# Negative Effects of Advertising Techniques in Electronic Commerce

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## INTRODUCTION

Companies who engage in online commerce find themselves dwelling at the intersection of the real and the virtual, and facing a task that is more complex than delivering an attractive Web site (Mitra, 2003). Practitioners and scholars have paid attention to techniques used in site and product promotion, which include the overall structure of the online retailing interface and individual features like banners, animation, sound, video, interstitials, and pop-up ads (Rodgers & Thorson, 2000; Westland & Au, 1998). Banner size, image maps, audio, and Web site interactivity have been found to enhance site appeal (Coyle & Thorson, 2001; Li & Bukovac, 1999;). Banner ads effectiveness was also found to be affected by incentive offerings contained in the ads, as well as the emotional appeal imbedded in the ad (Xie, Donthu, Lohtia, & Osmonbekow, 2004). Nonetheless, the use of such promotional techniques also comes with its negative effects that could influence consumers' perceptions of and attitude toward a site.

## BACKGROUND

A hierarchical chain of media effects in traditional advertising research spans the spectrum of ad content to cognition, attitude, and behavior (Olney, Holbrook, & Batra, 1991). Both content and form variables were considered predictors of attention, memory, recall, click-through, informativeness, attractiveness, and attitude (Rodgers & Thorson, 2000). The study of the effects of executional factors extended to the Web involves new techniques such as banners, sponsorships, interstitials, pop-up windows, and hyperlinks that need to be considered and require a higher level of comprehensiveness than print or TV ads. They may potentially contribute to the delivery of Web content and the enhancement of Web site appeal. Consumer behavior related to online shopping experience has also been continuously explored in the information systems literature (Jarvenpaa & Todd, 1997; Koufaris, 2002; Koufaris, Kambil, & Labarbera, 2001; Van den Poel & Buckinx, 2005; Vijayasarathy, 2003). Researchers have examined Web site design from the perspective of building a cognitive framework, emphasizing enhanced usability through coherent choice of design elements and composition of the layout (Rosen, Purinton, & Lloyd, 2004).

## CONSUMER ATTITUDE TOWARD WEB SITES

Attitude toward the ad (Aad) is an important traditional measure for developing marketing and advertising strategies. Aad mediates advertising responses to influence brand attitudes and purchase intentions (Brown & Stayman, 1992). Attitude toward the site (Ast) is a measure parallel to Aad and was developed in response to a need to evaluate site effectiveness, measuring a Web user's predisposition to respond either favorably or unfavorably to the content of a Web site in a natural exposure situation (Chen & Wells, 1999).

The similarity between Aad and Ast arises from the fact that a commercial Web site contains information similar to that contained in traditional advertising. An informative site appealingly organized in an entertaining form is likely to be appreciated by the visitors and hence is likely to receive a favorable attitude toward the site. Ast is a direct result of a visitor's perceptual dimensions such as perceived entertainment and perceived irritation (Ducoffe, 1996; Gao, 2003).

Online consumers place great value on the Web as a source of information. In the meantime, consumers also seek entertainment and appreciate information in an enjoyable context. Studies have also shown that product

representation, the quality of the shopping experience, perceived usefulness and perceived ease of use of the Web site have a significant effect on attitude toward online shopping, intention to buy, and actual shopping behavior (Del Giudice, 2004; Gefen, Karahanna, & Straub, 2003; Koufaris, 2002; Mummalaneni, 2005).

## PERCEIVED IRRITATION

The experience and perception of a visitor are individual specific. A Web site intended to be entertaining and informative may produce an unintended outcome of a user's feeling of irritation. In traditional advertising research, irritation is believed to be caused by tactics perceived to be annoying, offensive, or insulting, as well as ad features that are overly manipulative (Ducoffe, 1996). An irritating commercial is one that provokes and causes displeasure and momentary impatience (Aaker & Bruzzone, 1985). In the Web context, irritation can indicate a user's confusion and distraction or the messiness of the site.

Web-based features that may have negative effects on visitor perceptions and attitude include scrolling text across the screen or the status bar, continuously running animation, nonstandard link colors, outdated information, complex URLs, broken links or anchors, error messages, and pop-up ads, among others (Nielsen, 2003). In traditional media, annoyance and irritation are the main reasons why people criticize advertising (Bauer & Greyser, 1968). Irritation leads to reduction in advertising effectiveness (Aaker & Bruzzone, 1985). Ducoffe (1996) found a negative and significant correlation of – 0.52 between irritation and the perceived value of advertising. Irritation is also a cause for visitors to leave a site (Nielsen, 2004).

## Continuous Animation

A Web advertising technique that has been widely adopted is animation. It has been typically intended to facilitate the communication of product information between the Web site and its visitors. One such example is the online virtual showrooms of automakers. At sites featuring computer games and outdoor activities, animation may also increase the perceived realism of information presented. In a study of the effects of interactivity and vividness on consumer attitude, Coyle and Thorson (2001) find that a more vivid site, through the use of audio and moderate animation, was related to a more positive visitor attitude.

Animation can also be used to draw a visitor's attention. The use of continuous animation on many Web sites is for the purpose of alerting the visitor of a particular product or event, or an attempt to entertain the visitor while she or he is at the site. Nielsen (1999) suggested that animation should be done on a one-time-only basis and then the animated object should become a still image. Nielsen (1995) argued that Web users should not be constantly bombarded with the same intensity in impression an movement by the equivalent of the billboards of Times Square in New York City.

Due to the overpowering effect of moving images on the human peripheral vision, the presence of continuous animation on a page makes it very hard to read the text in the middle of a page (Nielsen, 1995). We argue that the continuousness poses a problem that is similar to TV advertising in terms of intrusiveness. Greyser (1973) found that people felt more irritated by TV commercials than by other media due to the intrusiveness of TV commercials. Continuous animation is much like scrolling text at the bottom of a television screen that cries for attention. It is a form of intrusive presentation of information to Web site visitors. Such intrusiveness demands attention like TV commercials, and will similarly cause irritation like any other intrusive means of advertising.

## Pop-Up Ads

Another frequently adopted web-based promotional technique is the pop-up ad. We observe that pop-up ads, like animated banners, can be used for both cross-site and in-house advertising. Nielsen (2003) maintains that users at search sites are more receptive to targeted ads than in other contexts, because these ads often relate to what the users are after, and subsequently the users are more likely to follow the ads. Although some people often find them annoying, many others find them informative and related to their search goal and thus consider them less irritating than in other circumstances.

On the other hand we observe that, though less inclined to deploy cross-site ads, many firms use pop-up ads, along with animated banners, to inform visitors of certain promotions and events. Does the use of such techniques for in-house advertising cause a higher level of irritation than in the absence of them? Both animated site banner and pop-up ads are ways to reach the consumer within the site, but are they good delivery mechanisms for the store?

Unexpected pop-up ads could have similar negative effects. In traditional advertising, Greyser (1973) found that interruptiveness was a predominant reason why the British public considered TV advertisements more irritating than the print media. The Internet is a hybrid of the print and broadcast media. The use of unexpected pop-up ads closely mirrors the TV commercials' interruptiveness. In addition, the visitor has to find a way to get rid of the popped-up window, the process of which increases the level of irritation.

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