

# Revising the Effects of Online Advertising Attributes on Consumer Processing and Response

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## Abstract

With advances in technology, the internet has allowed advertisers to design advertisements with unique features that can help capture consumers' visual attention and enhance their psychological states such as attitudes and emotions. Yet, web advertising features and attributes can significantly contribute to online consumer behaviors. This paper strives to provide guidelines for researchers and advertisers as to what outlines the effects of online advertising design on consumers' processing and multiple outcomes. The findings indicated that exposure to a well-designed online advertisement can influence several cognitive and emotional responses, such as attention to the ad, motivations to process the ad, depth of processing, pleasure, arousal, and online purchase intention. According to the present review, consumer involvement is regarded as an important moderator in the relationships between web advertising content as well as design and several responses, including consumers' intention to search and process information. The article concludes by identifying several areas of opportunities for advancing our understanding of web advertising effects. Marketers and advertisers will find the current work useful, as it can be used to maximize the effectiveness of web advertising.

**Keywords:** web advertising, consumer processing, attitude, trust, emotions

## 1. Introduction

Online advertising has become an important ad form since 1994 when the first banner ad appeared on Hotwired for AT & T (Choi & Rifon, 2002; Goldfarb, 2014; Hollis, 2005). According to a recent report released by Interactive Advertising Bureau (IAB, 2017), internet ad revenue totalled over \$ 20 billion in the United States for the first quarter of 2017, up 23 % over the same period in 2016. Moreover, the population of internet users has grown consistently at notable rates worldwide. In 2016, the number was around 3.5 billion, up from nearly 2 billion in 2010, and the number is estimated to surpass 3.7 billion by 2018, accounting for around half the world's population (The Statistics Portal, 2016).

Under these conditions, it is vital to evaluate and review the effectiveness of this relatively new form on consumer behaviour continually. Web advertising is considered the main marketing tool in influencing consumer purchase decision (Kiang, Raghu, & Shang, 2000). It is widely argued that the aesthetics are the key issue in online advertising success (Cho, 1999; Segev, Wang, & Fernandes, 2014; Wu, Wei, & Chen, 2008). This may be because of the nature of online environment where so many stimuli compete for consumers' visual attention.

Previous research studies indicated that online consumers always make a judgment of the websites immediately after visiting the site, which influences their willingness to engage with the site (Cho & Kim, 2012; Shih, 2004). This emphasizes the importance of aesthetic aspects of websites such as attractive pictures and suitable background colors in influencing consumers' purchase decisions.

Prior research in the context of marketing and psychology also suggests variables (e.g., attitudes, emotions, trust, product involvement, and processing behaviour) to be important in influencing consumers' purchase decision (Bonsón Ponte, Carvajal-Trujillo, & Escobar-Rodríguez, 2015; Chen, Hsu, & Lin, 2010; Cyr, Head, Larios, & Pan, 2009; Ha & Lennon 2010; Hwang, Yoon, & Park, 2011; Hyun, Kim, & Lee, 2011; Kim, Kim, & Park, 2010; Olney, Holbrook, & Batra, 1991; Peng & Kim, 2014; Richard, 2005; Shaouf, Lü, & Li, 2016).

Against this background, this study aims to offer guidelines for researchers and practitioners as to what establishes the effects of effective online advertising design on consumer processing (e.g., attention to

advertising, motivations to process the ad, as well as depth of processing) and responses (of online trust, attitudes toward ad, emotional responses, and purchase intention). This article also analyzes the effect of product involvement, as it plays a significant moderating role in the effect of ad visual design on consumers' desire to search and process additional information (Cho, 2003). In fact, companies usually advertise on websites not just to provide information for products evaluation, they also seek to affect emotions and gain trust toward their sites to ensure effective communications with consumers (Rodgers & Harris 2003).

This article contributes to the current advertising literature by providing guidelines for researchers and practitioners that establishes effective elements of web ad design. The article also provides a new understanding of how web advertising design affects consumer processing behavior and multiple cognitive and affective responses. To the best of our knowledge, this article is the first to assess research on the effects of different elements of web advertising content and design on consumer behavior in different context such as psychology and marketing.

The article begins by explaining the importance of visual design of web advertising in enhancing consumer behavior. We then analyze how elements of web advertising design influence consumer processing behavior and important response, including attitudes and emotions, and e-trust. The article concludes by identifying several areas requiring future research and discussing the findings in the context of a number of theoretical perspectives.

## **2. Why Does Web Advertising Design Matter?**

Advertising design is a key success factor in online advertising (Cho, 1999; Flores, Chen, & Ross, 2014). As suggested by Rossiter & Percy (1997), visual attention is a fundamental initial response to advertising messages. Therefore, to successfully capture consumers' visual attention, advertising features need to cut through the clutter of competing advertisements by well-designed ads (Pieters, 2007; Sajjacholapunt & Ball, 2014). In addition, Rompay, De Vries, Bontekoe, & anja-Dijkstra (2012) reported that visual means in advertising should be used to strengthen brand prestige.

Past research studies in the field of web advertising (e.g., Drèze & Hussherr, 2003) demonstrated that internet users usually ignore the banner ads. A possible reason provided by Simola, Kuisma, Oorni, Uusitalo, & Hyona (2011) and Simola, Kivikangas, Kuisma, & Krause (2013) for this phenomenon is a poor design of the advertisements (e.g., white background colors). Other researchers suggest that web site features and attributes often contribute to online consumer purchase intention (Chen et al., 2010; Richard, 2005; Vijayasarathy, 2004). According to Dreze & Zufryden (1997), online advertisement design elements include several factors such as web interface, background colors, images, sound effects, textual content, information type, and dynamic techniques. If these factors are consistent with customers' attitudes, beliefs, and value, the effectiveness of ad is enhanced.

In other work, Lee, Park, & Wise (2013) proposed that participants will report stronger intentions to purchase brands featured in online advertising with brand interactivity than brands featured in advertisements without brand interactivity. In an early study by Janiszewski (1993) provided empirical evidence suggesting the evaluation of a brand name is shown to depend on its placement. Furthermore, the brand name was evaluated more favourably when placed to the right side of an advertisement than right of the slogan.

Regarding online banner advertising, Day, Shyi, & Wang (2006) have revealed that flash banners accelerated the speed of decision making. The results of the same study validated the fact that advertising on the tops of web pages are more valuable than those at the bottom. A recent study by Goodrich (2014) has also indicated that consumers, especially males showed more favourable attitudes to banner advertisements on the left of the page, oppose the right side.

Previous research in the field of psychology and marketing have indicated that advertising does prompt consumers' emotional responses and influence their behavioral intentions (Chang, 2006; Hyun et al., 2011; Macinnis & Park, 1991; Olney et al., 1991). Moreover, the important study of Hyun et al. (2011) has indicated that people tend to form an affective evaluation of a product or service based on performance assessment of specific attributes. Therefore, it is essential to consider which specific characteristics of advertising can result in the strongest effect on consumers' emotional states and behaviors, and to maximize advertising effectiveness accordingly.

It is widely argued that selective attention and emotional responses are the two main brain systems used to prioritize human behavioral responses to visual stimuli. Indeed, their interaction is supported by neural connections (Fenske, Raymond, & Kunar, 2004). In their important study, Hyun et al. (2011) revealed that advertising dimensions (e.g., relevant news, stimulation) have a positive and significant effect on encouraging

consumers' emotional responses. Therefore, advertising should be attractive, and use visual stimuli, and images to boost users' emotional response.

There has been some experimental research investigating a person's emotional response to aspects of visual means such as color and images. For instance, Simmons (2006) found an association between colors and emotion. Moreover, Ibanez (2011) established a relationship between shapes and the emotional state.

Another research study by Mould, Mandryk, & Li (2012) has discussed the effects of using non-photorealistic images online on emotional responses (e.g., pleasure and arousal). The authors statistically found that the use of such kind of images significantly affected viewers' emotional reactions. In the context of e-commerce, it was stated that the level of aesthetics on websites positively influence pleasure and arousal (Jeong, Fiore, Niehm, & Loren, 2009). In an online shopping context, site stimuli such as background color, text color, animated images have been shown to influence emotions states of consumers while navigating the websites (Eroglu, Machleit, & Davis, 2003; Fiore, Jin, & Kim, 2005; Ha & Lennon 2010; Wu et al., 2008). What is more, these emotions can affect in turn consumers' behavioral responses such as purchase intentions (Eroglu, Machleit, & Davis, 2001).

According to the theory of distinctiveness and other related work (e.g., Ang & Low, 2000; Rosenkrans, 2009), people react emotionally to salient objectives such as animated images, bright colors. Thus, it is reasonable to expect that web sites that have a rich and colorful graphical background may result in more positive emotions and attitudes toward the site. This assumption has been supported by previous studies. For instance, the empirical study conducted by Mandel & Johnson (2002) has emphasized that using a cloudy sky on a website can increase feelings of luxury that consequently direct purchase behavior.

Considering a specific visual element, researchers in the field of marketing have confirmed that using images in advertising can help the viewer to imagine brand use or other pleasant states, which may result in positive affect and liking of the advertisement (Rossiter & Percy, 1997). The results have been replicated by other researchers who argued that qualitative aspects of advertising such as the selection of music and images can influence how consumers assess the advertised products (Hagtvedt & Patrick, 2008; Modig & Rosengren 2014; Peracchio & Meyers-Levy, 2005). The aforementioned study of Hagtvedt & Patrick (2008) has shown that the use of artistic images in advertisements plays a significant role in increasing consumer evaluation of the advertised products.

In the field of online advertising, it is widely accepted that the banner advertisement click-through is the most common way to transfer consumers into a target site and engage them with a brand or product (Cho, 2003). This may be because of the limited amount of information being able to be displayed on banner ad. In their study, Faber, Lee, & Nan (2004) mentioned that the vast majority of banner ads contain just the brand name and a brief slogan.

However, it has been proven that banners design can play a significant role in prompting the consumers to shift from passive to active attention, leading to a positive effect on the click-through rate (Lohtia, Donthu, & Hershberger, 2003; Sajjacholapunt & Ball, 2014; Xie, Donthu, Lohtia, & Osmonbe, 2004). This action consequently may influence advertising process and brand recall (Crespo-Almendros & Del Barrio-García 2014). The empirical research of Li and Bukovac (1999) has concluded that animated banner advertising lead to quicker response and better recall than non-animated banners, and that large banner ads result in better understanding and more clicks than small banner ads. A recent study by Segev et al. (2014) have also revealed that a banner ad that is consistent with the context can generate more positive attitudes toward the ad and the brand, as well as higher purchase intention.

However, the study of Pasqualotti & Baccino (2014) has established that the closest advertisements from reading activities delayed information processing. This result can be an indication to pay more attention to placement issues of web advertisements. Moreover, the topic of online cues design and their impact on consumers' preferences has been discussed in the study of Mandel & Johnson (2002). The authors examined several online stimuli (e.g., advertisements) in affecting consumers' information-searching behavior. It has been found that visual elements of stimuli drive differences in external search for information which in turn drive differences in choice.

Empirical research has revealed that animation in banner advertising does not necessarily attract user attention (Lee & Ahn, 2012). In that study, animated banners generated less attention compared with static ads. This result is also more consistent with Pasqualotti & Baccino's (2014) suggestions that animated banners would be more distracting than static advertisements. They also considered how the animation and placement characteristics of advertising banners affected readers' eye movements and thus their cognitive states (e.g., information processing). In fact, there is increasing evidence that the position of images in product-related information can alter processing and impact consumer perceptions. For example, Chae & Hoegg (2013) demonstrated that

product images presented in the lower right corner of a package results in the product being perceived as heavier. Moreover, the impact of background colors in banner advertising on consumers' intention to click and search for additional information has been empirically discussed in many studies (e.g., Sokolik, Magee, & Ivory, 2014).

Indeed, Sokolik et al. (2014) discovered that the click-through rates of banner ads with red have been compared with the click-through rates with blue color schemes. The authors found that red color background had greater rates than blue ones. This is an indication that visual design in banner ads is of great importance in influencing viewers' responses to online environment. It is important to keep in mind the influence of banner ad size because in many studies investigating online ad design effects, it has been found that banner size does indeed play an important role in encouraging consumers to click on banners and recall them. As one example, Chatterjee (2008) in his important study found that large sizes of banner advertising had significantly higher level of recall and recognition compared to small ones.

Other work investigating whether the position of banner ads on webpages can affect the implicit and explicit memory of them. For instance, John & Sathiyaseelan (2014) showed that the top position of ads was most effective, and the right position was least effective in terms of explicit memory, but no significant difference was found as regards implicit memory. Moreover, it was revealed that the users are more likely to click on the banner ad at the top of the screen, the largest banner, animated banners, banners with bright colors (Nihel, 2013). It is widely thought that creative characteristics of online ads also can influence click-through rates (Rosenkrans, 2009). In Rosenkrans' (2009) empirical investigation, the user reacted more actively to online banner ad designs with creative characteristics. Nevertheless, the main empirical results shown by Nihel (2013) are that memory is mainly affected by the location in the screen, size and animation in banner advertising.

Researchers in the field of advertising (e.g., Lee et al., 2013; Sicilia, Ruiz, & Munuera, 2005) confirm that interactivity on websites does help people process information more comprehensively and more positively. In their study, Cho & Leckenby (1999) indicated that consumers can get higher purchase intentions as interactivity increases because interactivity yields more careful information processing. It is well known that the perceived complexity of advertising messages is highly affected by the amount of text, because text is usually more difficult to process than images (Rossiter & Percy, 1997). The study of Chandon, Chtourou, & Fortin (2003) empirically showed that the presence of animated images do not have a positive effect on click through rates. A possible explanation for these results is because of the poor design of the displayed advertising which may be quite small or with cool colors.

According to the Elaboration Likelihood Model (Petty & Cacioppo, 1981), advertising stimuli with different information types need different mental resources and cognitive efforts. Therefore, it has been assumed that when consumers view a webpage in text format and in picture format, they will follow different information processing styles for processing advertising, and pay attention to it differently (Hsieh & Chen 2011). Another empirical research study in the field of web advertising (Wang, 2012) has confirmed the importance of site stimuli design in increasing consumers' trust. In that study, it was observed that the level of trust was linked to visual design of advertising. What is more, Chen et al. (2010) have emphasized that a secure IT infrastructure is important in decreasing perceived risk and increasing consumer trust in the context of e-commerce.

### **3. Consumer Processing and Responses to Web Advertising**

#### *3.1 Consumer Processing Behavior*

Information processing refers to how information is perceived, processed, and translated into action (Massaro & Cowan, 1993). It is well known that individuals differ in terms of their motivation to process information and reach conclusions (Chang, 2012). Recent studies in the field of online advertising (e.g., Wang & Sun, 2010) have reported that product information in advertising is the most important issue in e-commerce, and refers to the informing role of ads about products which leads to better decision making for customers. It is well established that the individual differences in involvement and processing of information significantly influence the attitude formation towards the consumer product (Haugtvedt, Petty, & Cacioppo, 1992; Verma 2009). In addition, Verma (2009) has stated that if advertisements succeed in gaining consumer involvement, the effect of advertisements increases. In their important model, Smith et al. (2007) included that consumer processing behavior contains three variables: amount of attention allocated to the ad, motivation to process the ad, and depth of ad processing.

It was expected that consumers, especially with a high level of involvement, when participants view banner ads on a website, they may click on banners in order to seek for additional information. One study by Tsao (2014) investigating the impact of incomplete information on purchasing decisions, it has been discovered that consumers who thought missing information in advertising to be important tended to find missing information from other sources like media, salespersons, and in stores.

In the field of marketing and psychology, it is widely accepted that there are two sources consumers can find missing information: internal or external. An internal search can refer to obtaining information from memory, and external search indicates seeking information elsewhere, for example, in stores, salespersons, advertisements, peers, and family members (Blackwell, Miniard, & Engel, 2001).

With respect to information searching behavior, extant research has found a positive relationship between the level of interactivity in a branded message and viewers' attitudes toward the brand (Lee et al., 2013; Sicilia et al., 2005). For example, Sicilia et al. (2005) find that interactivity on websites could help people process information more thoroughly and more positively. In online advertising context, advertising formats that produce interactivity motivates the importance of purchase intention as an advertising effect (Pavlou & Stewart, 2000). In addition, Cho & Leckenby (1999) indicate that consumers gain higher purchase intentions as interactivity increases, because interactivity produces more deliberate information processing. It has been proven by a recent study that consumers use online advertising to seek for information, and it is a good source of products information by clicking on online ads or seek in other search engine, in turn influences the attitudes toward online ads. In that study, information was found to be the second strongest forecaster of consumer's attitudes toward online ad, and providing information was found one of the most important functions of advertising. This finding is fully consistent with past research on online advertising. For instance, Korgaonkar & Wolin (1999) found that product information was positively related to ad attitudes.

In online advertising context, scholars always argue that the goal of most banner ads is both to generate direct responses (e.g., clicking on as to transfer the user into a company's site), and to obtain brand recognition through banner exposure (Cho, 2003). When users click on an ad, it takes them to another website or browser window where additional information is given. According to Tsang & Tse (2005), online advertising is effective if it is able to generate an immediate response from consumers such as click on banners. These findings may be a good indication to the importance of such behavior in increasing consumers' awareness about the advertised products and brands. Thus, it can be said that higher level of online advertising design may lead to higher intention to click on ads. Moreover, the prior information stored in consumers' memory has been shown to influence customers' product selections and behavioral intentions (Schlinger, 1979). In addition, It has been reported that the following content must be included for effective advertising: the advantage of the product; product information that is not known by current consumers; the product's impact on consumers' everyday lives; and the uniqueness of the product (Hyun et al., 2011; Schlinger, 1979). However, when applying this supposition to online banner ads, it is impossible to include all of this information. Thus, the only way to offer enough information is by clicking on the banner. In other words, for banner ads to be more effective, clicking behavior is essential for persuasiveness process.

One study by Crespo-Almendros & Del Barrio-García (2014) has revealed that the highest level of recall for the online banner ad content was achieved by consumers who click on that banner. This result may indicate to a strong correlation between clicking and cognitive responses such as the ability to remember the ad content.

Although there are other ways of finding and arriving at target sites, the banner advertisement click-through is believed to be the most common way to draw consumers into a target site and engage them with a brand or product (Cho, 2003). Referring to general advertising models, banner effectiveness may be evaluated with respect to a processing stage (e.g., attention, recall, recognition and mental workload), to the communication effect (e.g., attitudes towards the advertisement) and to user behavior such as click-through rates (Köster, Ruth, Mamborg, & Kaspar, 2015).

In prior research, educational experience of consumers has shown to influence their emotional reactions (Jeong et al., 2009). In order for an advertising message to achieve its ultimate goal, attention alone is not enough, so consumers must process what they have seen (Wedel & Pieters, 2000). However, without attention, no further processing can happen to impact consequent consumer decision making (Lee & Ahn, 2012). Further to this, previous findings have found that once users pay attention to the marketing message, their cognitive and affective processes are triggered. This may result in changes in their behavior as well as their psychological state, including memory, attitude, and preference. Furthermore, when comparing with other forms of media, the internet user is more actively searching for the desired information (Hsieh & Chen 2011).

### *3.2 Emotional Responses to Web Advertising*

Emotional responses towards advertising have been extensively studied in advertising research (Hyun et al., 2011). In the marketing context, it has been proven that emotions play a key role in decision-making and purchase behavior. Previous research studies in the context of psychology and marketing have discovered that emotional

states resulted from advertising messages have an effect on consumers' attitudes toward ads and brands (Babin, Darden, & Babi, 1998; Cyr et al., 2009; Shaouf et al., 2016).

It is widely accepted among psychology scholars that a positive emotional response involves two measures: pleasure and arousal (e.g., Chebat & Michon, 2003; Hyun et al., 2011; Mehrabian & Russell, 1974; Yüksel, 2007). Mehrabian and Russell (1974) provide a simple definition of pleasure as the degree of joy and satisfaction. Whereas arousal as the degree of encouragement, excitement, and attentiveness. Regardless of the type of advertised brand and product, prior studies (e.g., Lynch, Kent, & Srinivasan, 2001; Rodgers & Harris, 2003) have found that the emotional state of a person is a critical basis of whether consumers will make a purchase online or not. According to research models proposed by Ha & Lennon (2010), consumers exposed to a branded interactive layout create emotional arousal, which rises their positive attitudes toward ads. They also found that as an advertisement increases in the degree of interactivity, consumers show higher levels of positive attitudes toward the ad and the website on which the ad was displayed. Likewise, advertising research (e.g., Chan, Jiang, & Tan, 2010; Jang & Namkung, 2009; Urich, 2011) has showed that positive emotion positively influences behavioral intentions and encourages individuals to repeat the purchase.

In fact, previous research by Sharif (2014) has provided considerable evidence that emotional states can influence attitudes and online purchase intentions. This result is in agreement with Hwang et al.'s (2011) findings who explained that both cognition and affection indirectly through forming attitudes can encourage purchase intentions. Moreover, they concluded that the influence of cognition on purchase intentions is stronger than that of affection on purchase intentions.

It has been documented in the literature that positive emotional state is usually related to consumer decision making and engage product recall with positive links (Lynch et al., 2001). Additionally, positive emotional reactions may prompt consumers to return to a brand or company again in the future. A large number of previous research studies have argued that advertisers and marketers must study not just beliefs and opinions but also emotions as they result in positive responses from consumers (Rodgers & Harris 2003). Indeed, Rodgers & Harris (2003, p. 327) profess, "Emotion, trust, and convenience are three critical determinants of women and men's shopping attitudes and behavior".

In addition, Hazlett & Hazlett (1999) conducted multivariate analyses of emotion responses to advertising and found that unpleasant feelings and low-intensity pleasant feelings affected consumer attitude toward the ad, while high-intensity pleasant feelings affected advertising recall. The determined impact of overlooking on emotional evaluation of online stimuli may help to reduce the emotional salience of disrupting stimuli, and they will be less likely to attract attention. In this way, attention and emotion may work together to prioritize processing (Raymond, Tavasoli, & Fenske, 2000). According to the experiment results from Fenske et al. (2004), attention can also lead to emotional responses.

### *3.3 Attitudes towards Web Advertising*

Attitude toward the ad is defined as consumer response to the advertisement in a favourable or unfavourable manner during an exposure (MacKenzie, Lutz, & Belch, 1986). It is widely accepted that generating favourable attitudes toward advertising is a key objective for advertisers and marketers. Indeed, as early as 1975, Fishbein & Ajzen (1975) suggested that a consumer attitude plays a vital role in determining the intention and behavior.

A number of empirical studies in marketing have demonstrated how consumers' attitudes toward advertising could influence brand attitudes and purchase intention (Shaouf et al., 2016). With regard to audience reactions to online ad, findings of previous research have indicated that attitude toward online advertising is a significant predictor of both a consumer's attitudes toward brands and their intention to make a purchase. For example, in an early studies by Stevenson, Bruner, & Kumar, (2000) found that negative advertising attitudes were associated with weak purchase intention. In support, Korgaonkar & Wolin (1999) found that a positive attitude was more likely to result in frequent online purchasing and high levels of online spending. More recently, Wu et al. (2008) have proposed that advertising effects such as brand attitude and purchase intention can be directly influenced by attitude toward online advertising. Other recent studies (e.g., Becerra & Korgaonkar 2010; Hwang et al., 2011; Wang & Sun 2010) provided empirical evidence that the more positive attitude toward online stimuli one holds, the more likely he or she will be persuaded by online ads and correspondingly will buy online.

According to the Theory of Reasoned (Fishbein & Ajzen, 1975) and theory of planned behavior (Ajzen, 1991), the most important determinant of a behavior is an individual's intention to perform the behavior. Moreover, the first determinant of behavioral intention is the attitude toward performing behavior. Although Goodrich (2011) found that brand attitude was negatively related to purchase intention, most prior studies on both traditional and online advertising have established a positive and significant correlation between brand attitude and consumers'

intentions to purchase (Hwang et al., 2011; Rasty, Chou, & Feiz, 2013). In sum, consumers are more likely to have a higher purchase intention for a certain product if they hold more positive attitudes toward that product. In other work by Wang & Sun (2010) who find that ad attitudes can play a mediating role in the relationship between online advertising and consumers responses such as purchase intention.

### *3.4 Online Trust*

Trust is defined as the beliefs a person has about a seller's behavior based on the consumer's perceptions of the seller's ability, kindness, and honesty (Mayer, Davis, & Schoorman, 1995). A large amount of research (e.g., Gefen, 2000; Gefen, Karahanna, & Straub, 2003) has established a relationship between trust and other important factors, such as attitude and behavioral intentions. Indeed, trust may play a crucial role in online transactional relationship with environmental doubts between sellers and buyers (Kim et al., 2010). Rodgers & Harris (2003) examined the shopping process and proposed that convenience, trust, and emotions are three major attributes that affect the shopping experience. It is important that users perceive web sites as suitable, private and secure if they are to be revisited (Cyr, 2014). Other work investigating the role of trust in e-commerce, Kim et al. (2010) discussed the mediating and moderating effects of product involvement and trust toward websites in relation to the effects of web advertisements' attributes on customers' purchase intentions. The authors found that online trust is regarded as an important factor in developing long-term online B2C relationships. A number of previous studies have identified the importance of consumer trust in online stores. For instance, Yoon (2002) revealed that trust does influence online purchase intention. Chen et al. (2010) also argued that consumers purchasing decision online heavily depends on consumers' trust in the information placed online about products or services.

Unlike traditional commerce, online shopping requires a high level of trust. If consumers do not trust a website will leave the site without making a purchase (Chen et al., 2010; Cyr, 2014). All these studies and others underscore the importance of trust in online setting, and they further suggest that issues of trust must be taken into consideration by e-marketers and advertisers.

In most research to date, information is considered an important prerequisite to trust (Cyr 2014; Flavián, Guinaliú, & Gurrea, 2005; Ganguly, Dash, & Cyr, 2009). More specifically, online trust has been considered as the main factor which influenced by visual design of online advertising. It is often said that trust is an aspect of emotionality that is often associated with a positive perception state engendered by a comfortable relationship with that entity (Martín & Jiménez, 2011). As a result, trust may interact with other factors such as emotions in order to add addition effect on consumers' attitudes and purchase intention (Shaouf et al., 2016). In a world where the consumer is king; trust is a key building block in brand marketing. The goal of a company or product is to gain consumer's trust with the expectation that trust will ultimately translate to company sales and profits (Rodgers & Harris 2003). This goal is particularly essential for e-commerce marketers who have been accused of advertising practices such as trick banners that engender consumer distrust (Rodgers & Harris 2003).

### *3.5 Online Purchase Intention*

Online purchase intention has been defined by Chen et al. (2010) as a consumer's desire to buy a product or service from a web site. In this context, purchase intention is considered to be "the final consequence of a number of cues for the e-commerce customer" (Ganguly et al., 2009, p. 27). Previous studies have shown that purchase intention is a good predictor of actual purchasing behavior (Morwitz et al., 2007; Pavlou & Fygenson, 2006), which has recently led e-commerce research to adopt purchase intention as a measure of the effectiveness of site stimuli (Amaro & Duarte, 2015; Elwalda, Lü, & Ali, 2016; Hasanov & Khalid, 2015; Lü, Fan, & Zhou, 2016; Shaouf et al., 2016; Wu et al., 2008).

In the context of web advertising, design elements of web advertisements were assumed to have a direct effect on advertising outcomes, including viewers' intention. (Manchanda, Dubé, Goh, & Chintagunta, 2006; Shaouf et al., 2016; Wu et al., 2008). This indicates that online advertising should be well-designed to enhance consumers' purchase intention, which in turn affects their purchasing behaviors (Lewis & Reiley, 2014).

## **4. Conclusion and Directions for Future Research**

In recent times, the population of internet users has increased dramatically around the world. As a result, most businesses have used online advertising formats in order to persuade the target audience to view the advertiser and its product favorably, and to buy the advertised brand. As well, a growing amount of money is being spent on this medium each year. However, for an online advertising message to be most effective, a great amount of attention must be given to aesthetic aspects of online advertising that aim to attract and please the viewers. This study aimed to provide much insight into whether and how online advertising design features influence multiple

outcomes. In particular, this article analyzed empirical research on the effects of web advertising on consumer processing behavior (of attention to ad, motivations to process the ad, and depth of processing. A further discussion in this article is also about the effects of web advertising visual design on several outcomes (of online trust, attitudes towards the ad, emotional responses, and online purchase intention).

Prior research studies in the field of advertising emphasize the importance of site stimuli design such as background color, images because websites are highly competitive contexts which may make design features more critical (Burmam, 2010).

The findings indicated that rich sensory design elements enhanced entertainment and aesthetic experiences that increased pleasure and arousal for users, which in turn increased their intention to purchase (Cho & Kim, 2012; Jeong et al, 2009). In terms of web advertising, it is empirically confirmed that the effectiveness of an advertisement greatly depends on its content and design (Calder, Malthouse, & Schaedel, 2009; Shen & Chen, 2007; Simola et al., 2013). The same advertising can, have different effects depending on the information contained in the ad. A possible explanation provided is that consumers are encouraged by different information type. Thus, advertisers must take into account this issue when they design a certain advertisement. It is always said that the more complex an advertising message is, the more involvement and mental capacity receivers need to process the information. Therefore, for online advertising messages to be most effective, they must be well-designed by including both text and images because advertising messages that contain a lot of text are less likely to be processed. It was also concluded that a well-designed online banner ad does increase the level of consumer trust in advertisers, which in turn influences consumers' attitudes and purchase intention.

More importantly, consumer involvement with advertising messages was found to be the most important personal characteristics that influence advertising message processing. More specifically, consumers with a high level of involvement are more likely to seek, give attention to, and cognitively process detailed information (Grimes, 2008). By contrast, consumers making decisions under conditions of low involvement lack the motivation to actively seek and process detailed issue-relevant information. Instead, they will depend on visual features such as pictures, music, background colors in order to reach to their decision (Grimes, 2008; Petty & Cacioppo, 1981). Although consumer involvement was confirmed as an important moderator in the relationship between site stimuli and consumer intention to search and process information (Cho,1999; Cho 2003; Richard, 2005; Segev et al., 2014), a possible moderating effect of product involvement in the relationship between online advertising design and motivational factors such as emotions and online trust has not been empirically tested. As such, future research in the field of web advertising can examine whether or not product involvement will strengthen the relationships between online banner ad characteristics (e.g., images, background colours, animation, and information type) and psychological factors such as emotional responses, attitude, satisfaction, online trust. Indeed, research models in the field of marketing and psychology indicates that exposure to visual design such as colors, images can create a direct relationship with advertising outcomes (Goodrich, 2011). However, empirical research investigating the direct effects of web ad visual elements on online purchase intention is scant (Shaouf et al., 2016; Wu et al., 2008). Thus, future research can expand previous studies by exploring whether visual characteristics of web advertising affect viewers' intention to shop online.

According to the mere exposure theory, mere exposure to a particular stimulus can help formulate positive responses, such as attitudes (Janiszewski, 1993). Although marketers have recognized for a long time that positive emotions can increase cognition toward a certain product or company, the effects of emotional responses, such as pleasure and arousal, on consumer processing behavior have not been studied extensively in the web advertising context. Thus, exploring how different emotional states affect consumer processing behavior is an avenue for future research. Furthermore, the vast majority of prior studies have focused on the direct effect of advertising messages on emotional reactions (e.g., Grimes, 2008). However, cognitive responses, such as information processing behavior, recall, and attitude, can mediate the relationship between an online stimulus and emotions. If this is true, future research may assume relationships to investigate the direct and indirect effect (through cognitive reactions) of online advertising design and content on consumers' emotional responses. The results of such investigations can possibly be used to better match online ad content and design with advertising objectives.

## References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2) 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Amaro, S., & Duarte, P. (2015). An integrative model of consumers' intentions to purchase travel online. *Tourism Management*, 46, 64-79. <https://doi.org/10.1016/j.tourman.2014.06.006>

- Ang, S. H., & Low, S. Y. M. (2000). Exploring the dimensions of ad creativity. *Psychology & Marketing*, 17(10), 835-854. [https://doi.org/10.1002/1520-6793\(200010\)17:10<835::AID-MAR1>3.0.CO;2-#](https://doi.org/10.1002/1520-6793(200010)17:10<835::AID-MAR1>3.0.CO;2-#)
- Babin, B. J., Darden, W. R., & Babi, L. A. (1998). Negative emotions in marketing research: affect or artefact?. *Journal of Business Research*, 42, 271-285. [https://doi.org/10.1016/S0148-2963\(97\)00124-0](https://doi.org/10.1016/S0148-2963(97)00124-0)
- Becerra, E. P., & Korgaonkar, P. K. (2010). The influence of ethnic identification in digital advertising how hispanic Americans' response to pop-up, e-mail, and banner advertising affects online purchase intentions. *Journal of Advertising Research*, 50(3), 279-291. <https://doi.org/10.2501/S0021849910091440>
- Blackwell, R. D., Miniard, P. W., & Engel, J. F. (2001). *Consumer Behavior* (9th ed.). Fort Worth: Harcourt College Publishers.
- Bonsón Ponte, E., Carvajal-Trujillo, E., & Escobar-Rodríguez, T. (2015). Influence of trust and perceived value on the intention to purchase travel online: Integrating the effects of assurance on trust antecedents. *Tourism Management*, 47, 286-302. <https://doi.org/10.1016/j.tourman.2014.10.009>
- Burmann, C. (2010). A call for user-generated branding. *Journal of Brand Management*, 18(1), 1-4. <https://doi.org/10.1057/bm.2010.30>
- Calder, B. J., Malthouse, E. C., & Schaedel, U. (2009). An experimental study of the relationship between online engagement and advertising effectiveness. *Journal of Interactive Marketing*, 23, 321-331. <https://doi.org/10.1016/j.intmar.2009.07.002>
- Chae, B., & Hoegg, J. (2013). The future looks "Right": effects of the horizontal location of advertising images on product attitude. *Journal of Consumer Research*, 40(2), 223-238. <https://doi.org/10.1086/669476>
- Chan, J. C. F., Jiang, Z., & Tan, B. C.Y. (2010). Understanding online interruption-based advertising: Impacts of exposure timing, advertising intent, and brand image. *IEEE Transactions on Engineering Management*, 57(3), 365-379. <https://doi.org/10.1109/TEM.2009.2034255>
- Chandon, J. L., Chtourou, M. S., & Fortin, D. R. (2003). Effects of configuration and exposure levels on responses to web advertisements. *Journal of Advertising Research*, 43(2), 217-227. <https://doi.org/10.1017/S0021849903030228>
- Chang, C. (2006). Beating the new blues: mood repair through exposure to advertising. *Journal of Communication*, 56, 198-217. <https://doi.org/10.1111/j.1460-2466.2006.00010.x>
- Chang, C. (2012). Effectiveness of consensus information in advertising: the Moderating roles of situational factors and individual differences. *Journal of Business and Psychology*, 27(4), 483-494. <https://doi.org/10.1007/s10869-012-9258-5>
- Chatterjee, P. (2008). Are unclicked ads wasted? enduring effects of banner and pop-up ad exposures on brand memory and attitudes. *Journal of Electronic Commerce Research*, 9(1), 51-61.
- Chebat, J. C., & Michon, R. (2003). Impact of ambient doors on mall shoppers' emotions, cognition, and spending—a test of competitive causal theories. *Journal of Business Research*, 56(7), 529-539. [https://doi.org/10.1016/S0148-2963\(01\)00247-8](https://doi.org/10.1016/S0148-2963(01)00247-8)
- Chen, Y. H., Hsu, I. C., & Lin, C. C. (2010). Website attributes that increase consumer purchase intention: A conjoint analysis. *Journal of Business Research*, 63(9-10), 1007-1014. <https://doi.org/10.1016/j.jbusres.2009.01.023>
- Cho, C. H. (1999). How advertising works on the WWW: modified elaboration likelihood model. *Journal of Current Issues & Research in Advertising*, 34-50. <http://dx.doi.org/10.1080/10641734.1999.10505087>
- Cho, C. H. (2003). Factors influencing clicking of banner ads on the WWW. *Cyberpsychology & Behavior: the Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*, 6(2), 32-43. <https://doi.org/10.1089/109493103321640400>
- Cho, C. H., & Leckenby, J. D. (1999). Interactivity as a measure of advertising effectiveness: antecedents and consequences of interactivity in web advertising. *Proceedings of the 1999 conference of the American Academy of Advertising* (pp. 162-179). Albuquerque, NM.
- Cho, E., & Kim, Y. K. (2012). The effects of website designs, self-congruity, and flow on behavioral intention. *International Journal of Design*, 6(2), 31-39.

- Choi, S. M., & Rifon, N. J. (2002). Antecedents and consequences of Web advertising credibility: A study of consumer response to banner Ads. *Journal of Interactive Marketing*, 3(1), 1-23. <http://dx.doi.org/10.1080/15252019.2002.10722064>
- Crespo-Almendros, E., & Del Barrio-García, S. (2014). The quality of internet-user recall: A comparative analysis by online sales-promotion types. *Journal of Advertising Research*, 54(1), 56-70. <http://doi.org/10.2501/JAR-54-1-056-070>
- Cyr, D. (2014). Return visits: A review of how web site design can engender visitor loyalty. *Journal of Information Technology*, 29(1), 1-26. <https://doi.org/10.1057/jit.2013.25>
- Cyr, D., Head, M., Larios, H., & Pan, B. (2009). Exploring human images in website design: a multi-method approach. *MIS Quarterly*, 33(3), 539-566. <http://doi.org/stable/20650308>
- Day, R., Shyi, G. & Wang, J. (2006). The effect of flash banners on multiattribute decision making: distractor or source of arousal?. *Psychology & Marketing*, 23(5), 369-382. <https://doi.org/10.1002/mar.20117>
- Drèze, X., & Hussherr, F. X. (2003). Internet advertising: Is anybody watching?. *Journal of Interactive Marketing*, 17(4), 8-23. <https://doi.org/10.1002/dir.10063>
- Dreze, X., & Zufryden, F. (1997). Testing web site design and promotional content. *Journal of Advertising Research*, 37(2), 77-91.
- Elwalda, A., Lü, K., & Ali, M. (2016). Perceived derived attributes of online customer reviews. *Computers in Human Behavior*, 56, 306-319. <https://doi.org/10.1016/j.chb.2015.11.051>
- Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2001). Atmospheric qualities of online retailing: a conceptual model and implications. *Journal of Business Research*, 54, 177-184. [https://doi.org/10.1016/S0148-2963\(99\)00087-9](https://doi.org/10.1016/S0148-2963(99)00087-9)
- Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2003). Empirical testing of a model of online store atmospherics and shopper responses. *Psychology & Marketing*, 20(2), 139-50. <https://doi.org/10.1002/mar.10064>
- Faber, R. J., Lee, M., & Nan, X. (2004). Advertising and the consumer information environment online. *American Behavioral Scientist*, 48(4), 447-466. <https://doi.org/10.1177/0002764204270281>
- Fenske, M. J., Raymond, J. E., & Kunar, M. A. (2004). The affective consequences of visual attention in preview search. *Psychonomic Bulletin & Review*, 11(6), 1055-1061. <https://doi.org/10.3758/BF03196736>
- Fiore, A. M., Jin, H., & Kim, J. (2005). For fun and profit: hedonic value from image interactivity and responses toward an online store. *Psychology & Marketing*, 22(8), 669-694. <https://doi.org/10.1002/mar.20079>
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading: Addison-Wesley.
- Flavián, C., Guinaliú, M., & Gurrea, R. (2005). The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information & Management*, 43(1), 1-14. <https://doi.org/10.1016/j.im.2005.01.002>
- Flores, W., Chen, J. C. V., & Ross, W. H. (2014). The effect of variations in banner ad, type of product, website context, and language of advertising on Internet users' attitudes. *Computers in Human Behavior*, 31(1), 37-47. <https://doi.org/10.1016/j.chb.2013.10.006>
- Ganguly, B., Dash, S. B., & Cyr, D. (2009). Website characteristics, trust, and purchase intention in online stores: An empirical study in the indian context. *Journal of Information Science & Technology*, 6(2).
- Gefen, D. (2000). E-commerce: the role of familiarity and trust. *Omega*, 28(6), 725-737. [https://doi.org/10.1016/S0305-0483\(00\)00021-9](https://doi.org/10.1016/S0305-0483(00)00021-9)
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: an integrated model. *MIS Quarterly*, 27(1), 51-90.
- Goldfarb, A. (2014). What is different about online advertising?. *Review of Industrial Organization*, 44(2), 115-129. <https://doi.org/10.1007/s11151-013-9399-3>
- Goodrich, K. (2011). Anarchy of effects? Exploring attention to online advertising and multiple outcomes. *Psychology and Marketing*, 28, 417-440. <https://doi.org/10.1002/mar.20371>

- Goodrich, K. (2014). The gender gap: Brain-processing differences between the sexes shape attitudes about online advertising. *Journal of Advertising Research*, 54(1), 32-43. <https://doi.org/10.2501/JAR-54-1-032-043>
- Grimes, A. (2008). Towards an integrated model of low attention advertising effects: A perceptual-conceptual framework. *European Journal of Marketing*, 42(1/2), 69-86. <https://doi.org/10.1108/03090560810840916>
- Ha, Y., & Lennon, S. J. (2010). Effects of site design on consumer emotions: role of product involvement. *Journal of Research in Interactive Marketing*, 4(2), 80-96. <https://doi.org/10.1108/17505931011051641>
- Hagtvedt, H., & Patrick, V. M. (2008). Art infusion: the influence of visual art on the perception and evaluation of consumer products. *Journal of Marketing Research*, 45(3), 379-389. <https://doi.org/10.1509/jmkr.45.3.379>
- Hasanov, J., & Khalid, H. (2015). The impact of website quality on online purchase intention of organic food in Malaysia: a webqual model approach. *Procedia Computer Science*, 72, 382-389. <https://doi.org/10.1016/j.procs.2015.12.153>
- Hagtvedt, C. P., Petty, R. E., & Cacioppo, J. T. (1992). Need for cognition and advertising: Understanding the role of personality variables in consumer behavior. *Journal of Consumer Psychology*, 1(3), 239-260. [https://doi.org/10.1016/S1057-7408\(08\)80038-1](https://doi.org/10.1016/S1057-7408(08)80038-1)
- Hazlett, R. L., & Hazlett, S.Y. (1999). Emotional response to television commercials: Facial EMG vs. self-report. *Journal of Advertising Research*, 39(2), 7-23.
- Hollis, N. (2005). Ten years of learning on how online advertising builds brand. *Journal of Advertising Research*, 45(2), 255-268. <https://doi.org/10.1017/S0021849905050270>
- Hsieh, Y. C., & Chen, K. H. (2011). How different information types affect viewer's attention on internet advertising. *Computers in Human Behavior*, 27(2), 935-945. <https://doi.org/10.1016/j.chb.2010.11.019>
- Hwang, J., Yoon, Y. S., & Park, N. H. (2011). Structural effects of cognitive and affective responses to web advertisements, website and brand attitudes, and purchase intentions: The case of casual-dining restaurants. *International Journal of Hospitality Management*, 30(4), 897-907. <https://doi.org/10.1016/j.ijhm.2011.01.011>
- Hyun, S. S., Kim, W., & Lee, M. J. (2011). The impact of advertising on patrons' emotional responses, perceived value, and behavioral intentions in the chain restaurant industry: The moderating role of advertising-induced arousal. *International Journal of Hospitality Management*, 30(3), 689-700. <https://doi.org/10.1016/j.ijhm.2010.10.008>
- Ibanez, J. (2011). Showing emotions through movement and symmetry. *Computers in Human Behaviour*, 27(1), 561-567. <https://doi.org/10.1016/j.chb.2010.10.004>
- Interactive Advertising Bureau. (2017). *Internet advertising revenue report*. Retrieved from <http://www.iab.com/insights/iab-internet-advertising-revenue-report-conducted-by-pricewaterhousecoopers-pwc-2/>
- Jang, S., & Namkung, Y. (2009). Perceived quality, emotions, and behavioral intentions: application of an extended Mehrabian-Russel model to restaurants. *Journal of Business Research*, 62, 451-460. <https://doi.org/10.1016/j.jbusres.2008.01.038>
- Janiszewski, C. (1993). Preattentive mere exposure effects. *Journal of Consumer Research*, 20(3), 376-392. <https://doi.org/10.1086/209356>
- Jeong, S., Fiore, A. M., Niehm, L. S., & Lorenz, F. O. (2009). The role of experiential value in online shopping: The impacts of product presentation on consumer responses towards an apparel web site. *Internet Research*, 19(1), 105-124. <https://doi.org/10.1108/10662240910927858>
- John, D. A., & Sathiyaseelan, A. (2014). The effect of the positioning of webpage banner advertisements on implicit and explicit memory. *Global Journal of Commerce & Management Perspective*, 3(2), 120-124.
- Kiang, M. Y., Raghu, T. S., & Shang, K. H. (2000). Marketing on the Internet—Who can benefit from an online marketing approach?. *Decision Support Systems*, 27(4), 383-393. [https://doi.org/10.1016/S0167-9236\(99\)00062-7](https://doi.org/10.1016/S0167-9236(99)00062-7)

- Kim, J. U., Kim, W. J., & Park, S. C. (2010). Consumer perceptions on web advertisements and motivation factors to purchase in the online shopping. *Computers in Human Behavior*, 26(5), 1208-1222. <https://doi.org/10.1016/j.chb.2010.03.032>
- Korgaonkar, P. L., & Wolin, L. D. (1999). Multivariate analysis of Web usage. *Journal of Advertising Research*, 39, 53-68.
- Köster, M., Ruth, M., Mamborg, K. C., & Kaspar, K. (2015). Effects of personalized banner ads on visual attention and recognition memory. *Applied Cognitive Psychology*, 29(2), 181-192. <https://doi.org/10.1002/acp.3080>
- Lee, J., & Ahn, J. H. (2012). Attention to banner ads and their effectiveness: An eye-tracking approach. *International Journal of Electronic Commerce*, 17(1), 119-137. <https://doi.org/10.2753/JEC1086-4415170105>
- Lee, J., Park, H., & Wise, K., (2013). Brand interactivity and its effects on the outcomes of advergame play. *New Media & Society*. Retrieved from <http://nms.sagepub.com/content/early/2013/09/16/1461444813504267.full>
- Lewis, R. A., & Reiley, D. H. (2014). Online ads and offline sales: measuring the effect of retail advertising via a controlled experiment on Yahoo!. *Quantitative Marketing and Economics*, 12(3), 235-266. <https://doi.org/10.1007/s11129-014-9146-6>
- Li, B. H., & Bukovac, J. L. (1999). Cognitive impact of banner ad characteristics: an experimental study. *J & MC Quarterly*, 76(2), 341-353. <https://doi.org/10.1177/107769909907600211>
- Lohtia, R., Donthu, N., & Hershberger, E. K. (2003). The impact of content and design elements on banner advertising click-through rates. *Journal of Advertising Research*, 43(4), 410-418. <https://doi.org/10.1017/S0021849903030459>
- Lü, B., Fan, W., & Zhou, M. (2016). Social presence, trust, and social commerce purchase intention: an empirical research. *Computers in Human Behavior*, 56, 225-273. <https://doi.org/10.1016/j.chb.2015.11.057>
- Lynch, P. D., Kent, R. J., & Srinivasan, S. S. (2001). Tile global intermit shopper: evidence from shopping tasks in twelve coquetries. *Journal of Advertising Research*, 41(3), 15-23. <https://doi.org/10.2501/JAR-41-3-15-23>
- Macinnis, D. J., & Park, C. W. (1991). The differential role of characteristics of music on high- and low-involvement consumers' processing of Ads. *Journal of Consumer Research*, 18, 161-174. <https://doi.org/10.1086/209249>
- Mackenzie, S. B., Lutz, R. J., & Belch, G. E. (1986). The role of attitude toward the ad as a mediator of advertising effectiveness: A test of competing explanations. *Journal of Marketing Research*, 23(2), 130-143. <https://doi.org/10.2307/3151660>
- Manchanda, P., Dubé, J. P., Goh, K. Y., & Chintagunta, P. K. (2006). The effect of banner advertising on internet purchasing. *Journal of Marketing Research*, 43(1), 98-108. <https://doi.org/10.1509/jmkr.43.1.98>
- Mandel, N., & Johnson, E. J. (2002). When web pages influence choice: Effects of visual primes on experts and novices. *Journal of Consumer Research*, 29(2), 235-245. <https://doi.org/10.1086/341573>
- Martín, S. S., & Jiménez, N. H. (2011). Online buying perceptions in Spain: Can gender make a difference?. *Electronic Markets*, 21(4), 267-281. <https://doi.org/10.1007/s12525-011-0074-y>
- Massaro, D. W., & Cowan, N. (1993). Information processing models: Microscopes of the mind. *Annual Review of Psychology*, 44, 383-425. <https://doi.org/10.1146/annurev.ps.44.020193.002123>
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709-734. <https://doi.org/10.5465/AMR.1995.9508080335>
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. Cambridge, MA: MIT Press.
- Modig, E., & Rosengren, S. (2014). Can advertising creativity affect product perceptions and retailer evaluations?. *Journal of Product & Brand Management*, 23(6), 452-461. <https://doi.org/10.1108/JPBM-06-2014-0651>
- Morwitz, V. G., Steckel, J. H., & Gupta, A. (2007). When do purchase intentions predict sales?. *International Journal of Forecasting*, 23, 347-364. <https://doi.org/10.1016/j.ijforecast.2007.05.015>
- Mould, D., Mandryk, R. L., & Li, H. (2012). Emotional response and visual attention to non-photorealistic images. *Computers & Graphics*, 36(6), 658-672. <https://doi.org/10.1016/j.cag.2012.03.039>

- Nihel, Z. (2013). The effectiveness of internet advertising through memorization and click on a banner. *International Journal of Marketing Studies*, 5(2), 93-101. <http://doi.org/10.5539/ijms.v5n2p93>
- Olney, T. J., Holbrook, M. B., & Batra, R. (1991). Consumer responses to advertising: the effects of ad content, emotions, and attitude toward the ad on viewing time. *Journal of Consumer Research*, 17(4), 440-453. <https://doi.org/10.1086/208569>
- Pasqualotti, L., & Baccino, T. (2014). Online advertisement: How are visual strategies affected by the distance and the animation of banners?. *Frontiers in Psychology*, 5, 1-11. <https://doi.org/10.3389/fpsyg.2014.00211>
- Pavlou, P. A., & Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: an extension of the theory of planned behavior. *MIS Quarterly*, 30(1), 115-143. <http://www.jstor.org/stable/25148720>
- Pavlou, P. A., & Stewart, D.W. (2000). Measuring the effects and effectiveness of interactive advertising. *Journal of Interactive Advertising*, 1(1), 62-78. <http://doi.org/10.1080/15252019.2000.10722044>
- Peng, C., & Kim, Y. G. (2014). Application of the Stimuli-Organism-Response (S-O-R) Framework to online shopping behavior. *Journal of Internet Commerce*, 13, 159-176. <http://doi.org/10.1080/15332861.2014.944437>
- Peracchio, L. A., & Meyers-Levy, J. (2005). Using stylistic properties of ad pictures to communicate with consumers. *Journal of Consumer Research*, 32(1), 29-40. <https://doi.org/10.1086/429599>
- Petty, R. E., & Cacioppo, J. T. (1981). Central and peripheral routes to persuasion: applications to advertising. In L. Percy, & A. G. Woodside (Eds.), *Advertising and Consumer Psychology* (pp. 3-24). Lexington, MA: Lexington Books.
- Pieters, R. (2007). Optimal feature advertising design under competitive clutter. *Management Science*, 53(11), 1815-1828. <https://doi.org/10.1287/mnsc.1070.0732>
- Rasty, F., Chou, C. J., & Feiz, D. (2013). The impact of internet travel advertising design, tourists' attitude, and internet travel advertising effect on tourists' purchase intention: The moderating role of involvement. *Journal of Travel & Tourism Marketing*, 30(5), 482-496. <http://dx.doi.org/10.1080/10548408.2013.803394>
- Raymond, J. E., Tavasolli, N., & Fenske, M. (2000). Selective visual attention to novel stimuli determines emotional responses. *Journal of Vision*, 2(7), 2-12. <http://doi.org/10.1167/2.7.2>
- Richard, M. O. (2005). Modeling the impact of internet atmospherics on surfer behavior. *Journal of Business Research*, 58(12), 1632-1642. <https://doi.org/10.1016/j.jbusres.2004.07.009>
- Rodgers, S., & Harris, M. A. (2003). Gender and e-commerce: An exploratory study. *Journal of Advertising Research*, 43(3), 322-329. <https://doi.org/10.1017/S0021849903030307>
- Rompay, T. J., De Vries, P. W., Bontekoe, F., & Tanja-Dijkstra, K. (2012). Embodied product perception: Effects of verticality cues in advertising and packaging design on consumer impressions and price expectations. *Psychology & Marketing*, 29(12), 919-928. <https://doi.org/10.1002/mar.20574>
- Rosenkrans, G. (2009). The creativeness and effectiveness of online interactive rich media advertising. *Journal of Interactive Advertising*, 9(2), 18-31. <http://dx.doi.org/10.1080/15252019.2009.10722152>
- Rossiter, J. R., & Percy, L. (1997). *Advertising Communications & Promotion Management*. Boston: McGraw-Hill.
- Sajjacholapunt, P., & Ball, L. J. (2014). The influence of banner advertisements on attention and memory: Human faces with averted gaze can enhance advertising effectiveness. *Frontiers in Psychology*, 5. <http://dx.doi.org/10.3389/fpsyg.2014.00166>
- Schlinger, M. J. (1979). Attitudinal reactions to advertisements. In J. Eighmey (Ed.), *Attitude Research under the Sun* (pp. 171-179). Chicago: American Marketing Association.
- Segev, S., Wang, W., & Fernandes, J. (2014). The effects of ad-context congruency on responses to advertising in blogs: Exploring the role of issue involvement. *International Journal of Advertising*, 33(1), 17-36. <http://dx.doi.org/10.2501/IJA-33-1-017-036>
- Shaouf, A., Lü, K., & Li, X. (2016). The effect of web advertising visual design on online purchase intention: An examination across gender. *Computers in Human Behavior*, 60, 622-634. <https://doi.org/10.1016/j.chb.2016.02.090>

- Sharif, S. S. (2014). Impacts of the trilogy of emotion on future purchase intentions in products of high involvement under the mediating role of brand awareness. *European Business Review*, 26(1), 43-63. <https://doi.org/10.1108/EBR-12-2012-0072>
- Shen, F., & Chen, Q. (2007). Contextual priming and applicability: Implications for ad attitude and brand evaluations. *Journal of Advertising*, 36, 69-80. <http://dx.doi.org/10.2753/JOA0091-3367360105>
- Shih, H. (2004). An empirical study on predicting user acceptance of e-shopping on the Web. *Information & Management*, 41(3), 351-368. [https://doi.org/10.1016/S0378-7206\(03\)00079-X](https://doi.org/10.1016/S0378-7206(03)00079-X)
- Sicilia, M, Ruiz, S., & Munuera, J. L. (2005). Effects of interactivity in a web site: The moderating effect of need for cognition. *Journal of Advertising*, 34(3), 31-45. <http://dx.doi.org/10.1080/00913367.2005.10639202>
- Simmons, D.R. (2006). The association of colors with emotions: a systematic approach. *Journal of Vision*, 6(6), 251-251. <http://journalofvision.org/6/6/251/,doi:10.1167/6.6.251>
- Simola, J., Kivikangas, M., Kuisma, J., & Krause, C. M. (2013). Attention and memory for newspaper advertisements: Effects of ad-editorial congruency and location. *Applied Cognitive Psychology*, 27(4), 429-442. <http://dx.doi.org/10.1002/acp.2918>
- Simola, J., Kuisma, J., Oorni, A., Uusitalo, L., & Hyona, J. (2011). The impact of salient advertisements on reading and attention on web pages. *Journal of Experimental Psychology: Applied*, 17(2), 174-190. <http://dx.doi.org/10.1037/a0024042>
- Smith, R. E., MacKenzie, S. B., Yan, X., Buchholz, L. M., & Darley, W. K. (2007). Modeling the determinants and effects of creativity in advertising. *Marketing Science*, 26(6), 819-833. <https://doi.org/10.1287/mksc.1070.0272>
- Sokolik, K., Magee, R. G., & Ivory, J. D. (2014). Red-hot and ice-cold web ads: The influence of web Ads' warm and cool colors on click-through rates. *Journal of Interactive Advertising*, 14(1), 31-37. <http://dx.doi.org/10.1080/15252019.2014.907757>
- Stevenson, J. S., Bruner, G. C., & Kumar, A. (2000). Webpage background and viewer attitudes. *Journal of Advertising Research*, 40(1-2), 29-34. <http://dx.doi.org/10.2501/JAR-40-1-2-29-34>
- The Statistics Portal. (2016). Number of internet users worldwide from 2005 to 2016. Retrieved from <https://www.statista.com/statistics/273018/number-of-internet-users-worldwide/>
- Tsang, P. M., & Tse, S. (2005). A hedonic model for effective web marketing: An empirical examination. *Industrial Management and Data System*, 105(8), 1039-1052. <https://doi.org/10.1108/02635570510624437>
- Tsao, W. C. (2014). Exploring routes to persuasive online advertising. *International Journal of Business and Management*, 9(12), 35-49. <http://dx.doi.org/10.5539/ijbm.v9n12p35>
- Uhrich, S. (2011). Explaining non-linear customer density effects on shoppers' emotions and behavioral intentions in a retail context: the mediating role of perceived control. *Journal of Retailing and Consumer Services*, 18, 405-413. <https://doi.org/10.1016/j.jretconser.2011.06.002>
- Verma, S. (2009). Do all advertising appeals influence consumer purchase decision: An exploratory study. *Global Business Review*, 10(1), 33-43. <https://doi.org/10.1177/097215090801000102>
- Vijayasathya, L.R. (2004). Predicting consumer intentions to use on-line shopping: the case for an augmented technology acceptance model. *Information Management*, 41(6), 747-762. <https://doi.org/10.1016/j.im.2003.08.011>
- Wang, A. (2012). Visual priming of pharmaceutical advertising disclosures: effects of a motivation factor. *Corporate Communications: An International Journal*, 17(1), 73-88. <https://doi.org/10.1108/13563281211196362>
- Wang, Y., & Sun, S. (2010). Assessing beliefs, attitudes and behavioral responses toward online advertising in three countries. *International Business Review*, 19(4), 333-344. <https://doi.org/10.1016/j.ibusrev.2010.01.004>
- Wedel, M., & Pieters, R. (2000). Eye fixation on advertisements and memory for brands: A model and findings. *Marketing Science*, 19(4), 297-312. <https://doi.org/10.1287/mksc.19.4.297.11794>
- Wu, S. I., Wei, P. L., & Chen, J. H. (2008). Influential factors and relational structure of Internet banner advertising in the tourism industry. *Tourism Management*, 29(2), 221-236. <https://doi.org/10.1016/j.tourman.2007.03.020>

- Xie, F., Donthu, N., Lohtia, R., & Osmonbe, K. T. (2004). Emotional appeal and incentive offering in banner advertisements. *Journal of Interactive Advertising*, 4(2), 30-37. <http://dx.doi.org/10.1080/15252019.2004.10722085>
- Yoon, S. J. (2002). The antecedents and consequences of trust in online purchase decisions. *Journal of Interactive Marketing*, 16(2), 47-63. <https://doi.org/10.1002/dir.10008>
- Yüksel, A. (2007). Tourist shopping habitat: effects on emotions, shopping value and behaviours. *Tourism Management*, 28, 58-69. <https://doi.org/10.1016/j.tourman.2005.07.017>

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