

Conference Paper

A Framework for Investigating Low Attention Processing of Advertising

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Abstract.

In the cluttered digital landscape, it has been widely accepted that advertising typically receives low attention from consumers. This condition becomes a problem when many marketers switch to digital media, which is accelerated by the pandemic period in various countries. Restrictions on physical activity make digital marketing activities the primary alternative for marketers and consumers. The study of how advertising can get adequate attention, so that it can contribute to marketing is very necessary in both theory development and practical needs. Yet, advertising effectiveness at low attention has been the subject of limited research. As low-attention processing involves a set of mental processes, some being at subconscious level, the difficulty concerns the methodology for investigating those processes and measuring the effects that occur. This paper proposes a novel framework for investigating low attention to advertising, incorporating the four levels of competition for attention, and a naturalistic approach to research. We provide preliminary evid

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1. Introduction

Attention is critical to advertising effectiveness. The more attentional resources paid to the persuasive message, the higher the level of processing, and the more favorable the effect on consumer decisions [1]. Yet, advertising is rarely the primary reason consumers access digital content, so for the most part, what can be expected of consumers is low attention to advertising. In fact, 54% of all attention paid to advertising was low attention, whereas only 32% was high attention, and the remaining 14% was 'no attention' [2]. This condition is expected to be even more difficult when online marketers have relied on digital advertising since the onset of the pandemic and is likely to continue for the aftermath of the pandemic. While advertising tends to operate at low attention, the consequences of low attention for advertising effectiveness remain obscure. A common effort to overcome the problem of low attention is to bring additional attention

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to advertising. As a result, much research has focused on discovering 'saliency factors', such as motion, novelty, and creative elements, to capture attention. These factors may be useful in drawing eyes or ears toward the ad (i.e., direction of attention), but they do not necessarily bring attention to advertising (i.e., the amount of thinking devoted to the ad). As attention is hard to obtain, it is therefore important to understand how consumers process advertising at low attention and, more importantly, how to make advertising work despite low attention. Our paper articulates a novel framework that is specifically designed to investigate low attention processing of advertising. We consider four layers of competition for attention, outline the challenges in conducting attention research and ways to cope with those challenges, present preliminary evidence of digital advertising effectiveness at low attention, and conclude with an agenda for future research.

2. Levels of Competition for Consumer Attention

In the context of digital advertising, there are (at least) four levels of competition to consider. First, advertising has to compete with the consumer's internal (e.g. own thoughts, mood, motivation, and interests) and external environment (e.g. noises or events happening around the person) [3]. Second, digital media provide unprecedented opportunities for new, smaller brands to advertise alongside the world's biggest brands. Not only does advertising from one brand compete with that from other brands of the same product category, but also with all other brands. Third, advertising messages compete with other digital contents on the same screen for a short attention span. Advertising is easily ignored as it frequently appears in the periphery or outside the focal view. However, advertising that appears in the focal view and uses forced exposure (e.g., pop-up, pre-roll, or mid-roll advertising) can be regarded as annoying and intrusive and therefore may trigger avoidance behavior. Fourth, consumers are frequently engaged in multitasking during ad exposure. Not only do people perform different tasks, such as listening to the music or talking on the phone while surfing the internet, but today's advertising in one device has to compete with content in other devices that the consumer is using simultaneously. In fact, people switch between screens on an average of 2.5 times per minute during online activities [4]. Advertising researchers may consider these levels of competition and incorporate them in the research design. Doing so might increase the relevance of research to address the actual problem of consumer attention in advertising.

3. Methodological challenges in attention research

Advertising research on attention can be seen as fragmented, with many attentional phenomena being investigated but rarely compared or related to each other. The review of literature has revealed two main challenges: (1) research is grounded upon different theoretical and methodological perspectives; and (2) research often faces challenges in developing an appropriate ecological context.

Firstly, attention research in advertising is situated at the intersection of advertising processing and consumer psychology. Consequently, these streams of literature need to be taken into consideration and be streamlined when designing a study. In advertising, there is an ongoing debate about how advertising works and whether attention is a precondition for effectiveness. The Strong theory [5] posits that advertising is a strong force working through persuasion and conversion, and consumers need to be paying attention first before they can be persuaded. In contrast, the Weak theory [6] suggests that advertising is a weak force working through nudging. In this view, consumers absorb a great deal of advertising information without actively searching for or consciously evaluating it. Alternatively, advertising can work through an affective processing called subconscious seduction [7], and repeated exposure to advertising can develop 'mild emotional attachments' to the brand [8]. Research needs to clarify which theory provides a better explanation for low attention processing of advertising.

From the psychology perspective, attention is a complex construct and there are competing theoretical considerations about how attention works. The Spotlight Theory of attention has inspired a number of eye-tracking studies to determine which part of an ad is likely to gain attention and receive further processing [9]. According to this theory, attention focuses on a selected region and leaves information outside the focus unattended. Thus, information which is not the focus of attention would have relatively no impact on cognition or behavior. However, [10] argued that there can be *covert attention* in which the attentional spotlight shifts to a different location in the absence of eye movements, so the direction of the eyes and attention does not have to be one and the same. Alternatively, the Gradient Model proposes that attentional resource falls off from the center of the gradient to the edges [11]. This implies that, although the best result of processing is obtained from the center of the gradient which is the focus of attention, there is some possibility that information outside the focus receives some processing. Likewise, [12] found that when one focuses his attention on a piece of information in the focal view, other information in the peripheral field can also be incidentally processed and have a subsequent behavioral impact.

Secondly, attention research often takes place in a laboratory setting, employing rigid protocols to manipulate attention [3] and depicting an artificial scenario [13]. This kind of research may have limited capability to examine the actual state of attention and behavior of the consumers. In response to the challenges, a more realistic approach to research has been proposed. The main principle is to study attention in *real-life* contexts, where consumers are in control over their attention, which is prone to distractions from their internal and external environments. This implies that the same stimulus can generate different effects depending on how people allocate their attention to that stimulus. Therefore, a common protocol of exposing respondents to fictitious advertisements in isolation that they can look at as long as they wish [14] may see different findings from those in a realistic study.

4. Is Digital Advertising Effective Under Conditions of Low Attention?

To provide preliminary evidence of low attention advertising effects, we conducted two experimental studies in the laboratory and online settings. These settings are important to find out if the laboratory findings replicate in a real-life context. The studies use real brands and generic branded tweets as ecologically valid stimuli. Study 1 has three conditions: *Divided attention (DA)*, *Incidental attention (IA)*, and *control group*; while Study 2 has four conditions: *Focused attention (FA)*, *DA*, *IA*, and *control group*. *DA* participants were instructed to pay attention to both target as well as distracter tweets; *IA* participants were instructed to pay attention to distracter tweets; whereas *FA* participants were instructed to pay attention to branded tweets including the target tweets. Across two studies and various product categories (cars, sport shoes, toothpaste, and shampoo) we found that exposure of advertising under *DA* and *IA* was sufficient to increase the odds of target brands being included in the consideration set and selected as the preferred brand choice more than the control 'no attention' condition which received no exposure of target ads, demonstrating the positive low attention effects of advertising on choice. In fact, the effect in *IA* is stronger than *FA*. This implies that advertising would likely to have a stronger impact on choice if it is not the focus of attention. Table 1 presents the results.

	Study 1 - Laboratory experiment n = 65				Study 2 - Online experiment n = 276			
	Brand consideration		Brand choice		Brand consideration		Brand choice	
	β	OR	β	OR	β	OR	β	OR
Constant	-0.75**	0.47	-1.09**	0.33	-0.058	0.94	-1.32**	0.27
Focused attention (FA)					0.47**	1.60	0.66**	1.93
Divided attention (DA)	1.04**	5.28	0.81**	2.25	0.47**	1.60	0.64**	1.90
Incidental attention (IA)	1.66**	2.82	1.17**	3.22	0.738**	2.09	1.10**	3.01
Omnibus tests (Model) summary	$\chi^2 = 18.218, df = 2, p = .000$		$\chi^2 = 8.940, df = 2, p = .000$		$\chi^2 = 14.170, df = 3, p = .003$		$\chi^2 = 26.676, df = 3, p = .000$	
2 Log likelihood	213.821		217.028		1124.104		1044.049	
Cox & Snell Square	0.103		0.052		0.017		0.031	
Nagelkerke R Square	0.137		0.070		0.023		0.043	
Classification accuracy (overall)	65.5%		61.3%		59.5%		66.5%	

**significant at $\alpha = 0.05$

Figure 1: Logistic regressions on brand consideration and brand choice.

5. Agenda for Future Research

As the concern about inattention to advertising is growing, our findings that low attention advertising has a positive effect on choice can be good news. However, more work is needed to reproduce the basic results, investigate new formats (such as Facebook or Instagram ads, static or video ads, verbal or visual ads, and ads presented in a focal view, peripherally, or simultaneously), and apply other contexts (such as mobile media due to the widespread use of smartphones or hybrid media such as digital signage or smart television). Future research can also examine the effects of advertising in different levels of competition for attention.

Another area to consider is the impact of source factors. Brand or product-related characteristics such as brand familiarity and utilitarian/hedonic choices, and ad-related characteristics such as rational/emotional appeals may moderate the effects of attention and produce different results when interacting with low attention. Additionally, prior research has found that ‘a jumping frog’ in Sony television ads [15] and a puppy in Andrex toilet tissue ads [7] can drive the success of advertising despite being irrelevant to the brand/product. When consumers process advertising at low attention, these ‘items’ can evoke positive affect that can be linked to the brand. Knowledge of such cues is critical to bridge the gap between brand communication effect in advertising and the actual brand purchase.

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