

The Effect of Online Information Search on Image Development: Insights from a Mixed-Method Study

In the past several decades, destination image has been extensively studied in the tourism literature. The concept of tourist destination image (TDI) was first brought to marketers' attention as a tool helping product positioning and promotion. That is, destination marketing organizations (DMOs) found that understanding destination image may help differentiate their products from those of competitors (Li and Vogelsong 2006). More recently, marketers have realized that understanding destination image may assist balance destination supply and demand (Tasci and Gartner 2007). As Trojan (2005, p. 54) put it, "Knowing what visitors and potential visitors think about the destination is essential when developing tourism products and marketing campaigns."

Traditional wisdom holds that tourists' destination image may be enriched or changed after their trip (Chon 1991; Fakeye and Crompton 1991; Li and Vogelsong 2006; Martín and Bosque 2008; Pearce 1982). In essence, such changes will reflect the quality of tourists' travel experiences, and hence destination performances. In contrast, the formation of tourists' image before their trip is less researched. This is certainly understandable, considering the marketing implications and research feasibility of measuring post-trip images. Nevertheless, the development of pre-trip image seems to be more relevant to tourists' destination choice, and more critical to destination marketers' decision making, and hence warrants more research attention.

As a new marketing communication channel, the Internet has changed the landscape of tourism marketing. Tourism is now ranked the number one industry in terms of online

transaction volume (Werthner and Ricci 2005). It is estimated that at least 61 percent of the U.S. adult Internet users research travel online (Ramsey 2007). For both academics and practitioners, the increasing importance and prevalence of the Internet has challenged numerous well-established theoretical and business models (Biswas 2004). It is intellectually intriguing and practically crucial to examine the impact of the Internet on consumer behaviors and the overall marketing environment. For instance, among extant TDI research on tourists' pre-trip image development (Baloglu and McCleary 1999; Beerli and Martin 2004; Mercille 2005; Phelps 1986) and multidisciplinary studies on image formation (Hirschman 1981; Lindquist 1974-1975; Mazursky and Jacoby 1986; Stern and Krakover 1993), most have mainly focused on the effects of traditional information sources, such as personal experiences and word-of-mouth. The effect of Internet on image development remains unclear.

Combined, this paper attempts to provide an initial exploration of the effect of online information search on tourists' pre-trip destination image development. A mixed method study was conducted, with 30 participants who had only limited knowledge about China being asked to develop an itinerary for a one-week vacation to China. The mixed method approach included both quantitative and qualitative parts.

Literature Review

In this section, the authors will briefly summarize the definition, dimensionality, and development of destination image first, and then review the impact of information search on image development. Due to the conceptual uniqueness and rich history of TDI and space limitation, this review will mainly focus on the tourism literature.

The Construct of TDI

TDI has drawn extensive research attention since Hunt (1971) first introduced the concept to tourism literature. Milman and Pizam (1995) defined the term as “the visual or mental impression of a place, a product, or an experience held by the general public” (p. 7).

Increasingly, most researchers have agreed that destination image is the overall or total impression of one place (Bigne, Sanchez and Sanchez 2001; Crompton 1979).

However, when asked about the composition of the image, tourism scholars have given different answers (Gallarza, Saura and Garcia 2002; Li and Vogelsong 2006). Crompton (1979) first revealed the cognitive dimension of destination image. Several researchers (Baloglu and Brinberg 1997; Echtner and Ritchie 1991; Walmsley and Young 1998) then argued that destination image reflects not only “one’s ideas about the physical properties of a place” (cognitive image), “but also his or her feeling and evaluation on the destination” (affective image) (Li and Vogelsong 2006, p. 350). Together, cognitive image (beliefs) and affective image (feeling) form a “global impression about an object or destination,” namely, the overall image (Baloglu and McCleary 1999, p. 870). This two-dimensional conceptualization of destination image is widely employed in subsequent studies (Martín and Bosque 2008).

Nevertheless, another group of researchers (Dann 1996; Gartner 1996; Pike and Ryan 2004), following the tripartite model of attitude structure in psychology (Eagly and Chaiken 1993), contended that images possess cognitive, affective, and conative components. They argue that conative image reflects the behavioral aspect (e.g., visit intention) of one’s destination perception. The tripartite model of image seems to imply that TDI is an attitude, which remains debatable. Finally, another stream of TDI research approached the topic from the supply side (Echtner and Prasad 2003; Hunter and Suh 2007; MacKay 1997). That is, instead of

deconstructing how (potential) tourists perceive a place, this group of researchers focuses more on how destinations project their image. Of particular interest is the role and presentation of visual image in destination promotional materials (Tasci and Gartner 2007).

Despite its importance and attraction to a growing number of scholars, destination image studies are still considered atheoretical and lacking in conceptual frameworks (Baloglu and McCleary 1999; Echtner and Ritchie 1991; Gallarza, et al. 2002; Tasci and Gartner 2007). In their discussion on the components of destination, Echtner and Ritchie (1991) proposed that TDI consists of three continua, i.e., the attribute-holistic continuum (i.e., TDI comprises both the perceptions of individual attributes of a destination and the holistic impression), the functional-psychological continuum (i.e., some TDI characteristics are directly observable, others are abstract and not tangible), and the common-unique continuum (i.e., TDI traits and features range from common to destination-specific). In the same vein, Gallarza and colleagues' (2002) literature review suggests that TDI is complex, multiple, relativistic, and dynamic. Most recently, Tasci and Gartner (2007, p. 423) conceptualize TDI as “a composite of a wide spectrum of inputs that can be viewed as affecting either the demand or supply side of the image construct.” The ensuing image, formed through controllable (dynamic), semicontrollable (semidynamic), and uncontrollable (static) inputs, in turn, “has direct effects on pre-, during- and posttrip consumer behavior” (Tasci and Gartner 2007, p. 423).

TDI Formation Process

Gunn (1972), arguably the first to conceptualize the image formation process, described image formation through a seven-phase travel experience:

1. *Accumulation of mental images about vacation experiences;*

2. *Modification of those images by further information;*
3. *Decision to take a vacation trip;*
4. *Travel to the destination;*
5. *Participation at the destination;*
6. *Return home; and,*
7. *Modification of images based on the vacation experience.*

Gunn (1972) suggested that potential tourists' image of a destination could be categorized as "organic" and "induced" images. Organic image relies on noncommercial sources of information and represents "the totality of what a person already knows or perceives about that destination," and it is "accumulated over time from newspapers, radio and TV news, documentaries, periodicals, dramas, novels, and non-fictional books and classes on geography and history" (Gunn 1997, p. 37). Induced image, on the other hand, is image derived from commercial tourism information. Its formation is a result of exposure to information from commercial sources such as travel agents, brochures, and advertising, all of which attempt to build on or modify customers' organic image to a favorable evaluation in a purchase context (Gartner 1989). The key difference between organic and induced images is destination marketers' level of control: the former is by definition not controllable, while the latter is. Gartner (1993) elaborated that there exist eight image formation agents with different degrees of level of market penetration, control and costs to destination marketers, and credibility to the information recipients (Tasci and Gartner 2007).

The organic-induced image typology has been widely cited in the tourism literature. Fakeye and Crompton (1991) added that when a tourist visits a destination, s/he would develop a "complex" image resulting from actual contacts with the area. Selby and Morgan (1996)

proposed a similar hierarchy of place image comprising of “organic” image, “projected” image (established from tourist organization’s deliberate marketing effort), and “re-evaluated” image (perception obtained after visiting the destination itself). They noted that the categorization of organic and projected images “may not be mutually exclusive” (p.288), and referred the two as “naïve image.” To date, most studies have focused on complex or “re-evaluated” image and the role of actual visitation in its formation (Chon 1991; Fakeye and Crompton 1991; Li and Vogelsong 2006; Martín and Bosque 2008; Pearce 1982). In comparison, “naïve image” is still not well understood.

Information Search and Image Development

In Gunn’s (1972) typology, information received by a consumer could modify an existing destination image accumulated through actual visitation experience or media exposure. Baloglu and McCleary (1999) argued that an image could be formed by either stimulus factors (including external information and past experience) or personal factors (referring to the consumers’ personal characteristics). This section mainly discusses information search driven by stimulus factors, with particular emphasis on online information search.

Information search related to consumer decision making has been widely studied in marketing and tourism fields (Jun, Vogt and MacKay 2007; Vogt and Fesenmaier 1998; Woodside and Lysonski 1989). For making a purchase, consumers need to evaluate different alternatives on various attributes (Payne, Bettman and Johnson 1993). If internal search in consumers’ memory cannot provide enough information, external search, where consumers actively look for information to reduce risk and uncertainty in decision making, will occur (Engel, Blackwell and Miniard 1995; Petrick, Li and Park 2007). Travelers also search for

information for fun, entertainment, social status, and symbolic reasons (Vogt and Fesenmaier 1998). They may use a variety of information sources when conducting external search and employ different strategies in combining information sources (Fodness and Murray 1998).

Many researchers have explored the connections between the use of information sources and image formation. Woodside and Lysonski (1989) asserted in their model that information sources would influence the cognitive evaluation of a destination but not its affective image. In the same vein, Um and Crompton (1990) proposed that external source would affect one's cognitive beliefs of a destination and thus move the position of a destination in one's choice set. Gartner (1993) also pointed out that the types or amount of information sought would influence the cognitive image but not the affective part. Finally, Holbrook (1978) and Baloglu and McCleary (1999)'s studies demonstrated with empirical evidence that information sources will influence the cognitive component but not the affective part of a destination image. In sum, most researchers seem to agree that the affective aspect of image is based on the cognitive part and the former is harder to change via external information.

The Internet provides a new type of information source which is more dynamic, interactive and richer in content (Pan and Fesenmaier 2006). It has become one of the major sources of travel related information and purchase venue (Milligan 2006). A study showed that from 1995 to 2000 there was a large increase in Internet usage for travel information search purpose across all age groups, and specifically the baby boomer generation surprisingly adopted the Internet more often as a trip planning tool (Beldona 2007). Indeed, the Internet is more than one information source; it is a communication, distribution, and transaction channel; it includes text, images, and multi-media content, which may come from both commercial and non-

commercial sources, and customers themselves (Peterson, Balasubramanian and Bronnenberg 1997).

Biswas (2004) has argued that since online information acquisition is different from offline settings drastically, all the consumer theories need to be re-evaluated in online settings. The present authors suggest that image development process is no exception. Thus, this study aims to revisit extant conceptualizations on image development in an online setting. Specifically, the study attempts to examine how the Internet will influence TDI development process, and how affective image and cognitive images will be affected by online search.

Conceptual Development

Gunn's (1972) organic-induced image typology indicates that information coming from noncommercial sources will lead to tourists' organic image, while that from commercial sources and deliberate destination marketing efforts will lead to induced image. Nonetheless, when today's consumers look for travel information, they are most likely to search and evaluate both types of information. As a result, both types of information may contribute to a successful trip plan as well as travelers' altered or augmented destination image. For consumers, it might be neither necessary nor possible to distinguish the two types of information.

Day and Montgomery (1999, p. 7) prioritized "the connected knowledge economy" as one of the five emerging themes that will shape the future direction of marketing. In the connected knowledge economy, information and knowledge flow in an unprecedentedly free (low cost) and frequent (low barrier) manner. Sophisticated destination marketers are conveying their message through noncommercial approaches, such as PR, events and festivals, and social media. For example, Dr. Pepper has been promoting their new soft drink to youth market using

blogs (Kaikati and Kaikati 2004); several companies were found to have identified influential online community members and attempt to persuade them to write favorable reviews by providing them perks (Dellarocas 2006). As a result, the distinction between organic and induced image, in its original sense, is getting increasingly blurred. Put differently, in today's market and technology environment, there can hardly be any "organic" image constructed purely from noncommercial sources. As Tasci and Gartner (2007, p. 414) asserted, "mutual exclusivity of organic, induced, and autonomous agents are practically nonexistent."

Further, as indicated, the key difference of organic and induced images is destination marketers' level of control and deliberation, which illustrates a supply-driven mentality. From tourists' perspective, a more relevant typology of image should be based on their type and level of information search effort. This paper hence proposes to use the term "*baseline image*" to refer to (potential) tourists' destination image stemming from passive or ongoing information gathering, whereas "*enhanced image*" as their image built from active and intentional information search. What makes difference here is whether customers take the initiative to search for information (i.e., active information search) or they are merely exposed to information (i.e., passive information collection) (see Table 1). By no means do the authors attempt to complicate the already confusing terminology in TDI literature. Rather, the new terms represent a more demand-driven, customer-focused perspective.

INSERT TABLE 1 ABOUT HERE

In general, information search literature in marketing and tourism has been focusing on external travel information search, which intrinsically increases consumers' product knowledge. However, the influence of information search on TDI might be different from that on customers' product knowledge. It has been suggested that TDI is more holistic, subjective, and built in long-term compared to one's generic knowledge about a destination (Gunn 1997). Nevertheless, in today's online world, with multimedia readily available to fulfill every aspect of tourists' information needs, tourists' pre-trip destination images may be more susceptible to changes. In the cases of images people hold toward unfamiliar long-haul destinations, the authors suspect that such changes may occur after even just one online information search session.

Based on the foregoing discussion, a model was proposed (Figure 1). In this model, tourists' destination image was conceptualized as a two dimensional construct, with the overall image comprising of cognitive and affective dimensions. It is postulated that active information search will change the baseline image into enhanced image.

INSERT FIGURE 1 ABOUT HERE

This study was guided by the following two research questions:

RQ1: Does online information search influence participants' destination image? Put simply, will participants' "baseline image" and "enhanced image" be different as a result of participants' active information search?;

RQ2: How does online information search process influence participants' destination image?

Methodology

To answer the research questions, a mixed-method study was designed to investigate participants' destination image development process before, during, and after an online travel planning exercise. This study is part of a larger study on people's online information search process. Considering the exploratory nature of this study, college students, a relatively homogeneous group, are deemed to be appropriate participants (Calder, Phillips and Tybout 1981). The use of college students as samples for research has been widely debated especially in consumer behavior literature (see Peterson, 2001 for an overview). In general, researchers tend to use student samples for theory testing and experimental designs (e.g. Lopes and Galletta, 2006; Wang and Wallendorf, 2006), which also fits the purpose of this study. China was selected as the hypothetical destination for this study, with the assumption that most American participants will share a similar level of familiarity (or lack of it) before the study (National Geographic Education Foundation 2006). Plus, as one of the world's largest international travel destinations, China provides a wide array of attraction options for travel planners to choose from and hence allows sufficient variation in the trips being made.

A mixed methods approach used in similar previous studies (Backlund, Skaner, Montgomery and Strender 2003; Pan and Fesenmaier 2006; Vining and Fishwick 1991) was adopted. This approach combined traditional pre- and post-exercise surveys, with think-aloud protocol and a process tracing method. The think-aloud protocol asks participants to verbalize his or her thoughts, feelings, and opinions, when carrying out a task. It is argued that language mediates thoughts and therefore, researchers can understand the cognitive process during information search through the language of the participants (Carley and Palmquist 1992).

Process-tracing methods record the clickstreams of the participants (Wang, Hawk and Tenopir 2000), and are generally used to capture information search behavior on the Internet.

In the study, participants were first informed about the goal of this study and ensured their confidentiality. They then filled out an online survey (pre-exercise survey). Other than image questions (including Echtner and Ritchie (1993)'s three open-ended questions and quantitative image scales, which will be discussed next), the participants were also asked to report their travel experience and information search styles. Next, the participants were asked to familiarize themselves with the think-aloud method as prescribed by Ramey and Boren (2001). Afterwards, they were told to plan a week-long trip to China for their winter break, focusing on cities, attractions, and restaurants they were interested in. As part of the think-aloud protocol, they were asked to verbalize their experience during this process. A screen capturing software, Camtasia Studio, was used to capture their online activity into a movie file (TechSmith 2006) and PC Tattletale — a parental control software (Tattletale 2006) — was used to capture the web pages the participants have accessed.

Once the trip planning exercise was completed, participants filled out a post-exercise online survey, regarding their image (Ekinici and Hosany 2006) and satisfaction level with the travel information search and trip planning process (de Bruijin and de Vreede 1999). Participants were also asked to rate their computer and Internet skills. The total session lasted less than one hour, in which the travel planning exercise was limited to 50 minutes. During this process, the researcher sat besides the participant and took field notes.

After all the sessions were completed (each participant did the exercise in a separate session), a transcription of proceedings was developed which incorporated both the think-aloud protocol and process tracing method. Further, participants' on screen actions and verbalization

explaining those actions were coded. The data was then coded through the open-coding process (Strauss 1987). In this phase, specific words, phrases and actions were identified as being part of a category. Finally, core categorizations were developed and key themes were explored independently by three authors. The purpose of this phase was to reduce the volume of the data to a manageable set, while retaining the depth of qualitative inquiry. Finally, the coding as discovered was put through a verification process where the research team double-checked inter-rater issues, and further analyzed and resolved these issues.

Image Change Measurement

Consistent with most extant TDI studies, the authors conceptualized that image comprises of both cognitive and affective dimensions (Baloglu and McCleary 1999; Martín and Bosque 2008), which lead to the overall image of a destination (Baloglu and McCleary 1999). Specifically, China's destination image in this study was quantitatively measured following Ekinci and Hosany's (2006) approach, with cognitive image measured by six sets of seven-point bipolar adjectives adopted from Ong and Horbunluekit (1997), and affective image measured by Russel's (1980) four bipolar affective items. Finally, the respondents were asked to rate their overall impression of China as a tourism destination, by selecting on a Likert-type scale from one (highly unfavorable) to ten (highly favorable). The cognitive and affective image items were all mixed together and randomly ordered. Moreover, the orders of these items were completely different in pre- and post-exercise surveys.

Following Li and Vogelsong (2006), participants' image changes were determined via two series of questions: Method One compared same participant's image rating in pre- and post-exercise surveys. That is, in both pre- and post-exercise surveys, participants were asked to rate

their image of China using the aforementioned cognitive and affective image scales. It was postulated that differences between pre- and post-exercise image, if any, would be largely attributable to the treatment (i.e., participants' information search).

Alternately, Method Two had the participants directly report their image change, if any. Specifically, in the post-exercise survey, participants were first asked "Did your image about China change after your online trip planning?" and then "If your image about China changed after trip planning, please describe how."

Results

A total of 34 undergraduate students from a southeastern public university in the United States were recruited. Two participants had visited China previously and their data was excluded from this analysis, as their image and information search behavior were presumably different from the rest. The rest (32 participants) were mostly sophomore, junior, and senior level students in business-related majors. Due to computer glitches, one participant did not fill out the pre-experiment survey and another one did not fill out the post-experiment survey. For comparison purpose, the following analysis is based on 30 participants who completed pre- and post-experiment survey results.

Among the 30 participants, there were 13 males and 17 females. The participants took an average of 5.1 pleasure trips last year, and in a typical year, each of them took an average of 5.3 trips. On a scale of 1 to 7 (from "1" "not at all" to "7" "definitely"), they considered themselves as rather experienced travelers (an average score of 5.1). Regarding their computer and Internet experience, on average the participants had 12.2 years of experience using a computer; they had used the Web for approximately 9.5 years and emails for 8.9 years. During an average week, the

participants accessed their emails and the Web on average more than six days. Finally, all of the participants were relatively experienced in searching for travel information online (e.g., 29 out of the 30 participants had used the Internet to check out destination information before, 27 booked airline tickets online previously, and 25 had reserved hotel rooms through internet).

When asked to list the all of distinctive or unique tourist attractions they could think of in China, 24 participants mentioned “Great Wall of China,” (including 11 who could only name Great Wall as the attraction they knew of in China). Three participants mentioned “temples” (including one who used the word “castles”); two participants mentioned the “dragon parade”; other attractions mentioned include “Chinese food”, “Hong Kong”, “Shanghai”, “Tiananmen Square”, “Beijing”, “Yangtze River” and “Huang He River”; and four participants could not recollect any attraction in China. These results indicate that, as expected, the overall knowledge of China in the sample was limited. The participants spent an average of 21.5 minutes ‘planning their trips’ to China. In total, 1,857 web pages were visited by 30 participants, or an average of 61.9 pages per participant.

Research questions analysis

RQ1 focuses on whether the online information search process may lead to any changes in participants’ destination image. As indicated, this was determined via Li and Vogelsongs’ (2006) two-method approach. Method One compared the same participant’s destination image before and after the information search exercise. To test the relationship between pre- and post-exercise image attributes, a pair-wise *t*-test was performed on the 10 image attributes. Table 2 presents the results of this analysis.

INSERT TABLE 2 ABOUT HERE

As can be seen, participants' destination image seemed to have somewhat changed before and after the information search exercise. This may be illustrated from three perspectives: overall image, affective image, and cognitive image. First, participants' post-exercise overall images were significantly more positive than their pre-exercise overall images ($p < 0.001$). In the same vein, statistically significant changes ($p < 0.05$) took place in all four affective image attributes. Moreover, although the directions of positive or negative adjectives in the four pairs of bi-polar semantic differential scales are random, all the changes occurred were toward the positive direction (i.e., participants felt China was a more exciting, pleasant, arousing, and relaxing destination after the exercise). In contrast, no statistically significant differences occurred on the six cognitive image attributes, although three of them observed marginally significant differences ($p < 0.1$).

Alternately, Method Two directly asked the participants if their image about China changed after the online trip planning process. Twenty participants or 66.7 percent of the participants reported that their image did change after the information search exercise.

RQ2 asks how online information search process influences participants' destination image. The authors deemed it more appropriate to address this "how" question using a qualitative approach. First of all, respondents were asked, "If your image about China changed after trip planning, please describe how." Following the cognitive/affective typology,

participants' self-reported image changes may also be categorized as cognitive image changes and affective image changes.

Among the 20 participants who claimed to have experienced an image change, the majority of (17) participants reported changes regarding their cognitive beliefs. Most reported that their image change came from knowing more about China. Specifically, participants found that the information search revealed many things that they did not know about China. Many of them were amazed by the variety of attractions and activities China can provide. A typical response was given by Participant 6, who wrote "*I did not realize there were so many things to do there and so many different places to visit that sounded like fun and there were many different activities to do.*" Participant 34 indicated, "*I had no clue there was such nice beaches and great skiing.*" The information search even helped remove some "foreignness" of a distant destination like China in participants' mind. For instance, Participant 9 reported, "*I found some western-world activities...things that you could find in America. Such as the cooking class...*"

Six participants' self-reported changes were regarding their affective image, or contained an affective component. For instance, Participant 4 put that, "*It [referring to the information search exercise] gave me more of a visual idea of China in the images that I saw through planning my trip and made me more and more excited about the destination [emphasis added].*" Some participants obtained a different affective impression, owing to a changed cognitive image. That is, their post-exercise cognitive images about China contradicted their prior impression. As such, they obtained a more positive affective image as the information search "corrected" some negative stereotype they held before. For example, Participant 12 stated, "*I thought it was an overpopulated place with no trees and just a lot of buildings but it seems beautiful and in a way*

peaceful.” Participant 15 concluded, *“it now looks more interesting to me and instead of being busy and crowded there are nice and cultural places to visit.”*

After reviewing participants’ answers on how their image changed, the authors further delved into the videos, weblog data, and transcripts of their information search exercise. Several themes emerged from the data.

The online information search helped participants acquire information about China in accordance with their cognitive framework. This information seemed to have served as a basis of their image change, even though the information on the Internet may not always be objective. For example, Participant 11 commented on a web page about the Summer Palace: *“This looks like it would be some place I could not miss. This is absolutely beautiful. Looks like a perfect getaway place from the city. That is exactly what it says.”* The participant believed in the information provided in the web page and built a favorable impression towards the Summer Palace. Participant 5 read about the new railway from Beijing to Tibet: *“The highest railway in the world. It looks really pretty. Looks like the most beautiful railroad ever Oh, the tickets are sold months in advance. Wow, that makes me want to take the railway.”*

Some participants brought their baseline image into the information search (and destination decision) process. Their information search process was hence more about confirming established images, rather than exploring new information. For instance, Participant 12, as most other participants, started her search from google.com. While checking out the “sponsored links” Google provided, she first stated, *“I want to see the panda bear when I am there,”* and then *“I want to see the panda bear, great wall, go shopping and general sightseeing for a day.”* She also said, *“Hong Kong seems too crowded. I do not want to go there— from what I heard about it.”* Looking at a picture of the Great Wall, she acclaimed, *“That's something you*

have to see if you go.” Thus, even before searching the specifics for her itinerary, she had already made many to-go versus not-to-go decisions based on previous knowledge. Participant 3 was even more straightforward, and said when he started the search, *“When you think about China, you think of karate and stuff like that.”* He hence googled “Beijing Karate Show,” but was disappointed to find nothing he was looking for (partly because Karate is a Japanese martial art). In another example, prior to making up his mind where to go in China, Participant 25 concluded that, *“Terra cotta is interesting because it is an archeological site. Forbidden City reminds me of a lot of movies I have seen [emphasis added]. That's why that interested me.”*

The impact of image on information search was also reflected when participants encountered something not fitting their image of China. Again, in Participant 12’s case, when she was planning her “shopping and general sightseeing” tour in Beijing, she was a bit surprised to find American restaurants there, and said, *“Ha, Starbucks! That’s ridiculous. And KFC!”* Obviously such western presence was not what she was looking for in China, and later when she noted the American brands in Beijing’s Hongqiao Market, she went on saying, *“Calvin Klein underwear? Goretex rain jacket? Oh my gosh, sneakers? Hah, not that exciting [emphasis added].”* In another example, Participant 14 decided not to visit a Hong Kong shopping place, simply because the name (Stanley Market) *“does not sound very Chinese.”*

However, for participants who have fairly limited prior knowledge about China, or when they need to decide on details about their itinerary which was not easily identifiable online, they tended to rely heavily on external sources that they deemed as credible sources (e.g., friends, websites they trust). In such cases, participants’ image tended to be more susceptible to change. A typical answer was given by Participant 31, when explaining why she decided to follow Frommer.com’s recommendation, *“I do not really know any other tourist's website. I do not*

know where else to look for, except that I want to see the Great Wall of China.” Participant 5 said, “You know what, I have a friend whom I think visited China. So I am going to Facebook to look at pictures. That always helps. If I have time, I will ask him myself. But I do not have time.” Participant 12 said, “I guess when I get there, I can figure out how to get tickets, whatever I need how to get there. I do not know. I guess I will rely a lot on concierge of the hotel [emphasis added] to tell me if I am making good choices or no.” When these happened, many participants concluded their information search by saying something like “There is so much to do in...” or “I didn’t know you can do... in China.”

Discussion and Conclusion

The Internet has profoundly changed customer behavior and marketing practices, and researchers have found it necessary to modify some traditional theories to better suit the web environment (Biswas 2004). This study revisited the traditional organic-induced image typology, and argued that there might not be a truly “organic” image in today’s environment. Instead, the authors propose to use the term “baseline image” (i.e., image stemming from passive information gathering) and “enhanced image” (i.e., image developed from active information search) to distinguish different image development stages in tourists’ mind. Based on this, a model was proposed and examined using a mixed-method study.

Thirty college students were asked to develop a one-week travel plan in China via online search. Data collected from the pre- and post-exercise surveys showed that participants’ overall destination images about China experienced significant and positive changes after information search. A closer look at the two image dimensions revealed that, with no exception, significant and positive changes occurred on all affective image measures, but not on any of the cognitive

image items. Nevertheless, when asked to describe their image changes, most participants reported changes on their cognitive beliefs about China, as a result of knowing more about the destination's product offerings. Further, the qualitative data generated during participants' information search process evidenced that, their destination image could be confirmed, enhanced, and to less extent, corrected by information search. Moreover, participants' information search process was also influenced by their baseline destination image.

From a theoretical perspective, although the present study proposes a different typology, it is consistent with the principle of Gunn's (1972) seven-step image modification process (specifically the first two steps). Thus, empirical findings of this study contribute to the theory by substantiating Gunn's image modification model from a new angle. It also complements many extant studies on image formation, which focused more on Steps 3-7 of Gunn's model.

The results on the dimensional changes of image change were somewhat perplexing. Although participants' self-reported image changes were mostly related to the cognitive aspect, the quantitative analysis showed that participants' cognitive image did not change, while affective and overall image changed. This result contradicts previous studies (Baloglu and McCleary 1999; Gartner 1993; Holbrook 1978; Um and Crompton 1992; Woodside and Lysonski 1989), which suggested information search would generally influence cognitive image. The fact that all affective image items observed significant changes, while this did not happen on any cognitive image items indicated that the result was not a statistical fluke.

One possible explanation is that most prior studies examined the effect of offline information, while the present one deals with online information search. The dynamic and interactive nature of the Internet (Pan and Fesenmaier 2006) allows tourism websites to deliver affection-related information more effectively than traditional offline information sources (Kim

and Fesenmaier 2008). Put differently, offline information sources, such as brochures and print advertisements, are comparatively limited in their ability to present emotion-related message. Online sources, particularly online social media, may be more effective in terms of eliciting affective responses (Peter and Olsen 2002). Further, participants of this study (i.e., college students) represent the new generation of customers, whose behavior (e.g., reaction to destination information) could be quite different from older generations (Peters 1996). For example, a study has shown that Generation Y (born after 1977) adult female shoppers are more fun-driven and recreational quality seekers (Bakewell and Mitchell 2003).

Another explanation is the Weber-Fechner Law (Dehaene 2003), which states that the amount of change needed to make difference noticeable is relative to the amount of initial stimulus. In the present case, that means the amount of stimuli needed to make significant changes on cognitive image might be much more than that for affective image. The participants may have formed much cognitive understanding about China already from previous years of education and media exposure, but not affective ones. One might speculate that, during the information search exercises, participants absorbed more information regarding cognitive image, and their self-reported image change was hence mainly on the cognitive aspect. However, the authors suspect that the amount of new cognitive information, proportional to the previous knowledge, might not be sufficient to reach a significant change. Changes in affective image, in contrast, might occur relatively easily owing to a fairly low threshold. Thus, it is the ratio of new versus old knowledge, rather than the absolute amount of information, that determines the image change. Moreover, changes in affective image overpowered the unchanged cognitive image, and resulted in changes in overall image.

One further possible reason is the sensitivity of scales employed to measure cognitive image. This study, following Ekinçi and Hosany's (2006) paper, measured cognitive image with a series of bi-polar semantic differential scales developed by Ong and Horbunluekit's (1997). The results might suggest that this scale lacks the sensitivity to detect changes, or is not particularly applicable to culturally distant destinations like China. In comparison, the affective image scale used (Russel 1980), which has been tested extensively before, might be a more sensitive instrument. Future research using different measures may provide insights on this.

For instance, many TDI studies measure cognitive image by presenting a list of destination attributes (e.g., natural attractions, accessible transportations) in Likert-type scales (e.g., from "offers very little" to "offers very much") to respondents. The authors deemed that approach not applicable to current respondents, who were not knowledgeable about the destination at all. However, if both Ong and Horbunluekit's (1997) scale and the traditional approach have such limitations in current scenario, the question could become, is it appropriate to measure respondents' pre-trip image quantitatively? This seems to highlight the strength of the mixed-method approach used in this study, where qualitative aspect of the research may present complementary, even more accurate information to researchers.

Indeed, the mixed-method approach of this study helped the authors gain a better understanding of the process beyond self-reported survey data. The qualitative data showed that image development and information searches are not two separate processes. Participants' baseline destination image might influence how and what information they searched, and the information search results in turn, helped generate an enhanced image. The finding makes intuitive sense. It is consistent with Lehto and her colleagues' (2006) finding that knowledge with a destination (and prior experience) may influence the content of search (e.g., types of

information sought) and degree of search (e.g., time spent online). The reciprocal effect of image on information search deserves further research.

From the practitioners' perspective, an interesting finding of this study is although the cognitive aspect of destination image is easier to manipulate, it is not easily changeable in tourists' mind. Thus, while nowadays destinations can bombard customers with facts and statistics, the demand side does not always readily accept such information. In comparison, tourists' affective image could be more open to change during information search. Thus, DMO website designers are suggested to pay more attention to components that may elicit positive affective responses. This is consistent with results of advertising research (Holbrook and Batra 1983) and current trend of experience-based marketing (Prentice 2004).

Moreover, destination marketers have to be more aware of the role of "online word-of-mouth" in image building. The power of online WOM was illustrated in this study, when participants showed how much they trusted some travel websites' recommendations and other tourists' ratings. Since online WOM is generally beyond DMO's control, destination marketers have found it challenging to use them. Ironically, this is precisely the reason customers nowadays tend to trust them more than any advertisements.

Like any other controlled experiments in a lab, this study is subject to the artificiality of the settings. The participants were given limited time to plan a one-week vacation, and they did not have access to other information sources, such as families and friends, and published travel books during the planning process, which are rarely the case in real life. While the research design has delivered valid results in previous studies (Backlund, et al. 2003; Pan and Fesenmaier 2006; Vining and Fishwick 1991), the results must be interpreted cautiously. Future studies may

consider comparing the effect of online versus offline information to better imitate the real world scenario.

Further, participants of this study are college students. Although many researchers have argued that student samples can generate equally reliable behavioral results as non-student samples (Oakes 1972; Calder, Phillips, and Tybout, 1981), others have questioned the external validity of such studies as college students are not always representative of “real people” (Lynch 1999). As Peterson concluded, “caution must be exercised when attempting to extend any relationship found using college student subjects to a nonstudent (adult) population” (2001, p. 450). Thus, future studies using non-student samples may provide new insights. Moreover, although Human-Computer Interaction research has showed that usually as few as five users can uncover the majority of the usability problems (Nielsen 2000), future studies on similar topic are expected to recruit more participants.

Finally, the present study is also limited for its pre- and post-test research design. A Solomon four-group study would have been preferred. That is, instead of having one group tested twice before and after the online planning exercise, the researchers should ideally use four groups, with two groups being pretested, and two being not. After that, one of the pretested groups and one unpretested groups should conduct the online planning exercise, and then all four groups will receive the posttest. This approach would substantially reduce the effects of the pretest on the posttest results, which is one major limitation of the present research design.

Conclusion

The present study examines the potential effects of online information search on tourists' destination image development. This paper contributes to the literature by proposing a new

model of tourists' pre-trip destination image development, and empirically validating it. It was found that active online information search may change participants' destination image, particularly its affective aspects. One strength of this study is its mixed method research design, which combined both quantitative and qualitative methods. This echoes Echtner and Ritchie (1991; 1993) who advocated that TDI studies should take advantage of the synergy of quantitative and qualitative research. It is hoped that this study, though only a small step, contributes to researchers' understanding of how tourists' destination image is formed before travel.

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Table 1. Comparison of Parallel Pre-trip TDI Typologies

| Gunn (1972; 1997) | Selby and Morgan (1996) | Present Paper |
|--|--|---|
| <p>Organic image: “the totality of what a person already knows or perceives about that destination.” It is “accumulated over time from newspapers, radio and TV news, documentaries, periodicals, dramas, novels, and non-fictional books and classes on geography and history” (Gunn 1997, p. 37).</p> | <p>Organic image: “derive from non-tourist sources” (p. 288).</p> | <p>Baseline image: (potential) tourists’ destination image stemming from passive or ongoing information gathering.</p> |
| <p>Induced image: derives from commercial tourism information. Its formation is a result of exposure to information from commercial sources.</p> | <p>Projected image: establishes from tourist organization’s deliberate marketing effort. “Official tourist organizations are responsible for projected image” (p. 288).</p> | <p>Enhanced image: image built from active and intentional information search.</p> |
| <p>The key difference is destination marketers’ level of control.</p> | <p>This categorization “may not be mutually exclusive” (p. 288).</p> | <p>The key difference is if customers take the initiative to search for information.</p> |

1
2
3

Figure 1. The Conceptual Model

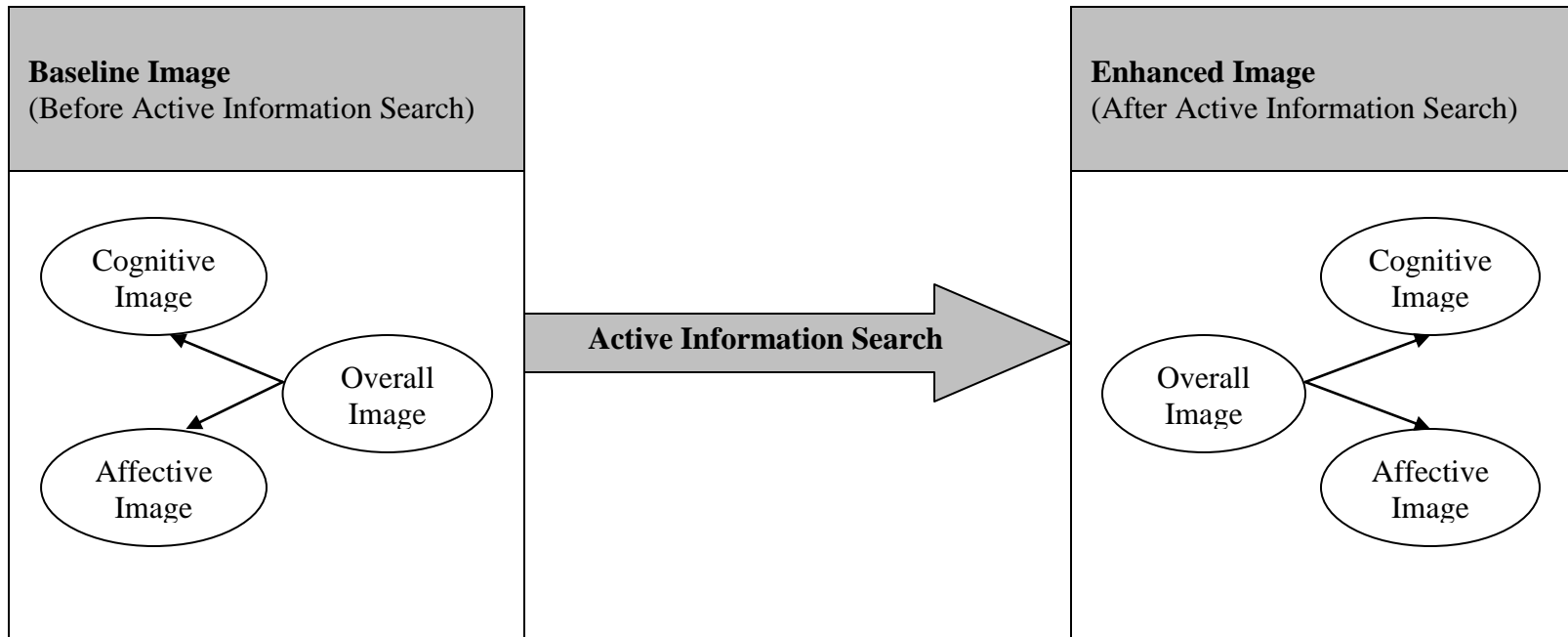


Table 2. Comparing Participants' Destination Image Before and After the Information Search Exercise

| Image Items | N | Pre-Exercise | | Post-Exercise | | <i>p</i> |
|--|----|--------------|-----------|---------------|-----------|----------|
| | | Mean | Std. Dev. | Mean | Std. Dev. | |
| <i>Affective Image</i> | | | | | | |
| AffIm1: Extremely Exciting - Extremely Gloomy | 30 | 2.60 | 0.89 | 1.97 | 0.85 | ** |
| AffIm2: Extremely Unpleasant - Extremely Pleasant | 30 | 4.77 | 1.14 | 5.37 | 1.22 | * |
| AffIm3: Extremely Arousing - Extremely Sleepy | 30 | 2.63 | 1.22 | 2.17 | 0.79 | * |
| AffIm4: Extremely Distressing - Extremely Relaxing | 30 | 4.03 | 1.19 | 4.50 | 1.25 | * |
| <i>Cognitive Image</i> | | | | | | |
| CogIm1: Extremely Friendly - Extremely Unfriendly | 29 | 3.14 | 1.19 | 2.72 | 1.07 | - |
| CogIm2: Extremely Accessible - Extremely Isolated | 29 | 3.72 | 1.28 | 3.28 | 1.53 | - |
| CogIm3: Extremely Lively - Extremely Stagnant | 30 | 2.37 | 1.07 | 2.37 | 1.07 | - |
| CogIm4: Extremely Interesting - Extremely Boring | 30 | 1.83 | 0.95 | 1.73 | 0.78 | - |
| CogIm5: Extremely Quiet - Extremely Noisy | 30 | 4.97 | 1.27 | 4.60 | 1.10 | - |
| CogIm6: Extremely Overcrowded - Extremely Sparse | 30 | 2.80 | 1.47 | 2.93 | 0.87 | - |

| <i>Overall Image</i> | | | | | | |
|--|----|------|------|------|------|----|
| OverIm: On a scale of one to ten, how would you rate your overall impression of China as a tourism destination | 30 | 7.07 | 1.36 | 8.13 | 1.17 | ** |

1 * $p < 0.05$

2 ** $p < 0.01$

3