We Definitely READ Photographs-Effects of Text in Destination Photograph Viewing

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1. Introduction

Extensive usage of photographs has been common in tourism advertising. Given the intangible features of tourism experiences that cannot be tried out in advance, photography is a pivotal tool used by tourism marketers in various platforms to promote destinations or provide tourists a virtual experience of a destination without physically being there (Tussyadiah & Fesenmaier, 2009). A handful of scholars have shown interest in studying photographs in tourism settings (e.g., Dewar, Li, & Davis, 2007; Garrod, 2008; Lo, McKercher, Lo, Cheung, & Law, 2011; Markwell, 1997; Pan, Lee, & Tsai, 2014). However, one important fact in the real world has been generally overlooked in existing studies on destination photographs: today's consumers receive thousands of marketing messages every day (including images), while the majority of them are simply ignored (Eppler & Mengis, 2004). Understanding how consumers allocate visual attention when viewing tourism photographs can inform how consumers navigate the tourism marketing messages, which is populated with too many stimuli for any one consumer to fully process, given that cognitive capacity and time are both finite. This study aims to investigate how consumers' visual attention can be attracted effectively by destination photographs in tourism advertising and consequently affects their perceived advertising effectiveness. In particular, the role of text that is embedded as part of the landscape of destination photographs is examined. The following objectives will be achieved in this study: 1) to examine consumers' visual attention patterns toward destination photographs with text in landscapes, and 2) to investigate consumers' perceived advertising effectiveness toward destination photographs with text in landscapes.

2. The Conceptual Framework

A review of the literature on photographs in tourism and hospitality research reveals that photographs play important roles in influencing destination images and advertising effectiveness. Yet, little is known about consumers' visual attention patterns and their perceived advertising effectiveness toward destination photographs. The importance of visual attention has been acknowledged in most advertising theories (Miniard, Bhatla, Lord, Dickson, & Unnava, 1991; Rosbergen, Pieters, & Wedel, 1997). It is critical to understand how and when consumers devote attention to destination photographs and what factors determines their visual attention patterns. Furthermore, how consumers evaluate destination photographs is another important issue in tourism marketing.
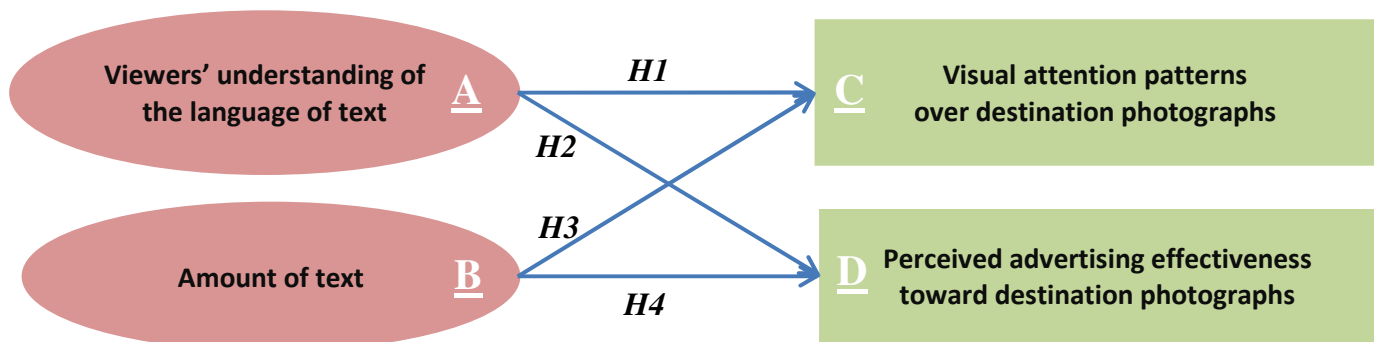
Research Hypotheses: **_H1_**: A significantly affects C; **_H2_**: A significantly affects D; **_H3_**: B significantly affects C; **_H4_**: B significantly affects D.

Figure 1 The Conceptual Framework

A handful of studies have examined the impacts of photographs as an element in tourism advertisements. Text is believed to be a vital part of advertisements in capturing consumers' attention and providing persuasive verbal communication (Mitchell, 1986; Pieters & Wedal, 2004). Destination

photographs with text naturalistically embedded in landscapes are frequently used in tourism advertising. These destination photographs generally contain text elements such as shop signs, plaques, stone inscriptions, and the like. This study presents a conceptual framework to examine the role of text as part of the landscapes of destination photographs on consumers' visual attention patterns and their perceived advertising effectiveness. In particular, this study examines two factors of text in the landscapes of destination photographs: (1) viewers' understanding of the language of text; and (2) amount of text. Accordingly, this study has four research hypotheses as illustrated in the Figure 1.

3. Methodology

This study employed eye-tracking (Rayner, 2009) supplemented by a questionnaire survey to collect data. Eye-tracking recorded consumers' eye movements as they viewed destination photographs. In addition, a questionnaire survey was employed to collect information on participants' perceived advertising effectiveness after viewing destination photographs. This study employed a 2 (viewers' understanding of the language of text: understand vs. not understand) by 2 (amount of text: single textual message vs. multiple textual messages) fully-factorial, within-subjects design, resulting in four experimental conditions. A total of 24 destination photographs were selected from a number of destination marketing websites. Chinese and Arabic were selected as the languages for texts in the photographs. With regard to the number of texts in photographs, photographs with one textual message contained only one inscribed board of some sort, whereas photographs with multiple textual messages contained 4 to 6 inscribed boards. Finally, four groups of photographs were selected and labeled as in Appendix A. A total of 37 participants were recruited to participate. All were native Chinese speakers who were over 18 years old and did not understand Arabic. An SR Research EyeLink 1000 desktop eye tracker with a sampling rate of 1000Hz was used to collect eye movement data. The heat map analysis was conducted to explore the participants' visual attention patterns during destination photograph viewing to accomplish the first research objective of the present study. Upon the completion of eye-tracking, participants were asked to fill out a survey. Four items were used in survey to measure perceived advertising effectiveness of destination photographs (i.e., *It arouses my interest*; *I want to see more about this destination*; *It is helpful in making travel decisions*; *It contains useful information*). Multivariate Analysis of Variance (MANOVA) was carried out to examine the effects of text on perceived advertising effectiveness to achieve the second research objective.

4. Key Findings

4.1 Visual attention patterns over destination photographs

<u>*Heat Maps*</u>. Participants' visual attention patterns over destination photographs can be visualized and analyzed using heat maps by two concepts: fixation duration and fixation region. Fixation region and fixation duration refers to where and how long participants' eyes gaze at particular regions of a photo. The fixation regions are highlighted by shades in red-green color spectrum, with red referring to the longest fixation duration and green indicating the shortest fixation duration. A total of 24 heat maps are shown in Figure 2. Findings suggest that participants' visual attentions are primarily clustered at regions containing text. The longer fixation duration are also allocated in the areas with text in each picture. This finding indicates that text in destination photographs draws the majority of viewers' visual attentions. Such pattern is commonly shown across different groups of photographs, no matter if viewers understand the language of the text.

The comparison of heat maps between photographs with a single textual message (Groups A & C) and photographs with multiple textual messages (Groups B & D) shows different results. With regard to photographs in Groups A & C, viewers' attentions were more concentrated on limited regions, whereas the other areas of the photograph did not receive any attention. When watching photographs in Groups B & D, viewers allocated their visual attentions to more areas in the photographs. This result indicates that viewers tended to attend to all the texts in tourism photographs, again, even when viewers were not able to read the text.

Note: **Group A**: A1-A6, Chinese & Single textual message; **Group B**: B1-B6, Chinese & Multiple textual messages;
Group C: C1-C6, Arabic & Single textual message; **Group D**: D1-D6, Arabic & Multiple textual messages.

Figure 2 Heat Maps of Visual Attention

4.2 Perceived advertising effectiveness of destination photographs

To achieve the second research objective, MANOVA analysis were conducted to examine the effects of viewers' understanding of the language of text and amount of text on perceived advertising effectiveness. Results are shown in Figure 3.

Viewers' understanding of the language of text. Overall, photographs with Chinese text showed significantly higher advertising effectiveness than those with Arabic text, as perceived by the native Chinese-speaking participants. In particular, there were significant differences in the aroused interest ($F_{Arousal}=32.97$, $p=.000$; $F_{SeeMore}=9.32$, $p=.000$) and perceived usefulness ($F_{Helpful}=17.36$; $p=.006$; $F_{Useful}=29.73$, $p=.000$) of photographs between the two types of photographs (Chinese text vs. Arabic text). Viewers showed more interests to know about the destinations when they watched the destination photographs with Chinese text. They also reported that the destination photographs with Chinese text provided more useful information to help make travel decisions than those with Arabic text.

Amount of text. There were statistically significant differences in the aroused interest and desire to see more ($F_{Arousal}=5.54$, $p=.029$; $F_{SeeMore}=9.23$, $p=.006$) between the two types of photographs (signal textual message vs. multiple textual messages), while the comparison of perceived usefulness and helpfulness does not show significant difference between groups. Viewers showed more interests to know more information about destinations when they watched the destination photographs containing one textual message.
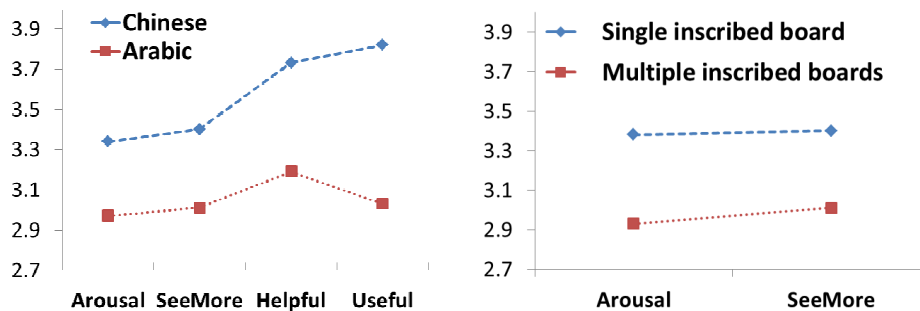

Figure 3 The Effects of Text on Perceived Advertising Effectiveness

5. Conclusions and Discussions

This study examines how consumers allocate visual attention when viewing tourism photographs, particularly photographs with text naturally embedded in the landscapes. The research findings suggest that viewers' attentions can be effectively attracted to the text embedded in the landscapes of photographs, no matter if viewers can understand the language of the text or not. The present study differentiates from the existing research on tourism photographs, which have primarily focused on analyzing contents and interpretations presented by pictures from the perspective of tourists. It is among the first attempts to employ eye-tracking technique in the tourism domain to investigate the visual patterns that consumers navigate tourism photographs, one of the most important tourism marketing materials. Particularly, text embedded in the picture has been identified in this study as an effective element that can attract and retain viewers' visual attentions. Literature on tourism advertising should also benefit from the findings of this study.

This study has several important practical implications for tourism marketers. First, the results suggest that text in destination photographs helps attract viewers' attentions. Consequently, when destination marketers consider using pictures in marketing materials, destination photographs with text naturally embedded in landscapes are suggested to be selected for effective message communication. Furthermore, findings of this study indicate that viewers tend to spend more time looking at destination photographs with text in a known language, and such photographs are perceived as more useful for travel decision making. This finding is particularly informative to tourism marketers who would like to tap into a foreign market with a different language. In such situations, it might be wise to use destination photographs with texts in targeted consumers' native language, to ensure that the marketing message can be effectively delivered to the targeted audience.

Reference

Dewar, K., Li, W. M., & Davis, C. H. (2007). Photographic images, culture, and perception in tourism advertising: AQ methodology study of Canadian and Chinese university students. *Journal of Travel & Tourism Marketing*, *22*(2), 35-44.

Eppler, M. J., & Mengis, J. (2004). The concept of information overload: A review of literature from organization science, accounting, marketing, MIS, and related disciplines. *The Information Society*, *20*(5), 325-344.

Garrod, B. (2008). Exploring place perception a photo-based analysis. *Annals of Tourism Research*, *35*(2), 381-401.

Lo, I. S., McKercher, B., Lo, A., Cheung, C., & Law, R. (2011). Tourism and online photography. *Tourism Management, 32*(4), 725-731.

Markwell, K. W. (1997). Dimensions of photography in a nature-based tour. *Annals of Tourism Research, 24*(1), 131-155.

Miniard, P. W., Bhatla, S., Lord, K. R., Dickson, P. R., & Unnava, H. R. (1991). Picture-based persuasion processes and the moderating role of involvement. *Journal of Consumer Research*, 92-107.

Mitchell, A. A. (1986). The effect of verbal and visual components of advertisements on brand attitudes and attitude toward the advertisement. *Journal of Consumer Research*, 12-24.

Pan, S., Lee, J., & Tsai, H. (2014). Travel photos: Motivations, image dimensions, and affective qualities of places. *Tourism Management*, *40*, 59-69.

Pieters, R., & Wedel, M. (2004). Attention capture and transfer in advertising: Brand, pictorial, and text-size effects. *Journal of Marketing*, *68*(2), 36-50.

Rayner, K. (2009). Eye movements and attention in reading, scene perception, and visual search. *Quarterly Journal of Experimental Psychology, 62*, 1457-1506.

Rosbergen, E., Pieters, R., & Wedel, M. (1997). Visual attention to advertising: A segment-level analysis. *Journal of Consumer Research*, *24*(3), 305-314.

Tussyadiah, I. P., & Fesenmaier, D. R. (2009). Mediating tourist experiences: Access to places via shared videos. *Annals of Tourism Research, 36*(1), 24-40.

Appendix A Original Destination Photographs as Visual Stimuli