are exposed to a message and those who are not. Rich media ads in

the study include superstitial by Unicast, dHTML by Eyeblaster, MSN's NGAP, Shoshkalees, Eyewonder and Klipmart, and Enhanced Flash by PointRoll, among others.

Keyword Search

Keyword search became the most popular format of internet advertising in 2003 in terms of revenues, surpassing banner ads, classifieds and sponsorships (IAB 2004). Keyword search, also called paid listings, are main sources of revenues for internet search sites such as Yahoo!, MSN, Lycos and Google. Keyword search rises to meet the new needs of consumers, advertisers and search and content sites. As information on the internet increases exponentially, finding useful information on the internet is never an easy task. Search sites become the starting point of internet use for millions of users every day. It is estimated that 30-40 percent searches are out of commercial motivations, making keyword search a potentially lucrative lead to Web sites that are designed to sell. Most paid listings services such as Overture and Google's AdWords offer keyword search on a pay-per-click basis, a pricing method that advertisers prefer.

Keyword search is superior over other internet advertising formats in that it delivers relevant commercial information at the moment when users need it. As a result, users are less likely to consider it intrusive. Unfortunately, little research is available about the effectiveness of this format of internet advertising at present.

3-D Visualization

Another format of internet advertising that has been used by more advertisers is 3-D product visualization. Different from many banner ads which enable users to interact with a Web site, 3-D visualization lets consumers interact with simulated products on the Web. The interface

properties of 3-D visualization offer a natural approach to product inspection and represent a form of "object interactivity" (Schlosser 2004). For example, consumers can inspect a 3-D product by rotating it for view from any angle, zooming in and out for details, and even trying some product (e.g., a digital camera or a laptop) functions through prescribed animation (for a review, see Li, Daugherty and Biocca 2001). Three-dimensional visualization has been used in an increasing number of Web sites of computers, appliances and electronics and even apparels. For example, the Sears site recently adopted 3-D visualization for household furnishing and decoration (Anonymous 2004).

Research shows that compared with graphical presentation of products on the Web, 3-D production visualization results in improved product knowledge, more positive brand attitude and heightened purchase intention for products for which touching is not essential for purchase decision (Li, Daugherty and Biocca 2003). Schlosser fund in a series of experiments that object interactivity, which allows the user to directly manipulate objects in the virtual word, led to higher purchase intentions than when the same product information is presented passively, either in block of text with graphics, through a story-board format, or through interactivity in instruction, regardless the user in a searching or surfing mode. Griffith and Chen (2004) examined the impact of virtual direct experience on product purchase decision, and they found that on-line ad enhanced with virtual direct experience results in lower perceived risk, higher evaluation, high affect and high conation. They further investigated the effect of the degree of digitization on apparel and the findings generally support the statement that higher degree of digitization of experiential attributes of apparel products improves the effectiveness of virtual direct experience ads.

Li, Daugherty and Biocca (2003) attribute the superiority of virtual experience as simulated in 3-D visualization over indirect or even direct experience for certain types of products (e.g., visual and material products) to virtual affordances, perceptual cues that can be simulated in 3-D visualization. They posited that when virtual affordance either match or exceed the consumer's perceived affordance, virtual experience results in better product knowledge, brand attitude and purchase intention. Schlosser (2003) explored the role of object interactivity from the mental image effects perspective. She speculated that the act of directly manipulating a virtual object should produce clearer mental images than if the information is acquired passively and that because vivid mental imagery more closely resembles the actual experience than cognitive elaboration, it should affect intentions. Different theoretical perspectives seem all supportive of the superiority of 3-D visualization as a format of on-line advertising.

Advergames

Product placement in online games is another example of ad-content integration, where interactive technology is used to embed brand messages in an entertaining fashion. The degree to which a brand is integrated into a game varies. Chen and Ringel (2001) observed three levels of integration: associative, illustrative and demonstrative. Associative integration is the lowest level, where a brand can be placed in the background of an activity or event, such as a Jack Daniel's logo appears around a pool table to not only make a natural setting but also appeal to the audiences its campaign is targeting. Illustrative integration places a brand in a prominent position in a game, such as an adventure game that features a story line to force a cartoon character to collect his wind-scattered General Mill's Cinnamon Toast Crunch cereal before the start of school. Demonstrative integration represents the highest level of brand integration, such

as a slam-dunk game in which a character demonstrate the performance features of the Nike Shox basketball shoes chosen by the player in the opening sequences of the game (Chen and Ringel 2001). Different types of brand integration in games also were discussed in other studies (Nelson 2002; Chaney, Lin and Chaney 2004).

In one of the studies of game player characteristics, Youn, Lee and Doyle (2003) compared three groups of people: on-line gamers, non-gaming internet users and non-internet users. Although there is no gender difference among them, on-line gamers are more impulsive and higher in novelty seeking, risk-taking, and word-of-mouth communication than other two groups. Both online gamers and non-gaming Internet users are more liberal toward socially sensitive issues than non-Internet users and more tolerant of advertising that contains sex or violence.

Expanded Scope of Internet Advertising Research

The review of effectiveness of various internet advertising formats indicates that academic research has fallen behind the practice in that some of the new internet advertising formats have not been adequately investigated. As a result, the analysis of some formats has to reply heavily on studies that have been conducted by advertising agencies, consultancies and associations. There are great challenges for future internet advertising researchers.

Like traditional advertising media, the growth of the internet as an advertising medium depends on how it meets the expectations of all parties that are involved: advertisers, internet publishers and consumers. For advertisers, the internet is expected to be more effective than traditional media in accomplishing certain advertising objectives. For internet publishers, an audience and advertisers are equally important. Internet publishers must strive for attractive

content to maintain an audience basis. At the same time, internet publishers must deliver formats of internet advertising that are effective for advertisers and acceptable to consumers. For consumers, benefits of the internet must exceed its costs before the internet can become a channel of choice for their information, entertainment, and shopping and buying activities. These expectations are driving forces behind the further development of internet advertising.

There must be a balance in benefits and costs of internet advertising among the three groups of constituents. An ultimate goal of internet advertising research is identify and understand the ways internet advertising can be most effective for advertisers, suitable to publishers, and acceptable to consumers. The next section reviews major studies in the area of internet advertising and discusses the directions for future research.

Function of Internet Advertising

The latest development of internet advertising suggests that the real power of internet advertising lies in its integration with conventional advertising to maximize its impact. Philport and Arbittier (1997) anticipated in the early time of internet advertising, "With respect to the Internet, we may have the first advertising channel that is not only a medium in and of itself but also a valuable extension of traditional channels" (p.75). Research of internet advertising should gradually be expanded from the effectiveness of individual formats of internet advertising into the function of various formats in combination and integration with other advertising and marketing efforts. A recent study by Chang and Thorson (2004) of the synergy of television and Web advertising represents a new approach to the function of internet advertising.

There are some interesting questions to be answered when examining internet advertising in a broader perspective. For example, what will consumers usually do after they are exposed to

and get involved in an online advertising message? How would exposure to internet advertising affect a consumer's subsequent information search and actual purchases? What is the role of internet advertising in generating and maintain consumer loyalty? Harvey's (1997) extension of the ARF model is still highly useful framework for exploring the function of internet advertising. A better understanding of the function of internet advertising will not only help the development and use of various internet advertising formats but also assist the effective integration of both traditional and internet advertising in marketing campaigns.

Exposure of Internet Advertising

In a seminal study, Leckenby and Hong (1998) tested a number of traditional media models using audience data from top 50 Web sites. They concluded that reach and frequency can be estimated quite accurately for schedules of Web vehicles but that conceptual and technical problems need to be solved before reliable estimates can be made for schedules that mix both traditional media and internet vehicles. Because the integration of traditional and new media is essential for many advertising campaigns, better understanding of cross-media usage and relative impact of messages from different sources is highly needed. For example, what is the optimal combination of traditional and new media vehicles to reach a particular segment of consumers? How can different media vehicles supplement each other to maximize the impact of their impact? What are the reach patterns of placement in both the internet and other conventional media over a period of time? There is little knowledge about these important questions.

The concept of effective frequency has been long established for media planning although recently scholars have started questioning the validity of this concept (Cannon, Leckenby, & Abernethy, 1996; Cannon & Riordan, 1994). Unfortunately, no studies are found to

address the issue of optimal frequency levels for a given product category or service type in internet advertising. How many exposures are sufficient to solicit a recall, or result in advertising wearout? What factors determine the level of effective frequency? Or is the concept of effective frequency still necessary in internet advertising?

Message of Internet Advertising

Behavioral response and branding are two major objectives of internet advertising. Blessie and Ju-Pak (1998) found, in a content analysis of 200 banner ads, that ads meet consumers' need for information, entertainment, and value by employing a variety of elements such as multimedia, interactivity, news, and incentives. The authors concluded, however, that Web and banner advertising are not being used to their full potential and suggested further research on "content, design, and context to determine which elements are effective in creating and maintaining attention, interest, and motivating click-through" (p.14). New research is needed to examine the influence of various factors in internet ad formats, ad-content integration and modes of advertising exposure. For instance, do consumers perceive any difference in credibility between editorial contents carrying banner ads and editorial contents blended with advertorials? How intrusive do users perceive newly emerged floating ads? How effective are various methods of brand integration in online games?

Conclusion

The effectiveness of Internet WWW advertising formats must be judged in the context of an overall philosophy or model of advertising effectiveness in general, regardless of medium or message characteristics. Yet, this chapter has also made the point that the Internet WWW has

some special characteristics, notably interactivity, which bring about special issues, which though may have existed in traditional media to some extent, become much more important in the new medium. Process control is one of those issues. The authors have sought to place this newly important element of Internet WWW advertising into the context of the traditional Cognition, Affection and Behavior (CAB) model of advertising objective-setting and effectiveness.

It is clear the formats of Internet WWW advertising continue to undergo rapid changes. The role of the much-maligned banner ad has decreased by more than one-half since 1998 as a portion of all Internet WWW advertising formats utilized. Keyword search Internet WWW advertising did not register relative to other formats in terms of advertising expenditures in 1998. Today, it represents 35 percent of all advertising expenditures on the Internet WWW. The constant evolution of the importance of different formats since 1995 shows the continuing fluidity of what is meant by Internet WWW advertising. An article in the New York Times of 2004 points out the problem of "fake" clickthroughs to a firm as the result of keyword search (Zeller, 2004). This article suggests that firms such as Eddie Bauer, Office Depot and CompUSA are paying upwards of $10,000,000 a year on fake clickthroughs which are generated not by consumers but by automated hacker programs in keyword search. These new technological issues suggest continued rapid evolution of Internet WWW formats, in addition to other pressures for format change which have existed in the past.

It seems reasonably clear that old Internet WWW formats such as the banner ad will not disappear any time soon, though much maligned. There is evidence of their effectiveness (IAB, 2004), and, as long as this is so, they will continue in existence. Rather than old formats disappearing, they seem to be remaining along with the invention of new formats so that the

variety of formats available to advertisers is increasing with the passage of time and the maturing of the Internet WWW. There are at least nine major format types now available to advertisers whereas in 1995 there were perhaps two or three. This is a positive development for the future of Internet WWW advertising. The continued invention of new formats is likely to continue into the foreseeable future.

One of the important challenges for advertisers is to find new ways to integrate Internet WWW advertising formats into the traditional advertising campaign with its traditional media and traditional formats. This is increasingly important as more new Internet WWW advertising formats come along. Part of this job will lie in the measurement of the effectiveness of these new formats. How should Keyword Search be measured in terms of advertising effectiveness? Is this solely in terms of clickthroughs? Can Keyword Search be measured using traditional effectiveness "Results" approaches in an efficient manner? It is probably the case that, as illustrated in Figure 4, the traditional effectiveness model of CAB will need to be employed, at a minimum, with the additional thought and work implied by "Process Control" and "Results" measures. This necessarily means the job of measuring advertising effectiveness will be expanded to include more measures, and, consequently, more time and money on the part of advertisers.

Finally, this chapter points out the need for more academic research on advertising effectiveness on the Internet WWW, in general, and on formats, in particular. There is a dearth of such research at the moment. Much of the current knowledge is proprietary or has its source in information published in trade publications. Academicians need to do more to contribute to the understanding of Internet WWW advertising effectiveness. There is considerable work of this nature relating to general processes of consumer interaction with interactive advertising at

the moment. What is lacking is research of an academic character dealing with the effectiveness of advertising formats on the Internet WWW.

References

Anonymous. 2004. Sears Builds on Lands' End to Move into Apparel and Home Fashions. Internet Retailer, October 24, 6.

Barry, Thomas. 1987. The Development of the Hierarchy of Effects: An Historical Perspective. *Current Issues and Research in Advertising*, 251-295.

Blessie, Miranda, and Kuen-Hee Ju-Pak. 1998. A Content Analysis of Banner Advertisements: Potential Motivating Features. Paper presented at the 1998 Convention of Association for Education in Journalism and Mass Communication.

Briggs, Rex, and Nigel Hollis. 1997. Advertising on the Web: Is there response before click-through? *Journal of Advertising Research,* 37 2:33-45.

Cannon, Hugh M., and Edward A. Riordan. 1994. Effective Reach and Frequency: Does It Really Make Sense? Journal of Advertising Research (March-April):19-28.

Cannon, Hugh M., John D. Leckenby, and Avery Abernethy. 1996. Overcoming the Media Planning Paradox: From (In)Effective to Optimal Research and Frequency. In Proceedings of the 1995 Annual Conference of the American Academy of Advertising, edited by G. B. Wilcox.

Chaney, Isabella M., Ku-Ho Lin, and James Chaney. 2004. The Effect of Billboards within the Gaming Environment, *Journal of Interactive Advertising*, 5(1): http://jiad.org/vol5/no1/chaney.

Chang, Yuhmiin, and Esther Thorson. 2004. Television and Web Advertising Synergies. *Journal of Advertising*, 33(2): 75-84.

Chen, Jane, and Matthew Ringel. 2001. Can Advergaming be the Future of Interactive Advertising? Working paper at http://www.locz.com.br/loczgames/advergames.pdf.

Cho, Chang-Hoan, Jung Gyo Lee, and Mary Tharp. 2000. Advertising Responses to Different Forced Exposure Levels on the WWW. In Proceedings of the 2000 Annual Conference of the American Academy of Advertising, edited by Mary Alice Shaver.

Crimmins, James, and Martin Horn. 1996. Sponsorship: From Management Ego Trip to Marketing Success. *Journal of Advertising Research*, 36 3:11-21.

Dalton, Gregory. 1998. Filter Blocks Online Ads. *Information Week*, February 23, 77.

DoubleClick. 2003. Rich Media: What? Where? Why: A DoubleClick White Paper, June, http://www.doubleclick.net.

Dynamic Logic. 2002. Rich Media Campaigns Twice as Effective at Lifting Brand Message Association. Research Report, http://www.dynamiclogic.com/beyond_0602.php

Edwards, Steven M., Hairong Li, and Joo-Hyun Lee. 2002. Forced Exposure and Psychological Reactance: Antecedents and Consequences of the Perceived Intrusiveness of Pop-Up Ads. *Journal of Advertising*, 31(3): 83-96.

Festinger, Leon. 1957. *A Theory of Cognitive Dissonance.* New York: Harper & Row.

Gardner, Meryl P., and Philip Shuman. 1988. Sponsorships and Small Businesses. *Journal of Small Business Management*, 26 4:44-52.

Griffith, David A., and Qimei Chen. 2004. The Influence of Virtual Direct Experience (VDE) on On-line Ad Message Effectiveness. Journal of Advertising. 33(1): 55-68.

Harvey, Bill. 1997. The Expanded ARF model: Bridge to the Accountable Advertising Future. *Journal of Advertising Research*, (March/April):11-20.

Interactive Advertising Bureau. 1999-2004. Internet Advertising Report, http://www.iab.net.

Interactive Advertising Bureau. 2004. Internet Advertising Revenue Report: 2003 Full-Year, April, http://www.iad.net.

Krugman, Herbert E. 1965. The Impact of Television Advertising: Learning without Involvement. *Public Opinion Quarterly*, Fall: 349-356.

Lavidge, Robert., and Gary Steiner. 1961. A Model for Predictive Measurements of Advertising Effectiveness. *Journal of Marketing*, October: 59-62.

Leckenby, John D., and Hairong Li. 2000. Whey We Need the Journal of Interactive Advertising. *Journal of Interactive Advertising*, 11, http://jiad.org/vol1/no1/editors/

Leckenby, John D., and Jongpil Hong. 1998. Using reach/frequency for Web media planning. Journal of Advertising Research 38 (Jan-Feb):7-20.

Li, Hairong, and Janice L. Bukovac. 1999. Cognitive impact of banner Ad characteristics: An experimental study. *Journalism and Mass Communication Quarterly,* 76 2:341-353.

Li, Hairong, Steven M. Edwards, and Joo-Hyun Lee. 2002. Measuring the Intrusiveness of Advertisements: Scale Development and Validation. *Journal of Advertising,* 31(2):37-48.

Li, Hairong, Terry Daugherty, and Frank Biocca (2001), "Characteristics of Virtual Experience in Electronic Commerce: A Protocol Analysis," *Journal of Interactive Marketing,* 15(3), 13-30.

Li, Hairong, Terry Daugherty, and Frank Biocca (2003), "The Role of Virtual Experience in Consumer Learning," *Journal of Consumer Psychology,* 13(4), 395-407.

Li, Hairong. 1999. Conceptualization of Internet Advertising: Practical and Theoretical Issues. Working paper at Michigan State University, East Lansing, MI.

Meenaghan, John A. 1983. Commercial sponsorship. *European Journal of Marketing*, 7 7:5-71.

Meskauskas, Jim. 2001. Are Click-Through Rates Really Declining? *Clickz*, http://www.clickz.com/experts/archives/media/plan_buy/article.php/835391.

Neff, Jack. 1999. Internet Could See More Web Site Sponsorships. *Advertising Age*, March 15, S6-S8.

Nelson, Michelle R. 2002. Recall of Brand Placement in Computer/Video Games. *Journal of Advertising Research*, March/April, 80-92.

Olsen, Stephen. 2004. Revenge of the Pop-ups. CNET News, October 14: http://www.news.com/

Palda, Kristian. 1966. The Hypothesis of a Hierarchy of Effects: A Partial Evaluation. *Journal of Marketing Research*, February: 13-24.

Pavlou, Paul A., and David W. Stewart. 2000. Measuring the Effects and Effectiveness of Interactive Advertising: A Research Agenda. Journal of Interactive Advertising, 11, http://jiad.org/vol1/no1/pavlou.

Philport, Joseph C., and Jerry Arbittier. 1997. Advertising: Brand Communication Styles in Established Media and the Internet. *Journal of Advertising*, March/April, 68-76.

Ray, Michael. 1973. Marketing Communication and the Hierarchy of Effects. In Clarke ed., *New Models for Communication Research*, 146-175.

Reeves, Byron, and Clifford Nass. 1998. *The Media Equation*. Center for the Study of Language and Information.

Rifon, Nora J., Sejung Marina Choi, Carrie S. Trimble, and Hairong Li. 2004. Congruence Effects in Sponsorship: The Mediating Role of Sponsor Credibility and Consumer Attribution of Sponsor Motive. *Journal of Advertising*, 33(1): 29-42.

Robertson, T. S. 1971. *Innovation and the Consumer.* New York: Holt, Rinehart and Whinston, Inc.

Rodgers, Shelly. 2003. The Effects of Sponsor Relevance on Consumer Reactions to Internet Sponsorships. *Journal of Advertising*, 32(4): 68-76.

Rodgers, Shelly., and Esther Thorson. 2000. The Interactive Advertising Model: How Users Perceive and Process Online Ads. *Journal of Interactive Advertising*, 11, http://jiad.org/vol1/no1/rodgers/

Schlosser, Ann E. 2003. Experiencing Products in the Virtual World: The Role of Goal and Imagery in Influencing Attitudes Versus Purchase Intention. *Journal of Consumer Research*, 30 (September): 184-198.

Strangelove, Michael. 1994. *How to advertise on the Internet*. Ottawa, Canada: Strangelove Internet Enterprises, Inc.

Sundar, S. Shyam, and Sriram Kalyanaraman. 2004. Arousal, Memory, and Impression-Formation Effects of Animation Speed in Web Advertising. Journal of Advertising, 33(1): 7-17.

Xie, Frank Tian, Naveen Donthu, Ritu Lohtia, and Talai Osmonbekov. 2004. Emotional Appeal and Incentive Offering in Banner Advertisements. Journal of Interactive Advertising, 42: http://jiad.org/vol4/no2/xie.

Youn, Seounmi, Mira Lee, and Kenneth O. Doyle. 2003. Lifestyles of Online Gamers: A Psychographic Approach. *Journal of Interactive Advertising,* 3(2): http://jiad.org/vol3/no2/youn.

Young, Shirley. 1977. Copy Testing: For What? For Whom? Paper presented at the Annual Conference of the Advertising Research Foundation, New York, NY, October.

Zeller, Tom Jr.. 2004. With Each Technology Advance, A Scourge. *New York Times*, October 18, 2004.