

**AN EXPLORATORY STUDY OF TRAVELERS' USE OF ONLINE REVIEWS
AND RECOMMENDATIONS: A QUALITATIVE APPROACH**

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ABSTRACT

Travelers are increasingly turning to online reviews and website recommendations to plan their trips. Through an experiment on travelers' searching for restaurants, attractions, and activities, the paper investigates the sources and types of online travel reviews and recommendations, and examines the heuristics that the subjects use when making travel decisions based on these third-party opinions. The results of this study indicated that those reviews and recommendations can come from other consumers, third parties, or travel companies; they can be categorized into text-based recommendations, symbolic recommendation, numerical ratings, or narrative reviews. In addition, they utilized several heuristics including the single criterion stopping rule, credibility heuristic and consensus heuristic to make their decisions. The paper contributes to the current literature by examining the sources and types of online reviews and recommendations, and travelers' online decision making strategies and provides implications for practitioners.

Keywords: website, online reviews, recommendations, heuristics, decision making, trip planning, online tourism

I. Introduction

The Internet has become one of the most important sources of information for travelers. Jupiter research predicted that by 2009, online travel sales would account for 30% of the total travel market, a 70% increase over 2004 (Chen, 2006). In addition to the traditional websites, new Internet tools and services are generated to allow individuals to publish, collaborate and share information online. Travelers now can turn to blogs, forums, chat rooms, online communities as well as social networking sites for travel product and service information. The Internet offers an opportunity for travelers to share other people's experiences and get recommendations for travel products and services. The so-called Web 2.0 is transforming online tourism business (Cooke & Buckley, 2007).

As parts of the Web 2.0 phenomenon, online travel reviews and recommendations are frequently used by travelers. This study will specifically examine the sources and types of online review and recommendations, and how travelers utilize them during their search for restaurants, attractions, and activities in a specified destination. Although several studies have been conducted regarding consumers' use of online reviews and recommendations (Litvin, Goldsmith & Pan, 2008; Chevalier & Mayzlin, 2006; Kumar & Benbasat, 2006; Park, Lee & Han, 2007; Liu, 2006; Dellarocas, Zhang & Awad, 2007; Chen, Wu & Yoon, 2004), this study provides unique contributions through several aspects. First, most previous studies focused on how reviews and recommendations are related to consumers' web site perception or amount of product sales (Kumar & Benbasat, 2006; Liu, 2006; Dellarocas, Zhang & Awad, 2007; Hu, Pavlou & Zhang, 2006). How consumers directly process the online reviews and website recommendations

remains to be understood. Second, previous studies have primarily examined online reviews and recommendations related to movies or books, while few studies have focused on travel products. Travel products are usually high-risk, experiential, non-refundable and unable to be evaluated before purchasing (Buhalis, 2003). This may increase the importance of online reviews and website recommendations for would-be purchasers. Third, almost all the previous studies either used surveys, experiments or collected archival consumers' reviews from websites. However, how consumers actually search and evaluate different types online recommendations from different sources is still largely unknown. As mentioned by Duan, Gu & Whinston (2008), one limitation of this line of research is that the studies "did not directly observe how word-of-mouth information would affect consumers' choice and purchasing decision," (p. 1015). The current study intends to fill the gaps in the literature and offer new insights in how online reviews and recommendations can help consumers in their decision making.

This study specifically examined the sources and types of online travel reviews and website recommendations, and the decision making strategies the travelers adopt when processing those reviews and recommendations. The next section reviews relevant literature about online reviews and website recommendations. Then the paper presents the research methodology followed by data analysis and results detailing the heuristics that subjects used during the online search. Implications for academia and practitioners are discussed.

II. Literature Review

The Internet is gaining popularity and is becoming one of the important sources for travel information. The increasing use of the Internet for travel information has changed the structure and accessibility of travel information (Litvin, Goldsmith & Pan, 2008). As a new communication channel, the Internet has become more and more important in impacting travelers' information provision and acquisition (Luo, Feng & Cai, 2004). The transfer of information and opinions from businesses to consumers and from consumers to consumers has become much easier on the Internet (Litvin, Goldsmith & Pan, 2008). However, studies show that the Internet has not replaced traditional source of media and is only complementing existing information sources (Beitelli, Bieger and Laesser, 2007; Luo, Feng and Cai, 2004; Litvin, Blose & Laird, 2004). In addition, there is a potential for inaccurate information from unqualified sources to be distributed on the Internet (Richards et al., 1998).

In this paper, two types of information that help the decision making process for online travelers are considered: website recommendations (from businesses to consumers) and online reviews (from consumers to consumers). The two categories are chosen due to similar classification of online feedback used by other researchers (Qu, Zhang and Li, 2009).

For the first type, various travel websites offer recommendations to travelers. For example, when a traveler searches Las Vegas on Frommer's website (www.frommers.com), the website will list the best dining places, the best hotel choices, the best nightlife and Frommer's favorite experience. Similarly, Expedia

(www.expedia.com) will provide Experts' top picks on hotels, sights and restaurants. These website recommendations can help reduce travelers' cognitive burden by providing a manageable number of choices. Researchers find that website recommendations can increase consumers' perceived usefulness and social presence of the websites (Kumar & Benbasat, 2006).

Consumer reviews, as the second type, is one form of word-of-mouth communication and has become popular on the Internet. The exchange of information is efficient in the online environment and provides consumers easy access to a greater amount of relevant knowledge (Wang & Fesenmaier, 2004). Consumers increasingly rely on online reviews to make a variety of decisions (Dellarocas, 2003). Compared to information provided by sellers, users generally feel consumer reviews to be more familiar, understandable, and trustworthy (Park, Lee & Han, 2007). By reading other people's reviews, consumers can better construct their interpretation of the nature of the products based on the experiences of others, resulting in less perceived risk for their own transactions. Smith, Menon & Sivakumar (2005) found that online consumer reviews reduced consumers' number of searches and time spent in searching for a restaurant. Moreover, consumers were more likely to choose the recommended restaurant when positive online recommendations were present. Put simply, online reviews can help consumers make more informed decision and do measurably affect their purchase intention.

Messages from different information sources are assigned different weights by consumers. Some studies find that consumers prefer recommendations of their peers as a

major information source (Smith, Menon & Sivakumar, 2005). Even when the recommender is described as being low in rapport and expertise, consumer recommendations are still used more than editorial recommendations (Smith, Menon & Sivakumar, 2005). Other researchers have reached a different conclusion. Senecal & Nantel (2004) found that online recommendation systems are the most influential source in consumers' product choice processes, although peer consumers were perceived as being more trustworthy. Therefore, it remains controversial which information source is more important in consumers' decision making.

Although website recommendations and consumers reviews tend to reduce the number of choices that a consumer considers, consumers may still be overloaded with information such as average ratings, quality of reviews and numbers of reviews, due to the large number of websites that offer recommendations and the conflicting consumer reviews. Besides, narrative comments also convey rich information that cannot be captured in numerical ratings (Pavlou and Dimoka, 2006). What are different types of online reviews and recommendations? Researchers find that a high number of positive customer reviews vis-à-vis negative reviews could positively influence consumers' product choice (Huang & Chen, 2006). In addition, both the quality and the quantity of online consumer reviews may affect consumers' product purchasing intention (Park, Lee & Han, 2007). Researchers have reached different conclusions regarding the number of reviews and the average ratings those reviews contain. Some find that the quantity of reviews has a stronger effect (Liu, 2006) while others find that the average ratings of the reviews play a more important role (Dellarocas, Zhang & Awad, 2007).

Consumers have limited cognitive resources. Described as “cognitive misers” (Fiske and Taylor, 1984, p12), they only spend the efforts necessary to make a satisfactory decision rather than an optimal decision. When consumers are overloaded with information, they tend to process information heuristically rather than systematically (Chaiken, 1987). The term “heuristics” refers to the general rules of thumb that people rely on to arrive at their judgment (Tversky & Kahneman, 1974). For example, rather than spending efforts to scrutinize all information to reach a judgment, a consumer will simply agree with majority opinion based on the heuristic, e.g. “Majority opinion is correct”. Lack of motivation, time, opportunity and knowledge is often the reason for using heuristics (Chaiken, Liberman and Eagly, 1989; Petty and Cacioppo 1984, 1986). These heuristics may result in less accurate decisions and biased responses (Johnson, Payne and Bettman, 1988), but consumers are willing to sacrifice some benefits to conserve cognitive efforts. Researchers have examined heuristics for evaluating Internet health information (Fritch, 2003) and online news (Sundar, Knobloch-Westerwick and Hastall, 2007), but no research has examined the heuristics of using website recommendations and online reviews.

In order to further examine how consumers use online reviews and website recommendations, the authors conducted this study using mixed methods. It examines how consumers use online reviews and website recommendations when they plan a trip overseas. Based on the foregoing discussion, the study intends to examine the use of

online reviews and recommendations when searching for travel products. Thus, the main research questions the authors have tried to address in this study are:

R1: What are the sources of the online reviews and recommendations for travel products?

R2: To what extent do the subjects rely on the online reviews and recommendations?

R3: What heuristics do the subjects employ when using the online reviews and recommendations?

III. Methodology

In this research, a quasi-experiment was conducted by asking some American students to plan a week's trip to China via the Internet. Although this is not a representative sample, considering the purpose and exploratory nature of this study, college students, a relatively homogeneous group, are deemed to be appropriate subjects. In this study, 34 undergraduate students (mostly sophomores, juniors, and seniors in business-related majors) from a southeastern public university participated in the study. They were recruited for this study with the incentive of one extra credit for a course. After filling out the informed consent form, the subjects were first told about the goal of the study and ensured of their confidentiality. The subjects were then asked to fill out an online survey. The goal of this pre-exercise survey was to collect each subject's individual characteristics, including their travel experience and their familiarity with China.

After the initial survey, the subjects were asked to familiarize themselves with the think-aloud method as prescribed by Ramey & Boren (2001). This was done by asking them, prior to their trip planning exercise, to find the local weather online. After this, a travel planning exercise to China was conducted; the subjects were told to plan a week-long (December 15th to December 22th) trip to China for their winter break. Each individual needed to decide where to visit during the stay in China. The subjects were asked to find the cities they planned to visit and the attractions and restaurants in each city they would like to visit. Due to time limitation, the subject was asked not to worry about airline tickets and hotel rooms. Although researchers found that the goal of the major proportion of information searches online is to find accommodations and flights, a significant number of travelers also search for activities, attractions and events (Jun, Vogt & Mackay, 2007). The whole session lasted less than one hour, in which the travel planning exercise was limited to 50 minutes. During this process, one researcher sat beside the subject and took notes; the researcher remained quiet except when the subjects stopped verbalizing their experience. In the latter cases, the researcher would remind the subject to keep talking. In total three researchers participated in the 34 sessions. A screen capturing software, Camtasia Studio, was used to capture their online activity into a movie file (TechSmith, 2006) and parental control software, PC Tattletale (PC Tattletale, 2006), was used to capture the web pages the subjects had accessed.

IV. Data Analysis

After the study was conducted, a transcription of proceedings was developed which incorporated both the think-aloud protocol and the process tracing method in an Excel

format. This coding was done first independently by two researchers and one external coder who independently coded the verbalizations and participants' on-screen actions. The data was coded using the open-coding process as described by Straus (1987). In this process the research began by open coding whereby the researchers examined the field notes, transcripts and the log for each interview, looking for 'fractures' in the data. The researchers then met and discussed individual interpretations. This was an attempt to develop inter-rater reliability. It was based on these discussions that specific words, phrases and actions were identified as being part of a category. Core categorizations were developed and agreed upon by the research team. The core categories for this study include technical usability, cultural usability, use of online reviews and recommendations, information search pattern and destination image. Further subcategories were also defined for technical usability and cultural usability.

The analysis then went into a second phase where closed-coding took place. In this phase specific words, phrases and actions were identified as being part of a categorization. Every interview was coded by two researchers who then compared coding sheets to ensure consistency. In times where there was dispute between coders, a third coder was brought in (Huberman & Miles, 1994). A unified code book was then developed and key source quotes which represented the categorizations were identified and agreed upon by all of the participating coders. .

Description of Sample Population

In the pre-exercise survey, students were asked to list the cities or tourist attractions of China, in order to assess their pre-existing tourism knowledge of China. Of the 34 subjects in the pre-exercise, two subjects had been to China before. Their data was

excluded from this analysis, as they had a much higher level of baseline knowledge about the destination. Among the 32 remaining subjects, five could not list any attractions in China. Sixteen of them only listed the Great Wall, and only four subjects correctly listed more than two attractions. This shows that overall, the subjects had a very low level of pre-existing tourism knowledge about China.

Among the 32 subjects, 15 of them were males and 17 were females. Regarding travel experience, each subject took an average of 5.2 pleasure trips last year; in an average year, each of them takes 5.3 trips. On a scale of 1 to 7 (from “1: not at all” to “7: definitely”), they consider themselves as rather experienced travelers (an average score of 5.0).

On average the subjects had 12.5 years of experience using a computer; they have used the Web for approximately 9.9 years and email for 9.6 years. On average, the subjects accessed their email and the Web more than 6 days a week. Finally, all of the subjects were relatively experienced in searching for travel information online (e.g., 31 out of the 32 subjects had used the Internet to check out destination information before, 29 had booked airline tickets online, and 27 had reserved hotel rooms through the Internet).

V. Results

1. Sources and Types of the Reviews and Recommendations

The examination of screenshots and verbal protocols of the subjects shows that the online recommendations and reviews they used came from different sources. There were mainly

three sources: **other travelers**, **third party websites**, and **travel companies**. An example for the first category is other travelers' reviews for restaurants or activities. Websites such as www.tripadvisor.com provide many reviews from other travelers. Examples of third party websites are www.fodors.com or www.beijingtraveltips.com. These websites are not associated with any travel companies but provide information and recommendations for travelers. An example for travel companies is www.expedia.com. Expedia recommends tours and activities to travelers and people can book tours and activities through the website.

There are at least four different types of online reviews and recommendations for travel products. The first format is website **text recommendations**. Websites use catch phrases to recommend travel products, such as "Best dining places", or "Top N list" or "Best in N days" (where N is usually a number). On Fodors' website, under certain restaurants, it says "Fodor's choice". Another recommendation type is **symbolic recommendations**. Many websites use various visually appealing symbols to make certain attractions salient, such as thumb-up images, red hot pepper image, and bold fonts. The third type is the **numerical ratings** or star ratings from other travelers. Many travel websites ask travelers to rate the travel product on a 1 to 5 scale. Therefore, the subjects can see the numerical ratings side by side with the travel product. The last type is **narrative reviews**. When travelers rate travel products, they usually write a few sentences about their experience (Figure 1).

----- INSERT FIGURE 1 ABOUT HERE -----

2. Reliance on Online Reviews and Recommendations

As the pre-exercise survey indicated, subjects of this study generally had a low level of knowledge about China. When consumers are less familiar with the products, the recommendations and reviews may have more significant influence in their decision making process (Chatterjee, 2001). Therefore, it is not surprising that our subjects relied heavily on online reviews and recommendations. The subjects were very quick to notice all formats of recommendations and they were very prone to click on these recommendations. Consequently, the recommended products were more likely to be selected. For example, www.fodors.com lists restaurants, hotels and nightlife bars in alphabetical order. The list was usually very long and most of the terms were written in a phonetic translation of their Chinese names and did not make sense to the subjects. Since the subjects lacked the necessary knowledge to make their own judgments from the list, they relied heavily on the recommendations. For instance, when subject 4 checked out the nightlife in Beijing, she scrolled down the list and clicked the one specified as “Fodor’s Choice.” All the other items on the list were ignored. On www.travelchinaguide.com, there were thumb-up signs besides certain attractions. Subjects were more likely to click on these attractions. This reveals that online recommendations serve as a fast and frugal heuristic for consumers to make decisions when they have little knowledge on the destination they seek.

Subjects also utilized recommendations from different resources. For example, here is the description of how subject 14 used Fodor’s recommendations and consumer reviews to choose a restaurant: *“This is the list of all restaurants, I am guessing in Beijing. So I will click on some of the choices they recommended here. This says Fodor’s choice.*

(Read over the description) *I am looking at the review. Does not give me too much information I want about the restaurants, but it does give me a phone number, so I will look at a couple of other restaurants before making reservations.*” The restaurant is called Laohanzi with a rating of 3.8 out of 5. However, there was only one consumer review under the restaurant’s description. Although it was Fodor’s choice, the consumer review rating was not particularly high and it lacked details that the subject wanted. In this case, the subject was evaluating both the website recommendations and consumer reviews at the same time.

In fact, online consumer reviews seemed to be the source that provided the most useful information. Subjects expressed great satisfaction when they found a website that provided consumer reviews. When subject 10 searched for Hong Kong activities, he went to www.travel.discovery.com. One of the pages listed the Hong Kong travel activities including entry (the various activities that people can do in Hong Kong), member (which shows the ID of the person who wrote the review), recommendations (highly recommended or recommended) and content ratings expressed by number of stars. Subject 10 was very pleased with the website: *“This place definitely got the hook-ups. It got content rating, member recommendations, member and entry”*.

In contrast, subjects were disappointed when they could not find consumer reviews. Subject 9 liked the website www.chinatravelguide.com and found several restaurants recommended by the website. However, he was disappointed that there was no consumer review: *“Travelchinaguide.com seems to be the most straightforward site. Once again it*

has locations, hours, average cost (of the restaurants). Does not give review or anything, which would be helpful though". Subject 7 expressed his intentions to find reviews when he did not find them on the websites. When he saw a list of Hong Kong restaurants, he commented: "OK I found a list of restaurants. I would write down a few restaurants and make sure that is where I end up. Maybe if I take it a little bit further, I would find some reviews." These incidents show that the subjects expected to read consumer reviews. Online reviews have hence become a necessary source for travel products evaluation.

These results indicate that when planning a trip to a foreign country, the travelers not only rely heavily on online reviews and recommendations, they also actively seek them and they feel disappointed when they cannot locate them. Those opinions and recommendations almost became a necessity for those travel products for this group of subjects.

3. Heuristics in Using Online Reviews and Recommendations

As mentioned earlier, heuristics are the simple rules that a consumer relies on to make a judgment. In this study, the subjects used three heuristics when evaluating online reviews and website recommendations: single criterion stopping rule, credibility heuristics and consensus heuristics (Table 1).

----- INSERT TABLE 1 ABOUT HERE -----

A. Single Criterion Stopping Rule

The single criterion stopping rule means that consumers mainly search information on one criterion and stops when they have enough information on that criterion. In many

decision-making situations, consumers gather information until they believe that information is sufficient. Therefore, a decision is made without acquiring further information on other criteria (Pitts & Browne, 2004). Online consumer reviews usually offer several types of information: numerical ratings of the reviews, the number of reviews, and narrative comments from the peer consumers. The subjects employed the heuristic of the single criterion stopping rule when using the online reviews. In this study, the numerical rating, rather than the total number of reviews or narrative comments, was used as the criterion for processing reviews and recommendations. The numerical rating proved to be the most useful information, helping the subjects to reach a conclusion quickly. The subjects paid close attention to numerical ratings and skipped the total number of reviews and narrative consumer reviews when the numerical rating was low. When there were more positive reviews, the subjects would ignore the negative ones. For example, subject 23 found a list of restaurants in Beijing on the Yahoo travel website. The first restaurant on the list was Afunti restaurant. Overall the restaurant had a review of 4.5 stars with a total of 9 reviews. On the right, the website listed one recent customer's review with a 5 star. *"The first one looks pretty popular so I am going to click on that one... Afunti restaurant. It got 4 and a half stars and some reviews. I am gonna click on the reviews and see. Basically people are saying the food is really good so I think that would be a good place."* However, the third reviewer only gave the restaurant two stars. The subject did not bother to read the negative review. She then chose another restaurant "Quanjude Roast Duck Restaurant". The restaurant had three reviews: a five star, a four star and a three star. The overall average rating was four stars, which was high and sufficient enough for subject 23 to choose the restaurant.

Subject 4 selected Fangshan restaurant from Fodor's. It was not Fodor's choice but it got a high rating: 4.4 out of 5. She read the description of the restaurant and liked it *"traditional snack foods developed to satisfy Empresses Dowager (Cixi' sweet teeth)... I do not know how to say her name but it got high ratings.... I think I will eat at Fangshan restaurant, recommended by Fodors."* After she made the decision, she scrolled down and read the only consumer review. The consumer review was short: *"Ever been waited on by an imperial servant. Exoticism at its peak."* She liked the comments and said *"Great!"*

Subject 21 came across a destination in Hong Kong called "Stanley Market." He said: *"It got Stanley market here. That's probably what I am interested in another country. So I will click on Stanley market. There are some blogs here. (Authors' note: these are actually not blogs but consumers' reviews) This is something I definitely read. If someone says they had a great time, I would write it down and make sure that we will have time to do it."* He only glanced through one review shown on the page: *"Stanley market has strong reviews. So I would write it down and set it up for a day."* In fact, among the five total reviews, the most recent reviews only rated Stanley Market a 2 out of 5. However, since the other four reviews were good, the subject still thought that Stanley market was a place worth visiting.

In this study, subjects ignored the narrative consumer reviews when the numerical rating was low. When subject 14 clicked on the "Red Capital Club" restaurant that said

“Fodor’s choice,” he read the first review “*Does not look like it got very good ratings here. So I do not like this.*” Immediately he clicked off. There were three reviews for the restaurant. The first customer gave “Red Capital Club” a rating of 1 for food, 3 for atmosphere, 1 for service, 1 for value and 1.4 for overall. The second customer gave a 3.6 for overall rating and the third customer gave the restaurant a 1.2 for overall. Dissatisfied with the overall rating, the subject did not read the other two reviews when he was not satisfied with the numerical rating.

B. Credibility Heuristics

Another heuristic that subjects used was credibility heuristics (Chaiken, 1987). Instead of judging the message, consumers relied on a communicator’s credibility as a guide. Website credibility affected how subjects processed consumer reviews and recommendations. In our study, most of the travel websites were found by typing queries into www.Google.com. However, three websites were searched directly by subjects instead of typing in the Google search box: www.expedia.com, www.fodors.com and www.frommers.com. These subjects had used these websites before, had a clear mental model of the organization of these websites and therefore trusted these websites. As a result, they also trusted their recommendations. For example, Subject 4 went directly to Fodor’s website and planned her itinerary based on Fodor’s recommendations: “*The Temple of Heaven. That sounds nice. On day One I will be at the Great Wall. Fodor’s says to do Ming Tomb too so we will check that out*”. This shows that she had prior knowledge of Fodor’s and thought it was a reliable source for traveling information. Before she visited Fodor’s website, Subject 4 had already decided that she was going to

the Great Wall on her first day. However, Fodor's recommended visiting the Ming Tomb and Great Wall at the same day. Without hesitation, she decided to also go to the Ming tomb.

On the contrary, if the subjects did not trust the website, they did not trust the recommendations. Website recommendations could cause distrust in the subjects when they suspected that the recommender was trying to make profit from them. Subject 26 clicked on a sponsored link in Google results after he typed in the key words "attractions in Hong Kong". The link took him to a Hong Kong travel-related website and he clicked the link "things to do best in 3 to 7 days". He was very interested in the title first: *"Things to do best in 3 to 7 days ...That sounds pretty promising right there. I might read that. If you have 5 days and If you have 7 days.... sounds good"*. However, after he read it, he realized that the website was trying to sell some tours. He expressed his disappointment: *"Basically they get me to go to these tourist traps. That sounds pretty bad. They are talking about shopping. I definitely do not want to go shopping in China for polo shirts. I think I will go to a different website."* He clicked back to the search results of the Google: *"I will try one of the unsponsored links."*

This incident showed that subjects did not trust the recommendations from the endorsers when they suspected that the endorsers had incentives to recommend a product. The nature of the sponsored link of Google may have caused subject 26 to doubt the unbiased nature of the information on that website. Although he clicked on the sponsored link, he may still be suspicious of the intention of the website. Overall,

consumers distrust recommendations from the endorsers if they suspect that the endorsers are trying to make profit from them (Mizerski, Golden & Kernan, 1979).

C. Consensus Heuristics

The third heuristic that consumers use in processing information is consensus heuristic (Chaiken, 1987). Consumers are influenced by the reactions of others to the message. If others approve the message, the persuasiveness of the message will be enhanced. In this study, triangulation of recommendations from different websites, if positive, increased the possibility of the recommended item being selected. Since a lot of websites provide similar recommendations on attractions in China, the repetition of the recommended destination motivated subjects to click the link if they had not clicked before. For example, subject 6 mentioned: *"Forbidden city. That was something that was on the other list too. It must be a pretty interesting place."* He then read the description. *"Looks like a tons of history associated with this place. It might be the most historical destination in China. I definitely have to visit it"*. Subject 7 found the recommended attraction "Peak Tram" in Hong Kong and he made the remark: *"Here is the Peak Tram that has come up three times. Now I am gonna read about it. Because if it has come up three times, I am gonna read about it."* Later he even watched an online video clip about Peak Tram.

What these two subjects assume is that if an attraction comes up multiple times in different websites, then it must be a popular attraction. It is interesting to see their search behavior and destination choices being influenced by the multiple recommendations from

different websites. Multiple recommendations also increased the post-selection confidence of the subjects. Subject 18 chose the Afunti restaurant in Beijing from Yahoo! Travel. Later she came across a recommended itinerary in Beijing from Yahoo! Travel and found out the Afunti restaurant is in the itinerary. She said: “*Oh that person also chose Afunti restaurant. I made the right choice*”. What she did not realize is that it was not a traveler’s itinerary, but a recommended itinerary made by Yahoo! Travel website. Yahoo! Travel just put together an itinerary from its own recommended hotels, activities, restaurants and night clubs.

VI. CONCLUSIONS, IMPLICATIONS, AND DISCUSSION

This study presents a qualitative examination of types and resources, and consumers’ decision strategies of online reviews and recommendations. This is one of the first studies that directly observe consumers’ processing approaches in using online reviews and recommendations. Previous research has shown that recommendations and reviews can influence consumers’ behavior. Past studies used archival data and experiments to study online reviews and recommendations, and found inconsistent results on their effect. In addition, few studies have directly examined consumers’ strategies of using online recommendations and reviews, especially in the decision making process. This study fills this gap and directly observes consumers’ use of these tools through video capturing software and verbal protocol analysis.

Research question one inquires about the sources and types of the online review and recommendations for travel product. Our results show the online reviews and

recommendations come from other travelers, travel companies and third party websites. Online reviews can take on types as text recommendation, symbolic recommendation, numerical rating and narrative reviews.

Research question two asked to what extent the subjects rely on the online reviews and recommendations. Our results show that the subjects were very sensitive to any recommendation formats, either linguistic or symbolic recommendations. This shows that due to the constraints of their knowledge of the foreign destination, the subjects regarded the recommenders as a knowledgeable source and relied on the reviews and recommendations for trip advice. Among all the reviews and recommendations, consumer reviews were considered the most valuable source of information. For example, the subjects relied more on consumer reviews rather than website recommendations when choosing a restaurant. They showed their disappointment when they could not find consumer reviews. This is consistent with previous results reported by Smith, Menon & Sivakumar. (2005).

Research question three intends to examine the heuristics used in using online reviews and recommendations. Results from this study suggest that at least three heuristics may be used when subjects process online reviews and recommendations. The first heuristic rule is single criterion stopping rule. When processing consumer reviews, the numerical rating was used as a simple criterion most of the time. When the numerical rating was low, the subjects would simply ignore the travel product; when the numerical rating was high, the subjects typically adopted the recommenders' suggestion even when there were

not many reviews. The numerical rating proved to be the most important criterion. Although the narrative reviews were a signal for the quality of the review, most of our subjects did not take review quality into consideration. The second heuristic used is credibility heuristic. The subjects trusted the recommendations if they trusted the websites. However, they distrusted the recommendations if they suspected any commercial purpose. The third heuristic is consensus heuristic. The subjects used multiple sources to choose travel products including website recommendations from independent third parties, travel business reviews and the consumer reviews. When they found out that one product was recommended by multiple sources, they had more confidence in choosing that product.

This study makes several contributions to academia. First, little research has identified the heuristics that consumers use when encountering online reviews and recommendations. This study provides insights on how travelers constructed their mental shortcuts when processing online recommendations. Second, previous research has reached inconsistent findings regarding the effect of numerical ratings of reviews and the quantity of reviews on sales (Liu, 2006; Dellarocas, Zhang & Awad, 2007; Hu, Pavlou & Zhang, 2006; Chen, Wu & Yoon, 2004). In this study the numerical rating was found to be much more influential than the quantity of reviews during consumers' decision making process. In most of the cases, the numerical rating of the consumers' review determined if a product was adopted by the subject, or at least incorporated in their choice set.

This study has important practical implications for tourism practitioners. First of all, travelers' active seeking of reviews and recommendations, and disappointment upon not finding them, indicate the necessity of providing those types of information. In fact, consumer reviews have been identified as a new element of the marketing communication mix (Chen & Xie, 2004). It might be a good idea to have consumer reviews on any type of hotel, restaurant, or Convention and Visitors Bureau websites. However, how to stay neutral and respond to negative reviews or ratings would be a challenge, as there would naturally be a bias toward posting only positive reviews. Second, reviews from consumers and recommendations from the travel agents or tourism organizations need to appear on multiple websites, especially the third party ones. That way, the travel products will gain greater visibility and the travelers' trust in the travel products will increase significantly. This highlights the increasing importance of certain types of marketing methods, such as press releases, reviewer trips/stays, membership of any associations, and any ratings from a third-party. These practices will solicit more opinions from different parties. Third, since travelers trust the messages based on the communicators, not all reviews and recommendations are good. Tourism marketers need to actively seek reviews and recommendations from trustworthy and quality organizations or websites. Those opinions or recommendations from suspicious websites will not boost travelers' trust and convert them; on the other hand, they may just turn travelers away.

VII. LIMITATIONS OF THE STUDY

The study is exploratory and qualitative in nature and has its limitations. Thus, the results must be interpreted cautiously. Like any controlled experiments in a lab, this study is subject to the artificiality of the settings. Other information sources, such as travel agencies, families and friends, telephones, and published travel books, were excluded from the travel planning exercise. The subjects were given limited time (50 minutes), as opposed to weeks and months, to plan a one-week vacation to a foreign, unknown country. If they were going to be spending their own money to really do this, there would probably be greater care taken when gathering information. Specifically, questions are raised related to whether the simulation used in this study would yield results comparable to the decision-making and search processes subjects would engage upon on their own. While the technique in previous studies (Pan & Fesenmaier 2006; Backlund, Skaner, Montgomery, Bring & Strender, 2003) has been found to deliver desirable results, the potential artificiality of the environment needs to be addressed.

Further, this study drew the sample from a student body from a southeastern university in the United States. Subjects of this study are younger, better educated, and more technology-wise than many American travelers. As a result, their experience and obstacles encountered in this study may not realistically reflect the usability of the Internet as a trip planning tool.. Moreover, the study only used China as the destination. Therefore, the external validity of the study may be questioned. Finally, since the online trip planning task was not personally relevant to the subjects, i.e., they did not actually plan a trip for a destination to which they necessarily wanted to travel, the subjects had a relatively low motivation in the task. Future research should investigate how consumers

process online reviews when they are highly motivated. For example, the quantity of reviews may be more influential when consumers are highly motivated to plan a trip of their own.

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Figure 1. Sources and Types of Online Review and Recommendations

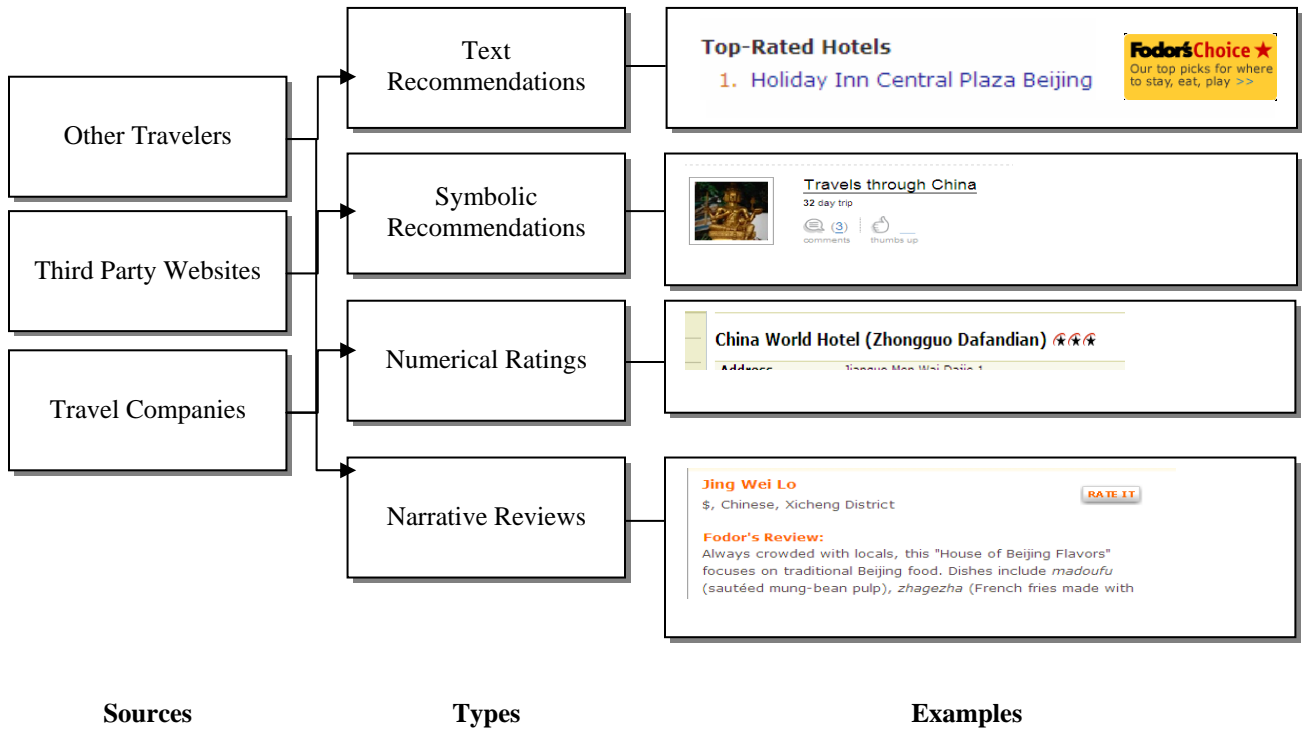


Table 1. Decision Heuristics in Using Online Reviews and Recommendations

Rules	Description
Single criterion Stopping rule	Consumers search information on one criterion and stops when they have enough information on that criterion
Credibility heuristics	Judging the credibility of the message based on its communicator's credibility
Consensus heuristics	The positive consensus of recommendations from different websites increased the possibility of the recommended item being selected