

WHERE TO PLACE ONLINE ADVERTISEMENTS? THE COMMERCIALIZATION CONGRUENCE BETWEEN ONLINE ADVERTISING AND WEB SITE CONTEXT

Ai-Yun Hsieh

Department of Business Administration
National Taiwan University of Science and Technology
D9808104@mail.ntust.edu.tw

Shao-Kang Lo

Department of International Trade
Chinese Culture University
shaokang@faculty.pccu.edu.tw

Yu-Ping Chiu

Department of Business Administration
National Taiwan University of Science and Technology
D9808105@mail.ntust.edu.tw

ABSTRACT

This study examined the effectiveness of advertising in the context of commercialization congruence between online advertising and Web sites. Specifically, we separated commercialization congruence into commercial and noncommercial sectors, and drew from schema-congruence theory to consider the effects of commercialization congruence that may influence attitudes toward advertising. We employed the laboratory experiment method to manipulate the commercialization level of the Web site and the banner advertisement to verify attitudes toward advertising, before testing them according to commercialization congruence between advertising and the Web site. The findings revealed that our subjects' attitudes toward commercial advertising were significantly higher (lower) than for noncommercial advertising on commercial Web sites (noncommercial Web sites). This study contributes to online advertising research, can assist advertisers in their understanding of the importance of commercialization congruence, and serves as a reference for advertisers considering the placement of advertisements on Web sites.

Keywords: Schema-congruence; Commercialization congruence; Banner ad; Web site

1. Introduction

The Internet is a powerful marketing information medium [Kaiser & Bodendorf, 2012]. The number of Internet users worldwide is increasing dramatically every year [Hanafizadeh et al., 2012; Jansen & Schuster, 2011]. According to Yaakop and Hemsley-Brown [2013], the average rate of Internet users has increased globally by 445% over the past decade. Therefore, advertisers are increasingly relying on online advertising to promote their products and services to potential customers [Sanje & Senol, 2012]. Accordingly, identifying the influential factors of online advertising effectiveness has become a popular research field.

In an online environment, it is difficult to avoid Internet advertising. Advertisements are ubiquitous on the Internet, and are more disorganized than traditional advertisements because of lower creation and insertion costs [Yaakop & Hemsley-Brown, 2013]. This factor encourages advertisers to insert advertisements into every possible online space. However, not every advertisement is suitable for placement on every Web site. To understand how to attain greater advertisement effectiveness, online or physical advertising-related research has addressed the influence of congruence between media context and advertising on the effectiveness of advertising [Campbell & Wright, 2008]. Most of these studies can be categorized into three types of congruence: (a) subject congruence, which is the match and mismatch between the product being advertised and the media context (e.g., vehicle advertisements placed on an automotive-related Web site; Moore et al., 2005; Newman et al., 2004; Shamdasani et al., 2001); (b) sponsorship congruence, defined as the similarities between the sponsor and the sponsee (e.g., Nike sponsoring an NBA event; Kamins & Gupta, 1994; McDaniel, 1999; Rifon et al., 2004; Roy, 2010; Woisetschlager & Michaelis, 2012); and (c) attribute congruence, which represents the congruence of affect, emotion, and implications between advertising and media (e.g., TV comedy programs followed by humorous advertising, such as an insurance ad printed on a fragile eggshell; Dahlén, 2005;

Goldberg & Gorn, 1987; Pelsmacker et al., 2002). These studies have shown that advertisements considering the congruence between advertising and media contexts are more effective than those that are incongruous.

In addition to the three categories of congruence, we identified a fourth type. Advertisements and the media context can be separated into commercial and noncommercial categories. In practice, because of the low insertion costs in the online environment, advertisers commonly insert commercial advertisements into Web sites that are noncommercial in nature to exposure information as much as possible; for instance, the Taiwan Cyclist Federation (www.cyclist.org.tw) is a noncommercial association promoting cycling sports, but a number of commercial and noncommercial advertisements are embedded into their official Web site. Another example is WGBH (<http://www.wgbh.org/>), which is a noncommercial public medium that provides educational content for New England, the United States, and more generally for users worldwide. The mentioned commercial insurance advertisement can be found on their site. Finally, although Michiganradio (<http://michiganradio.org/>) is a platform for a noncommercial public radio station, numerous commercial banners are placed on this site. However, the purpose of browsing Web sites varies according to the different types of sites. Users who browse noncommercial Web sites do so typically for noncommercial information-searching purposes, rather than intending to purchase or consume. Conversely, for commercial Web sites, users may be motivated to browse for consumption. Thus, when commercial advertisements are placed on noncommercial Web sites or vice versa, it intuitively appears to be inappropriate. However, even commercialization between the media context and advertising is incongruous, and the other three congruence categories mentioned between advertising and the media context may still be congruent. To truly understand the effect of commercialization congruence on advertising attitudes, it is necessary to discuss commercialization congruence independently. However, this leads to a critical question: Are advertisements placed in intuitively inappropriate media contexts able to ensure suitable advertising effectiveness? This study terms this congruence aspect “commercialization congruence,” which focuses on two levels of commercialization: advertising and the medium itself.

Schema-congruence theory can provide a method for understanding people’s perceptions toward various objects and issues. The theory explains what may occur when people receive new information that is either congruent or incongruent with their expectations [Mandler, 1982; Orth & De Marchi, 2007; Warlaumont, 1997]. The viewer’s reaction to advertising depends on whether the media context matches or fits the schematic expectations [Pappu & Cornwell, 2014]. The present study separated media contexts into commercial Web sites and noncommercial Web sites. Commercial Web sites are business platforms that offer goods, services, or business information to generate revenue (e.g., online auctions, online shopping malls, trading sites, business forums, and official sites for restaurants, hotels, and commercial radio). They are typically inundated with commercial advertising. For the commercial type, the nature between the media context and advertising messages is congruent. By contrast, noncommercial Web sites are run by governments, schools, hospitals, and other nongovernmental entities. Users access these Web sites to obtain noncommercial information, and thus, do not expect commercial messages to appear on these noncommercial sites. In such cases, the commercialization between the media context and advertising messages is incongruent. According to schema-congruence theory, consumers have positive or negative perceptions toward new information, depending on whether they are congruent or incongruent, respectively, with their expectations. This study uses an experimental design based on the manipulation of Web site commercialization (commercial/noncommercial) and banner advertisements (commercial/noncommercial), and we examine whether commercial advertisements placed on commercial Web sites (noncommercial advertisements embedded in noncommercial Web sites) are more effective compared with those placed on their noncommercial counterparts (noncommercial advertisements embedded in commercial Web sites).

The remainder of this paper first addresses the theoretical background and introduces the research hypotheses. We then present the experimental method, including the procedure for conducting the experiment, the approaches used to manipulate variables, and a description of the pilot test. We then provide the statistical results in support of the verified hypotheses. Finally, we offer a discussion of the results and a conclusion addressing the managerial implications, theoretical limitations, and recommendations for future research.

2. Theoretical Background

2.1. Schema-Congruence Theory

A schema is a hypothetical cognitive structure that guides perceptions, thoughts, and actions based on prior knowledge of stimuli gained through experience, such as through media exposure [McDaniel, 1999]. A cognitive structure includes elements such as the attributes and prototypes of a category, and the attitudes toward it [Goodstein, 1993]. People often apply their accumulated knowledge of a schema to understand the objects they encounter, after which they evaluate such objects and adopt appropriate actions based on their assessments [Fiske, 1982; Fiske & Linville, 1980; Schank & Abelson, 1977].

Schema-related studies focus on gaining an understanding of how information related to objects, conditions, and events may influence the cognitive structure of a schema. People may understand the cognitive structure of a schema based on the congruence between new knowledge and their self-schema [Verhellen et al., 2013]. If new information conforms to a person's expectations (schema), then that person's perceptions are smooth and logical, and the self-schema becomes consolidated through the accumulation of congruent information [Mandler, 1982; Warlaumont, 1997]. If new information is inconsistent with existing beliefs, then the self-schema adjusts accordingly to adapt to the new knowledge. If new information is extremely inconsistent with existing beliefs, such information is rejected, or subcategories are formed to prevent it from having a direct influence on the original schema [Lynch and Schuler, 1994; Mandler, 1982; Suján & Bettman, 1989].

Mandler [1982] stated that an evaluation of new objects relies on the ease of comprehension of the objects and the arousal induced by the objects. Schema congruity automatically enhances people's comprehension of objects, and leads to favorable responses because people appreciate objects that conform to their expectations and predictions. However, because schema congruity is limited in inducing arousal, the congruent object is unremarkable. Therefore, congruity is unlikely to prompt extensive cognitive processing, and this type of positive response is typically mild, rather than extreme [Mandler, 1982; Meyers-Levy & Tybout, 1989; Sengupta et al., 1997]. Conversely, schema incongruity may enhance arousal. Incongruities may disturb people's expectations of an object, thereby preventing them from easily comprehending the encountered novelty, leading to greater cognitive processing to resolve the incongruity [Mandler, 1982; Meyers-Levy & Tybout, 1989]. If incongruent information is resolved without having to alter existing cognitive structures and reaches a state of agreement through assimilation, subcategorization, or the activation of an alternative schema, then it is called "moderate incongruity," and produces notable and positive evaluations [Mandler, 1982; Piaget et al., 1981; Suján, 1985] that are superior to those based on congruity [Mandler, 1982; Meyers-Levy & Tybout, 1989]. However, if incongruent information cannot be resolved through extant cognitive structures, but instead necessitates changes to the entire cognitive structure, it generates greater cognitive efforts, and produces more frustration than when addressing incongruous information. This type of incongruity is called "extreme incongruity," and results in negative perceptions toward an extremely incongruent object [Mandler, 1982; Meyers-Levy & Tybout, 1989].

Schema congruence has been garnering increasing attention in marketing research. In advertising, studies have noted the concept of the advertising schema [Aggarwal & McGill, 2007; Chang et al., 2010; Dahlé & Edenius, 2007; Goodstein, 1993; McDaniel, 1999; Jurca et al., 2015; Orth & De Marchi, 2007; Stoltman, 1991; Warlaumont, 1997; Yoon, 2013], which suggests that consumers cope with new advertising stimuli by comparing prototypic advertisements with their memories [McDaniel, 1999]. The advertising schema consists of the cognitive knowledge of typical advertising formats and of the abstract aspects associated with advertising [Warlaumont, 1997]. Hence, the abstract features of advertising and the advertising media vehicle have potential influences on advertising assessments with respect to schema congruence.

2.2. Schema Congruence between Advertising and Context

Advertising and marketing researchers have examined the congruence between advertising and the media context. These studies have confirmed that the media context influences consumer evaluations of advertising, and have supported the supposition that congruity produces positive responses.

As mentioned, previous studies in the field of congruence between advertising and the media context fall into three categories: subject congruence, which is the match and mismatch between the advertising subject and the media context. For example, Shamdasani et al. [2001] indicated that the relevance of Web site content and banner advertisement product categories affect consumer reactions. A banner advertisement placed on a Web site hosting relevant content achieves significantly higher advertising effectiveness for the advertisement. Newman et al. [2004] found that congruence between the banner advertisement product class and the Web site affects attitudes toward the Web sites themselves. Their findings revealed that if an advertisement and the Web site displaying it are incongruous, attitudes toward the Web site are negative. Moore et al. [2005] discovered that Web users were more attentive to banner advertisements for a product category that is incongruent with the Web site product category, but users had more favorable attitudes toward an advertisement when they were aware of the congruence and experienced moderate congruence. Chang et al. [2010] examined the influence of the congruity between an online game and in-game advertising (IGA). The results revealed positive effects of congruity for both interest in and purchase intentions regarding in-game advertisements. On the other hand, other studies have discussed the similarities between the sponsor and the sponsee. For instance, Rifon et al. [2004] indicated that a close fit between a company and a cause it sponsored generated consumer ascriptions of altruistic sponsor motives, and promoted sponsor credibility and favorable attitudes toward the sponsor. Conversely, Simmons and Becker-Olsen [2006] demonstrated that incongruent sponsor partnerships reduced the clarity of a sponsor's position, and induced less favorable attitudes toward the sponsorship, leading to a decline in brand equity. Roy [2010] found that attitudes toward sponsorships were significantly more

positive when the sponsor–cause relationship was congruent compared with responses to less congruent conditions for sponsors. This type of congruence research, which focuses on event and cause marketing, is called (b) “sponsorship congruence.” Other studies that focus on the congruence of affect, emotions, and implications between advertising and media is called (c) “attribute congruence”. For instance, Goldberg and Gorn [1987] posited a mood congruency-accessibility hypothesis, which suggested that a new subject is more accessible if the mood primed from advertising is consistent with that of the subject. De Pelsmacker et al. [2002] divided the conditions of media and advertising into three categories: Humorous, warm feelings, and rational. They found that their defined attribute of congruity led to greater understanding of advertising, in that positive responses toward advertising increased with lower consumer product involvement. Dahlén [2005] verified that an insurance company, which premised an advertisement on a fragile eggshell (creative media), enhanced brand associations and brand perception because of the implied congruence.

In addition to the three types of congruence, different commercialization levels of Web sites and advertising can also be found in practice. Some Web sites and advertisements are commercial, whereas others are not. The present study considered Web sites as the media context; our objective was to gain an understanding of the congruence between the commercialization of Web sites and that of banner advertising as related to advertising effectiveness. This study thus names this fourth type of congruence “commercialization congruence,” which focuses on the commercial and noncommercial nature between advertising and the media, respectively.

2.3. Development of Research Hypotheses

The media context should not be regarded simply as a background, but as a critical factor affecting consumer attitudes. Specifically, the media context can be an active category based on people’s cognitive structure, and they influence consumer perceptions of an advertisement [Dahlen, 2005]. When consumers enter a commercial Web site (e.g., online auctions, online shopping malls, business forums), they are normally expecting to receive commercial information because, according to schema-congruence theory, the commerce category is active in the consumers’ cognitive structure when they are on a commercial Web site, irrespective of whether the advertising subject, sponsorship, or advertising attribute are consistent with the Web site. In such circumstances, commercial advertising information (object) conforms to the user’s perception (schema). Thus, the appearance of commercial advertising on commercial Web sites is accordant with consumer expectations, and thus, perceptions remain smooth and logical. This schema congruity automatically enhances user comprehension of the commercial advertisements. Consumers may react more favorably toward the advertisement because it fits with their existing cognitive structure [Mandler, 1982; Meyers-Levy & Tybout, 1989]. By contrast, for circumstances where consumers enter noncommercial Web sites, which are run by governments, schools, hospitals, and other nongovernmental entities, commercial advertising is considered inappropriate. This is because users may perceive that the purpose of noncommercial Web sites is not to trade, but providing noncommercial information. Based on schema-congruence theory, the noncommercial category is activated by the user’s cognitive structure on entering a noncommercial Web site, and if the presented commercial advertising information does not coincide with the user’s existing schema, the resultant advertising effects may be unfavorable [Mandler, 1982; Meyers-Levy & Tybout, 1989].

Thus, if commercial (noncommercial) advertising appears on noncommercial (commercial) Web sites, where they are unanticipated, negative responses to this incongruity may produce a condition of extreme incongruity. Conversely, when commercial (noncommercial) advertising appears on commercial (noncommercial) Web sites, the response toward advertisements is positive because the appearance adheres to consumer expectations. This study posited the following two hypotheses:

H1: *Commercial advertising placed on commercial Web sites results in improved attitudes toward advertising compared with noncommercial advertising.*

H2: *Noncommercial advertising placed on noncommercial Web sites results in improved attitudes toward advertising compared with commercial advertising.*

3. Methods

3.1. Experimental Design

We tested our hypotheses by conducting an experiment in which participants were first exposed to an advertisement, and then requested to indicate their reactions within the context of commercialization congruence between the advertisement and the Web site.

Manipulated variables included the commercialization level of the Web site (commercial Web sites and noncommercial Web sites) and that of the banner advertisement (commercial advertising and noncommercial advertising). The dependent variables were the attitudes toward the advertisement, which were tested according to the commercialization congruence between the advertisement and the Web site (independent variables).

The purpose of this study was to gain a greater understanding of instinctive reactions to external stimuli. Because this was not a study surveying consumer experiences or attributes, anyone was allowed to participate as long as they

had experience browsing Web sites. We recruited 172 participants for this experiment through URL links embedded in our invitation announcements posted on general forums and bulletin board systems. Four mock Web sites were created. Each participant was randomly assigned to one of four treatment groups to eliminate the effects of extraneous variables. Each user was then asked to browse the experimental Web sites, so that they would be exposed to specific advertisements. As instructed, after viewing the stimuli for 1 min, the participants evaluated their attitudes toward the advertisements.

3.2. Stimulus Development

To verify that commercialization congruity between advertising and the media context produced more positive advertising attitudes, we used the laboratory experiment method to manipulate the two commercial and noncommercial contexts of Web sites and advertising, and thus considered commercial advertising (noncommercial advertising) placed on commercial Web sites (noncommercial Web sites) as congruous, and noncommercial (commercial advertising) advertising placed on commercial Web sites (noncommercial Web sites) as extremely incongruous.

We chose sports as the congruent subject between Web sites and advertising, because prior studies have identified that incongruent subjects between Web sites and advertising produce negative attitudes. Two sport-related Web sites were selected for this study: the World GYM (commercial) Web site and the Sports Committee, Executive Department (noncommercial) Web site. World GYM is a well-known brand running a chain of fitness centers, and the Sports Committee, Executive Department is Taiwan's governmental body in charge of sports-related matters. To ensure that the participants received the manipulated stimuli, only one banner advertisement appeared on each Web site. We designed two sport-related advertising messages, differentiated by their commercial or noncommercial purpose. Based on the results of a pretest, we considered a running shoes advertisement to be sports related and commercial, and a "running a race for charity" advertisement to be sports related and noncommercial. We created two banner advertisements, and created fictional brand names (XAX) to circumvent the confusion that may have resulted from the participants' familiarity with actual brands.

3.3. Pilot Test for Experimental Material Preparation

For this study, we considered commercial advertising (noncommercial advertising) on noncommercial Web sites (commercial Web sites) as a condition of extreme incongruence. We conducted a pilot test to confirm this inference, and to verify that the manipulation (congruity and extreme incongruity) of the experimental material was successful.

We conducted four experiments, two regarding the commercialization levels of the Web sites and two regarding the commercialization levels of the advertising. In total, 56 participants with Web site usage experience were recruited in the pilot test by providing details of the experiment in an e-mail. Of these participants, 22 were men and 34 were women, and the average age was 22.34 years (standard deviation, $SD = 2.41$). Web usage patterns revealed that total Internet usage by participants comprised an average of 132 months ($SD = 3.554$), and they accessed the Web every day of the week ($SD = 0.512$), with each session lasting 3 to 4 hr ($SD = 2.748$). After inviting the participants to browse the experimental Web sites, we asked them to respond to the following question, which we adapted and modified from the Sujan and Bettman [1989] study: "How similar did you perceive the commercialization levels to be between the Web site and the inserted banner advertisement?" We adopted a 7-point Likert-type scale ranging from 1 (very similar) to 7 (very dissimilar) to measure congruence levels, and further categorized their indicated perceptions of congruity into congruous (mean = 1 to 3.99), moderately incongruous (mean = 4 to 5.99) and extremely incongruous (mean = 6 to 7), as conducted by Sujan and Bettman [1989]. The results revealed that commercial advertisements placed on a commercial Web site and noncommercial advertisements placed on a noncommercial Web site were both perceived as congruous; the means of the congruence level were 2.83 and 3.17 ($n = 58$, $SD = 1.94$), respectively. By contrast, noncommercial advertisements placed on a commercial Web site and commercial advertisements on a noncommercial Web site were perceived as extremely incongruity; the congruence level means were 5.91 and 6.34 ($n = 58$, $SD = 2.21$), respectively. An independent-samples t test on the congruence level means confirmed that commercial advertisements (noncommercial advertisements) embedded in commercial Web sites (noncommercial Web sites) differed significantly in perceived congruity from noncommercial advertising (commercial advertising) embedded in commercial Web sites (noncommercial Web sites). Regarding the commercial Web sites, for the mean differences between commercial advertising and noncommercial advertising, $t = -2.32$ ($p = .001$). By contrast, for the noncommercial Web sites, $t = -2.87$ ($p = .001$).

Figure1. The Experimental Pages



Commercial Web site / Non-commercial Advertising



Commercial Web site / Commercial Advertising



Non-Commercial Web site / Non-commercial Advertising



Non-Commercial Web site / Commercial Advertising

3.4. Dependent Variable Measurements

Participants were asked to rate their attitudes toward the advertisements. Our measurement method was a modified version of the approach used by Chang and Thorson [2004]. We employed a 7-point Likert-type scale to evaluate four statements, ranging from 1 (very disagreeable) to 7 (very agreeable). The items included the following questions: (a) “Do you think this advertisement is likable?” (b) “Do you think this advertisement is interesting?” (c) “Do you think this is a good advertisement?” and (d) “Do you think this advertisement is appealing?” We generated an index by averaging the responses to these 4 items (Cronbach’s $\alpha = .9509$).

4. Results

4.1. Participant Descriptive Statistics

Our study comprised 172 participants. Of the participants, 89 were men and 83 were women, with an average age of 24.62 years (SD = 5.312). Regarding Web usage patterns, their total Internet usage comprised an average of 112 months (SD = 2.434), and they accessed the Web every day of the week (SD = 0.961), with each session lasting 3 to 4 hr (SD = 2.067).

4.2. Hypotheses Tests

To test the congruence effects between the commercial and noncommercial nature of Web sites and advertisements on consumer attitudes toward advertising, we employed an independent-samples t test. The results are shown in Table 1. For the commercial Web site, our subjects’ attitudes toward commercial advertising were significantly higher than toward noncommercial advertising ($p = .002$); therefore, H1 was supported. The t-test results revealed that the subjects’ attitudes toward noncommercial advertisements was significantly higher than toward commercial advertisements on noncommercial Web sites ($p = .044$); therefore, H2 was supported.

Table 1. The effects of commercialization congruence between web sites and advertisements on attitudes toward advertising

Note: n = participants in set; M = average; sd = standard deviation; t = t-value; p= p-value

<i>Dependent variable</i>	<i>Nature of Web Site</i>	<i>Nature of Advertising</i>	<i>n</i>	<i>M</i>	<i>sd</i>	<i>P</i>
attitudes toward advertising	Commercial Web site	Commercial advertisements	91	3.72	1.18	0.002*
		Non--Commercial advertisements	81	3.18	1.11	
	Non-Commercial Web site	Commercial advertisements	98	3.02	1.06	0.044*
		Non--Commercial advertisements	81	3.35	1.16	

5. Discussion

For this study, we conducted an experiment by using a laboratory experimental method to emulate actual Web pages and manipulate the commercialization congruence between advertising and the Web site. Participants were recruited and randomly assigned to one of the experimental groups. The purpose of this study was to verify that the commercialization congruence of the media context and advertising influences advertising effectiveness. Our results suggested that commercial advertisements (noncommercial advertisements) placed on a commercial Web site (noncommercial Web site) enhance positive attitudes compared with commercial advertisements (noncommercial advertisements) placed on a noncommercial Web site (commercial Web site).

The present study has contributed to theory of advertising schema congruence by categorizing those studies into three types of congruence, making the theory a stronger structured and systemic. We also provide new insight into the effect of commercialization congruence on advertising, which is a new dimension of schema congruence between advertising and context. The results of this study differ from those of previous studies regarding the congruence between advertising and media such as subject congruence and attribute congruence. However, after setting controls for the subject and attribute congruence between advertising and media, our findings confirmed that commercialization congruence can also influence advertising effectiveness. In other words, although advertising and the media context in this experiment were controlled by restricting the conditions to one subject (sport) and emotion, we still found that commercial advertising effectiveness was higher with advertisements that appear on commercial Web sites than with those appearing on noncommercial Web sites. This was because Web site contexts affect users when browsing the Internet. If advertisements are hosted on a site with a different commercial level, it may trigger cognitive dissonance and lead to negative perceptions of the advertisements. Previous studies on traditional media have not addressed the issue of commercialization congruence because of limited advertising space and high costs in traditional media. By contrast, the barriers to entry for operating a Web site are low, and online advertising space is overabundant. Web site owners are active in their search for greater advertising opportunities. Furthermore, online advertising costs are measured according to the click-through rate, or advertising is free when participating in advertising exchange programs. Thus, advertisers can place advertisements anywhere on the Internet at extremely low costs. The results of our study can aid advertisers in understanding the potential effects of the media context, and promote the importance of commercialization congruence in advertising effectiveness, because the random placement of advertisements online may not improve advertising results.

The results of this study showed that the participants' attitudes based on their evaluations of advertising were not particularly high between the conditions of commercialization congruity and commercialization incongruity. This was expected because people in general consciously avoid advertising [Patrali, 2008]. Recent studies have begun to discuss how to enhance subconscious fixation behaviors toward advertising in the preattentive process by blurring the boundaries between advertising and the surrounding editorial content. Such studies have proposed that memories from subconscious browsing (i.e., those formed outside of the basis of perception) can still enhance individuals' preferences and attitudes toward the target. Therefore, we recommend that future studies draw from gestalt theory to manipulate visual elements (e.g., color, patterns, texture, and shape) to blur the boundaries between a banner advertisement and the editorial content. Users can then exercise their unconscious browsing behaviors toward advertisements before they are able to notice any commercialization incongruities, and advertisers can achieve the desired advertising attitudes. In fact, many of cognitive psychology theories are used to discuss advertising effectiveness between media context and advertising. Some studies have used the term priming effects to refer to how a prime (media context) influence a person's judgment about an object (advertising). Consumer's subsequent judgments are influenced by the constructs that are activated in an earlier task [Mandel & Johnson, 2002]. For example, when the concept of comfort is activated by information in media context, the large car size in advertisement could be interpreted as high comfort. Other studies used the concept of image transfer to explore the effects of sponsorship on brand image. For example, Web site with high perceived credibility or reputation will likely transfer positive evaluations from the Web site to the sponsor [Rogers, 2004]. From the associative theory perspective, these two theories mentioned above are discussed on the influence of judgment toward the object from one node to another node through spreading activation. It belongs to the aspect of one-way note to note direction. However, the schema-congruence theory in the current study refers to the congruence between media context and advertising. It belongs to the aspect of two-way nodes comparison. To focus on the influence of commercialization congruence on advertising attitude, only two-way nodes comparison was tested here. However, the information in Web site is from a variety of sources, consumers are affected by many kinds of contents. Additional understanding about the interaction and moderation effect of these two kinds of cognitive psychology theories (one-way note to note and two-way nodes comparison) on advertising effectiveness should be considered in follow-up studies.

6. Conclusion

This study represents the first known attempt to gain an understanding of commercialization congruence between advertising and Web sites and its effects on Internet browser attitudes toward advertising. Our findings have several theoretical implications. First, we integrated related research regarding congruence between the media context and advertising [Chang et al., 2010; Cornwell et al., 2005; Dahlén, 2005; Goldberg & Gorn, 1987; Haberland & Dacin, 1992; McDaniel, 1999; Norris & Colman, 1992; Pelsmacker et al., 2002; Rifon et al., 2004; Rodgers, 2004; Speed & Thompson, 2000; Yi, 1990a, 1990b, 1993], and categorized congruence research into three types: subject congruence, sponsorship congruence, and attribute congruence. Second, we expanded these subdivisions by proposing a fourth type, commercialization congruence, which could be considered for research on the issue of fit between the media context and advertising, and we discussed the congruity between commercial and noncommercial information and their influence on attitudes toward advertising. A follow-up study could promote a clearer and greater understanding of the functionality behind the four congruence types regarding the relationship between advertising and the media context. Third, our findings confirmed that commercialization congruity between advertising and the medium is more effective compared with commercialization incongruity. In other words, when commercial advertisements appear on commercial Web sites, consumer attitudes toward them are more positive compared with attitudes toward advertisements on noncommercial Web sites. Fourth, most of schema-congruence related studies are focused on discussing the contents relevance in media context and advertising no matter what type of congruence it is (subject congruence, sponsorship congruence or attribute congruence). The content features between media context and advertising are usually obvious and easy for consumers to perceive congruity or incongruity. However, commercialization congruence refers to the nature of commercialization, which is irrelevant to the content and is not clear for consumers to perceive the congruence. The results of this study still verified that schema-congruence theory can also be applied to discuss the congruence that is outside from the content features of media context and advertising.

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