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**The Value of Implicit Measures for Internet  
Advertising: Evidence of Mere Exposure Effects  
and their Impact on Consumer Preference for  
Pop-Ups and Banner Ads**

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## Abstract

Cognitive and neuropsychological research points to evidence that “repeated, unreinforced exposure to a stimulus is sufficient to enhance one’s attitude toward that stimulus”, referred to as the *mere exposure effect*. The main purpose of this study is to bring to attention sources of mere exposure effects data that, while rarely cited within the advertising literature, are highly relevant to questions of online advertising effectiveness. This study further sought to 1) investigate whether if pop-ups would be better recognised than banner ads, and 2) whether if pop-ups would be rated more favourably (due to the mere exposure effect) than banner ads (less liked due to devaluation-by-inhibition). The experiment was a 2 (Group A, Group B) × 2 (Advert Type: Banner Ads, Pop-ups) × 2 (Whether Seen: Seen, Not Seen) design. Twenty participants were instructed to read twelve articles on the screen, where each reading trial was presented with a banner ad located in the peripheral display of the full-screen article, and a pop-up that was sequentially displayed at the centre of the screen which would be instructed to click away. A total of 48 adverts (i.e., previously seen and not-seen pop-ups and banner ads) were then rated on each of the five affective dimensions (i.e., familiarity, eye-catching, appealing, memorable, and distinctive); followed by a recognition question as to indicate whether participants had seen the advert whilst reading the articles. As predicted, mere exposure effects occurred for all previously exposed adverts, but no difference in recognition was found between the advert types or any significant differences in the magnitude of favourability for the previously seen pop-ups and banner ads. These findings suggest that the magnitude to which favourability would be related to varying lengths of exposure durations presented with pop-ups and banner ads (i.e., brief vs. longer presentation times), and/or the level of attention guided towards pop-ups and banner ads (i.e., central, had to be clicked away vs. peripheral, could be ignored), was not supported. Practical implications and suggestions for future research regarding potential applicability of mere exposure theory in an Internet setting will be discussed.

## Introduction

### *Internet Advertising*

Internet advertising has undoubtedly attracted an enormous amount of investment from the commercial advertising industry. According to the Interactive Advertising Bureau (IAB) (2007), Internet advertising revenue increased by 26% from \$US16.9 billion in 2006 to \$US21.2 billion in 2007. In recent years, the Internet has evolved into an important medium for advertisers and marketers for both branding and direct-selling purposes (Hoffman & Novak 1996; Shen, 2002). During 2007, total spending on Internet advertising exceeded that of radio and cable television (TV) in the United States (IAB, 2007). It has been predicted that Internet advertising spending could surpass that of magazine advertising by 2010 (ZenithOptimedia, 2007). The commercial domain is by far the largest and fastest growing segment on the World Wide Web, with consumer-related advertisers continuing to represent the largest category of Internet advertising spending, accounting for 55 % of total advertising revenues in 2007. In particular, display-related advertising (e.g., display ads, rich media) accounted for 34 % of full-year revenues in 2007. Driving this rapid growth is the fact that the Internet has been drawing sizable audiences from other types of media (e.g. TV, magazines), which has turned the Web into a far more attractive venue for mass market advertisers (IAB, 2007; Shen, 2002). Nielsen/NetRatings (2008) estimates there are more than 1.4 billion Internet users worldwide with this number expected to grow dramatically every year.

Technological innovations have made the Internet an attractive medium for advertisers. Server-based technologies enable advertisers to display banner ads according to user profiles and interests. As an advertising medium, the Internet offers all the elements of other media and much more. Banner advertisements (or more commonly known as banner ads) can include everything from simple text and graphics, streaming audio and/or video, to highly dynamic plus interactive banner ads delivered with rich-media animations (Shen, 2002). In addition to conventional banner-ads, interstitials (or pop-up



ads) represent another popular techniques used to deliver rich media ads that can contain more sophisticated messages on the Web (Huang & Lin, 2006).

### *The Effectiveness of current Internet advertising campaigns*

The growth in Internet advertising comes with an increasing demand for effective advertising and media planning strategies. Despite the Internet's phenomenal growth, measurement and pricing practices on the Web are far from being standardised. Added to this is the need for accurate information and tracking of site traffic, advertising delivery, and user response for both Web publishers and advertisers (Shen, 2002). Although numerous efforts have been made to facilitate the process of developing viable measurement and pricing standards, such as guidelines proposed by the IAB in 1997 and 2002, attempts at standardisation thus far have been unsuccessful (Bhat, Bevans, & Sengupta, 2002). Ongoing discussions of measurement standardisation have been based on whether Internet advertising effectiveness should be assessed by direct response (i.e., click-through) or through mere exposure (i.e., impressions). Because the Internet enables advertisers to track responses to Internet ads, some reason that advertisers should pay for their ads on the basis of responses or performances, as evident in most online advertising campaigns that click-through to websites; while others argued that Internet ads have a role in creating brand awareness and image, and that such pricing and measurement methods would dismiss online advertising's brand-building value (see Danaher & Mullarkey, 2003; Shen, 2002 for reviews).

Despite the importance of this issue for both Web publishers and advertisers, there is little research available on the methodology used by advertising agencies to price, measure, and pretest Internet ads. A recent review by Shen (2002) has addressed this gap and sought to determine which measures and methods are being used to gauge the effectiveness of banner advertising. The majority of advertising agencies have indicated the use of click-through rates (i.e., the percentage of users who click on ad banners to connect to an

advertisers' site) and outcomes (i.e., the number of products purchased) to measure campaign effectiveness, rather than banner ad exposures or impressions (i.e., a broad indicator of the overall exposure of an ad that measures success in terms of visibility or brand recognition). This use of click-through has highlighted the interactivity of the Internet, indicating an active response toward advertising, rather than probable exposure to it which is believed to be essential in gauging the performances of online campaigns. Conversely, advertisers remained sceptical about the brand-building capabilities of online advertising, due to concerns that they have limited control, if any, on the exposure of advertised content. It is believed that the exposure-based approach may not be a good indicator of user involvement with an ad, as it does not track whether users interacted with the ad (Bhat et al., 2002; Hoffman & Novak, 1996).

Regardless of all this, there have been concerns that the accepted click-through approach may still not be appropriate to evaluate the success of online advertising campaigns (e.g., Shen, 2002). It is argued that relying on click-through as a metric of effectiveness could underestimate the brand-building power of online advertising. This argument points to evidence that online advertising can create a brand-building effect in the absence of click-through, based on the notion that measuring exposure to an ad can lead consumers to go directly to the site reference or look up the Website or product later, regardless of whether or not they click on the ad (Bhat et al., 2002; Briggs & Hollis, 1997). These concerns are also consistent with the evidence that online commerce has experienced a downturn in the recent past, as determined by declining click-through rates registered for most Internet advertising (Danaher & Mullarkey, 2003; Hanson 2000).

As a result, more recent studies have made attempts to use traditional survey research to provide insights into viewers' attitudinal motivations (e.g., Chandon, Mohamed, & Fortin, 2003; Danaher & Mullarkey, 2003; Hollis, 2005). These studies have relied on explicit memory retrieval using conventional measures, such as ad memory, brand awareness, and purchase intention, to anticipate attitudinal behaviours (Shen, 2002). For example, Dynamic Logic's AdIndex has become the industry standard for measurement of the

attitudinal effects of online advertising, which in one study has found that, a single exposure to an online advertisement can have a positive impact on online advertising awareness, total brand awareness, and purchase consideration (Hollis, 2005), as summarised by the observation that “the least 20 memorable advertisements negatively impacted brand favourability and purchase intent and had little to no impact on brand awareness and online ad awareness” (Mallon, 2005, cited in Hollis, 2005, p. 262). Similarly, Danaher and Mullarkey (2003) concluded that the longer a person is exposed to a web page containing a banner ad, the more likely one will remember the ad.

In contrast, cognitive and neuropsychological research points to evidence that affect is generated for a stimulus by merely exposing the subject to that stimulus repeatedly, referred to as the *mere exposure effect*, rather than being based on the cognitive processing of information (e.g., Zajonc, 1980, 2000). This strongly suggests that explicitly remembering an advert is unnecessary, and perhaps even irrelevant, to the change in attitudes that result from a single exposure to Internet advertising (Perfect & Askew, 1994). Therefore, open questions can be raised regarding the reliability of existing design and measurement methods used for online advertising – most importantly, can the traditional practices of advertising campaigns reliably determine the true impact of online advertising effectiveness? In summary, it still remains unclear as to whether or not Internet ads are effective as a medium for marketing communication.

Although there is greater interest in understanding which methods or measures work better in gauging Internet advertising effectiveness within the advertising literature (e.g., Shen, 2002), there is little available comparative and empirical research to resolve the debate. Given the similarities and differences between the Internet and traditional media, it is expected that mere exposure effects on the Web may differ or be similar in certain ways to traditional media (e.g., television commercials, print advertising), and this deserves further investigation (Hoffman & Novak 1996; Wong & Fortin, 1999). Specifically, it has been suggested that the majority of Internet advertisements do not receive any active processing due to the attention-demanding nature of tasks involved; this may imply that

Internet ads receiving limited attention compete for control over resources that may influence affective evaluation (Edwards, Li, & Lee, 2002).

However, the context of Internet advertising may somewhat differ from traditional media due to the interactive nature of the Internet. The online medium allows advertisers to present Internet ads in a form (e.g., pop-up, banner ads) that requires sufficient interest and motivation on the part of the consumers to interact with the advertisement and access appropriate information, rather than being passive recipients of the message (Hanson, 2000). In addition, given the empirical evidence from cognitive and neuropsychological research, it is striking that those who have recently drawn attention to the attitudinal outcomes (e.g., brand awareness) have largely dismissed the underlying mechanisms that would influence consumers' responses resulting from exposure to a banner ad, namely the mere exposure effect. Although empirical studies of mere exposure effects in an advertising context are still rare, growing research attention has shown the importance of non-conscious processes on consumer choice, suggesting that advertising effectiveness can be shown in the absence of explicit recollection. In particular, Perfect and Askew (1994) have shown the existence of mere exposure in print advertising by measuring unconscious effects of prior experience through implicit tests of memory.

In contrast to the widespread notion that the issue of online advertising effectiveness has been settled in favour of the direct response approach due to the universal measurement of click-through (e.g., Hollis, 2005), the main purpose of this study is to bring to attention sources of mere exposure effects data that, while rarely cited within the advertising literature, are highly relevant to questions of online advertising effectiveness.