



UNIVERSITY OF LEEDS

This is a repository copy of *Adapting to social media: the influence of online reviews on tourist behaviour at a world heritage site in China*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/176982/>

Version: Accepted Version

Article:

Xu, H, Lovett, J orcid.org/0000-0002-5839-3770, Cheung, LTO et al. (3 more authors) (2021) Adapting to social media: the influence of online reviews on tourist behaviour at a world heritage site in China. *Asia Pacific Journal of Tourism Research*, 26 (10). pp. 1125-1138. ISSN 1094-1665

<https://doi.org/10.1080/10941665.2021.1952460>

© 2021 Asia Pacific Tourism Association. This is an author produced version of an article published in *Asia Pacific Journal of Tourism Research*. Uploaded in accordance with the publisher's self-archiving policy.

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Xu, H., Lovett, J.C., Cheung, L.T.O., Duan, X., Pei, Q., Liang, D. In press. Adapting to Social Media: The Influence of Online Reviews on Tourist Behaviour at a World Heritage Site in China. Asia Pacific Journal of Tourism Research. <https://doi.org/10.1080/10941665.2021.1952460>

Adapting to Social Media: The Influence of Online Reviews on Tourist Behaviour at a World Heritage Site in China

Author Information

Han Xu^a

Ph.D, School of Geography, University of Leeds

Email: gyhx@leeds.ac.uk

Jon Lovett^a

Professor, School of Geography, University of Leeds

Email: j.lovett@leeds.ac.uk

Lewis T.O. Cheung^{b*}

Associate Professor, Department of Social Sciences, The Education University of Hong Kong

Email: ltocheung@eduhk.hk

Xialei, Duan^c

Assistant Professor, Faculty of International Tourism and Management, City University of Macau

Email: sallyduan@cityu.mo

Qing Pei^b

Assistant Professor, Department of Social Sciences, The Education University of Hong Kong

Email: qingpei@eduhk.hk

Dan Liang^d

Assistant Professor, School of Public Policy, Xiamen University

Email: liangdan@xmu.edu.cn

*corresponding author

^a School of Geography, University of Leeds, Woodhouse, Leeds LS2 9JT, United Kingdom

^b Department of Social Sciences, Education University of Hong Kong, 10 Lo Ping Rd, Ting Kok, Hong Kong

^c Faculty of International Tourism and Management, 4th Floor, Choi Kai Yau Building, Avenida Padre Tomás Pereira, Taipa, Macau

^d School of Public Policy, Chengzhi Building, Xiamen University, No. 422, Siming South Road, Xiamen, Fujian, China

Funding

This work was supported by the Education University of Hong Kong under Departmental Special Research Grant 04213.

Acknowledgements

The authors would like to thank the student research assistants of the Xiamen University for helping in questionnaire surveys and the funding support from the Departmental Special Research Project provided by the Department of Social Sciences of the Education University of Hong Kong.

Declaration of interest : None

- ✓ Author Agreement: All the authors of this paper have seen and approved the final version of the manuscript being submitted.
- ✓ Conflict of Interest: None
- ✓ Permission Note: All materials in this manuscript are original content.

Adapting to Social Media: The Influence of Online Reviews on Tourist Behaviour at a World Heritage Site in China

Abstract

Extending narrative transportation theory, the purpose of this study is to examine the effect of online reviews on destination choice and purchasing behaviour at a destination and to clarify the role of prior destination knowledge and perceived usefulness of online reviews. Data were collected from 432 tourists in Gulangyu, a UNESCO World Heritage Site in China. The results of structural equation modelling analysis validate the positive effect of online reviews on tourists' destination choice and purchasing behaviour. This study offers both theoretical and policy implications to understand how tourists reference online reviews to make travel-related decisions.

Keywords

destination choice, destination knowledge, decision making, narrative transportation, online reviews, social media, tourism marketing, tourist choice, tourist behaviour, usefulness of online reviews

Introduction

Online reviews are considered important for marketing and promotion of products and services (Chakraborty, 2019). It is valuable for tourists to be able to assess the quality of products and services before consumption (Lee, Hu, & Lu, 2018). Online reviews have not only provided real-time travel information for travellers to help them plan their itineraries

(Marchiori & Cantoni, 2011) but have also potentially stimulated travellers' interest in visiting a destination and eventually influencing their purchasing intentions at the destination (e.g., booking a certain hotel and buying recommended souvenirs (Frost, 2010; Yen & Teng, 2015)). In this era of social media, tourism-related businesses are no longer the only promoter and controller of the image of their destinations and products (Mavragani, Nikolaidou, & Theodoraki, 2019); destination knowledge and image can also be shaped by tourists' comments on an online social media platform. Understanding how online reviews influence tourist decision making thus becomes an important consideration for destination managers and tourism businesses for adapting their strategies in a competitive global environment with increasingly sophisticated consumers (Law, Buhalis, & Cobanoglu, 2014).

Researchers have used an experimental design to explore the influence of narratives on the formation of brand image and the intention to visit (Wong, Lee, & Lee, 2016). However, limited efforts have been made in media tourism to interview actual tourists and examine how online reviews persuade potential tourists to visit a destination and subsequently purchase relevant travel products at the destination.

The current work aims to address this gap in understanding the persuasive impact of online reviews on tourists' actual decision-making process. We adopted narrative transportation as the main theoretical lens of this study as we believe that narrative transportation theory can be fully applied to understand tourists' destination choices and buying behaviours. This study therefore chose travellers in Gulangyu who used online reviews to plan their trips as research subjects, aiming to explain how online reviews with narrative descriptions of specific places can affect travellers' destination choices and

purchasing behaviours at the destination.

The remainder of the current study is organized as follows. The literature and theoretical background are reviewed and discussed in the next section. Then, the methodology and results are presented. Finally, the implications and limitations of the current study's findings for future studies are discussed.

Literature Review

Online Review

The importance of online reviews in tourists' decision making can be summarized into the following three main considerations: first, tourism-related products and services cannot be experienced and so cannot be evaluated before consumption (Schmallegger & Carson, 2008); thus, tourists heavily rely on the knowledge and experiences of others (Mehraliyev, Choi, & King, 2020). Second, travel-related consumption is normally not a single purchasing decision but includes a series of travel decisions, including selecting destinations, booking hotels, planning travel routes, buying tickets, and choosing local restaurants. Seeking to make the best travel decisions and make the most of their experience, tourists read reviews and comments from fellow tourists to reduce risks and uncertainty (Chung & Koo, 2015). Third, reviews from tourists who have purchased the product or service are deemed honest and trustworthy, so potential tourists in the planning stage of visits rely on them as a dependable source of information in making travel decisions (Cox, Burgess, Sellitto, & Buultjens, 2009).

The impact of online reviews on travellers' decision-making processes has been recognized by marketing scholars. A few studies have made valuable contributions to the understanding of online review usage and adoption by potential tourists, including evaluating

different impacts of positive and negative reviews on purchase intention, investigating the impacts of online reviews on tourists' attitudes towards destination hotels, and examining the influence of travellers' trust in online reviews on their behavioural intention (Kim & Kim, 2020; Tan, Lv, Liu, & Gursoy, 2018; Vermeulen & Seegers, 2009). Another group of researchers has drawn upon the heuristic-systematic model to identify factors that likely influence the perceived usefulness of consumer reviews, such as website credibility, review length, receiver–source similarity, product type, content characteristics, and valence (Kim, Cheong, & Kim, 2017; Purnawirawan, Eisend, De Pelsmacker, & Dens, 2015; Willemsen, Neijens, Bronner, & De Ridder, 2011). While numerous academic studies assume that online reviews drive consumer choice, and some review characteristics are categorized as useful cues affecting information persuasiveness, tourists do not follow a standard mode of information processing. Instead, they are more likely to make travel decisions based on their subjective standards and the context, such as interests and trip purpose. So it is pertinent to ask: what is the general mechanism by which online reviews persuade prospective tourists to make subsequent travel decisions?

Online travel reviews capture storytellers' accounts of destinations or travel products, creating a storytelling experience (Kim, Park, Yun, & Yun, 2017). When online reviews represent a destination, their content enables the audience to travel mentally and emotionally (i.e., experience touristic activities) during story reception (Tussyadiah & Fesenmaier, 2009; Van Laer, De Ruyter, Visconti, & Wetzels, 2014). The process by which people obtain a virtual experience through online reviews can be called “narrative transportation” (Van Laer et al., 2014). Narrative transportation theory provides a good explanation of how online

reviews help tourists form mental images and gain knowledge of a location even if they have not been there. Additionally, the perceived usefulness of online reviews has been found to significantly impact consumer choice (Kucukusta, Law, Besbes, & Legohérel, 2015; Purnawirawan, De Pelsmacker, & Dens, 2012). Therefore, it can be assumed that destination knowledge and perceived usefulness of online reviews play a mediating role in online review transportation and tourist decision making.

Narrative Transportation

Narrative transportation is a concept from media and social psychology research, defined as individuals' immersion or engagement in a story (Green & Brock, 2000). This concept suggests that once individuals are "transported" into a narrative world, they experience high cognitive and affective engagement (Green & Clark, 2013), resulting in a story-related attitudinal and behavioural change (Escalas, 2007). It has been noted that people can be affected by narratives through watching, listening, and reading (Green & Brock, 2000).

Narrative transportation theory seeks to explain narrative persuasive effects through a different mechanism from well-known theories such as social cognitive theory, dual systems theory and cure exposure theory (Green & Sestir, 2017). Scholars in marketing (Green & Brock, 2000) and psychology (Hamby, Daniloski, & Brinberg, 2015) have researched narrative transportation to explore factors that affect it and explain narrative persuasive effects on attitudes and behavioural change. Specifically, studies have examined the role of narrative transportation, narrative types and audience factors (e.g., interviewer age)

influencing narrative transportation (Green, 2004; Rozier-Rich & Santos, 2011) and paths between narrative persuasion and outcomes (Banerjee & Greene, 2012; Van Laer, Feiereisen, & Visconti, 2019).

To explore the general mechanism in and process of narrative persuasion, Hamby et al. (2015) proposed the transportation-reflection-behaviour intention model. The model suggests two key processes for narrative persuasion – transportation and reflection – and assumes that narratives that carry information about the real world “transport” readers in a plausible experience of others (Deighton, Romer, & McQueen, 1989). Hence, narratives can have a significant influence on changes in recipients’ beliefs (Escalas, 2007; Green, 2004). While reflection acts as a facilitator between transportation and behaviour intention, it refers to an individual’s ability to link the story world to the real world (Hamby et al., 2015). Reflection is affected by the context and content of the narrative but controlled by audience members (Yukawa, 2006). During the reflection process, individuals evaluate the informativeness of narratives and decide whether and how to incorporate that useful information into a subsequent decision (Park, Lee, & Han, 2007). Thus, the potential outcomes of the reflection process are changes in behaviour and commitment to action (Yukawa, 2006). Although the above theoretical model has been proposed, empirical studies examining the general mechanism of narrative persuasion are still limited.

Academic interest related to narrative persuasion effects in marketing is growing (Wang, Wang, Peng, & Wang, 2020). However, narrative transportation theory has not been widely studied in the tourism field (Chen, Liu, Zhang, & Xiao, 2019). Ryu, Lehto, Gordon, and Fu (2019) suggest that narrative transportation can positively influence the perceived brand

image of a luxury hotel. Wong et al. (2016) note that narratives with different themes can influence readers' perceived destination image and their visit intention. By reviewing 64 papers on tourist imagery processing, Le, Scott, and Lohmann (2019) develop a conceptual framework to understand experiential marketing stimuli (e.g., online travel reviews) and tourist behaviour. However, application of narrative transportation literature is still scarce in hospitality and tourism, and more quantitative and theoretical studies are needed to understand the mechanisms of narrative persuasion.

Influence of Online Reviews on Tourist Behaviour

Online reviews normally refer to relevant content posted by consumers who have purchased and used a product or service (Litvin, Goldsmith, & Pan, 2008). In the context of tourism, online travel reviews are comments on travel products and destinations that tourists have experienced. They can involve the content of travellers' opinions and evaluations about tourism products and services, such as reviews of hotels, restaurants and attractions (Xiang, Du, Ma, & Fan, 2017).

In this research, online reviews are narratives that portray reviewers' personal stories of their consumption experiences (Jurafsky, Chahuneau, Routledge, & Smith, 2014), which simultaneously provide the reader with an opportunity to vicariously experience the product from the writers' perspective (Slater & Rouner, 2002). When potential tourists plan a vacation by reading real travellers' reviews, they engage in mental imagery processing and are transported into a destination-related narrative. Accordingly, online reviews allow consumers to "experience" destinations without actually visiting the physical locations (Buhalis & Law,

2008) and may inform consumers' subsequent travel and purchasing decisions (Alcázar, Piñero, & Maya, 2014).

Such transportation processing is also believed to help potential tourists learn about a travel product or increase their knowledge about a destination (Vermeulen & Seegers, 2009). Such information obtained through reading online reviews can therefore enhance potential tourists' knowledge of the targeted destinations and may facilitate tourists' intention to visit. Positive online reviews may also influence tourists' selection of other tourist services, such as hotels, local tours and restaurants. Based on the above literature, the following hypotheses are established:

H1: Online reviews will positively influence tourists' destination selection.

H2: Online reviews will positively influence tourists' purchasing behaviour.

H3: Online reviews will positively influence tourists' prior destination knowledge.

Influence of Destination Knowledge on Tourist Behaviour

The concept of destination knowledge is borrowed from consumer product knowledge (Keller, 2003). It can be defined as prior knowledge that an individual has about a destination. It is also sometimes referred to as destination familiarity (Gursoy, Del Chiappa, & Zhang, 2018; Tan & Wu, 2016). Compared with traditional channels, the destination knowledge provided by online reviews is not well structured, but it occurs in various forms and is more detailed. Specifically, the travel reviews posted by tourists usually have no unifying themes, but they contain stories, photos, videos, music, and personal movie clips, expressing visitors' opinions, feelings, and understandings about a destination. As such, online reviews aid in

interpretation, using travellers' points of view to disseminate destination knowledge to others.

When online travel reviews can enhance tourists' knowledge about a destination, they may further influence tourists' travel decision making, such as destination selection and tourism product purchases. Aggregated online reviews may highlight some attributes of destinations and tourism products (Pabel & Prideaux, 2016), which serve as “pull factors” to attract tourists to destinations and to purchase the same products as other tourists. Kim, Lehto, and Kandampully (2019) observed that tourists' prior knowledge about a destination can be enhanced when they consult online reviews. Tourists' knowledge of a destination further influences their evaluation of the destination, which translates into their intentions to travel to the destination. Abubakar and Ilkan (2016) reported that tourists' prior knowledge of a destination reduces their perceived risk and facilitates their decision-making about a destination. Ellis and Mattison Thompson (2018) found that tourists' prior knowledge significantly influences their purchasing behaviour regarding wine. Based on the above discussion, the following hypotheses are formulated:

H4: Prior destination knowledge will positively influence tourists' destination selection.

H5: Prior destination knowledge will positively influence tourists' purchasing behaviour.

Perceived Usefulness of Online Reviews

The perceived usefulness of information refers to how consumers evaluate online reviews, which can be regarded as a kind of personal belief or attitude (Willemsen et al., 2011). Despite the recognized narrative persuasive impacts of online reviews (Van Laer et al.,

2019; Wong et al., 2016), prior research suggests that only when reviews are perceived as relatively useful will they facilitate consumers' decision-making process (Purnawirawan et al., 2012; Ruiz-Mafe, Chatzipanagiotou, & Curras-Perez, 2018).

Travellers read online reviews to reduce risk in purchasing experiential goods (e.g., destinations, hotels, restaurants), but online travel-related information overload may increase their cognitive costs (Frias, Rodriguez, & Castañeda, 2008) and result in poor decision making. In other words, when online reviews are most relevant to travellers' preferences, travellers are likely attracted to the destination or tourism products suggested by online reviews and incorporate this information into their decisions. Thus, this study regards the perceived usefulness of online reviews as a traveller's subjective reflection process, which reflects the extent to which online reviews can meet tourists' needs, achieve tourists' goals and subsequently facilitate their decision-making.

Tourist decision making is a negotiation process between tourists' needs and destinations' amenities, while travel information is an influencing factor of tourist behaviour (Karl, 2018). Recent studies have explored the factors affecting the perceived usefulness of online consumer reviews. Content characteristics, such as expertise claims and review valence, are found to significantly influence the perceived usefulness of online reviews (Willemsen et al., 2011). However, the process of how online reviews influence purchase decisions has received less attention. Therefore, based on narrative transportation theory, this study considers perceived usefulness as a mediator between online reviews and consumer behaviour. The following hypotheses are accordingly formulated to explain the narrative persuasion process among tourists in the online tourism context:

H6: Prior destination knowledge will positively influence tourists' perceived usefulness of online reviews.

H7: Tourists' perceived usefulness of online reviews will positively influence tourists' destination selection.

H8: Tourists' perceived usefulness of online reviews will positively influence tourists' purchasing behaviour.

Based on the above hypotheses, this study proposed the following research model **(Figure 1)**.

Research Method

Study Site

This study was conducted on Gulangyu Island, which is a World Heritage Site and one of the most popular destinations in China. Gulangyu is located in southwestern Xiamen city and is only 1.88 square kilometres. It is famous for its architecture, unique history, and large piano museum. The island was home to an international community made up of local people, Chinese people who had returned from living overseas and foreigners. As a place of residence for Westerners during Xiamen's colonial past, the island was the site of consulates, churches, hospitals, schools, and police stations. In the early 20th century, the island attracted elite Chinese people living overseas to return and build private residences on the island, and the characteristics of these buildings demonstrate a mixture of Eastern and Western architectural styles. Gulangyu has more than 2,000 intact historical buildings, making it one of the best-preserved international settlements in China. In 2017, Gulangyu, as a historic international community, was officially listed as a World Heritage Site.

As a tourist destination, Gulangyu has a strong reputation and high visibility on the Internet. According to the report of Ctrip (2017), Gulangyu was the second most popular tourist destination during the 2017 Chinese Lunar New Year, receiving a total of 2.25 million visitors and generating tourism revenue of 2.4 billion RMB during that time. In 2018, Gulangyu was the second most visited UNESCO World Heritage Site, attracting approximately 12 million domestic and foreign visitors (UNESCO, 2018). People come to Gulangyu for its beautiful gardens, winding alleyways, pristine beaches and quiet lifestyle.

During public holidays in China, international musical events, such as the Gulangyu Piano Festival and the Gulangyu Four-Season Music Week, are held on the island. As the summer holiday is one of the two peak travel times of the year for Gulangyu, the authors chose to collect the data over the summer of 2018.

Data Collection

To test the conceptual model proposed above, a structured questionnaire was developed and tested. Prior to the survey, a pretest was performed to check the reliability and content validity of the questionnaire.

The on-site questionnaire was carried out on both weekdays and weekends on Gulangyu Island between June and August 2018. This peak visitation time was recommended by park management to maximize efficiency and ensure the best possible representation of different types of visitors. An on-site intercept procedure was employed at the entrances and exits of tourist attractions in Gulangyu, and before proceeding, we screened the respondents to ensure that all were age 18 or above. It took approximately 20 minutes for each respondent to complete the questionnaire. The surveys were administered by ten trained undergraduate students who well understood the procedure and etiquette of the questionnaire survey. Further explanation was given to the respondents if they requested clarification of the question items. The quality of the responses was checked by the authors. Incomplete and invalid questionnaires were removed. Five hundred questionnaires were distributed, and 439 were returned, yielding a response rate of 87.8%.

Measurement Scales

The design of the question items of each construct was based on an extensive literature review. The items were modified by the authors to fit the research purpose. Apart from the demographic questions, all the other questions on the questionnaire adopted a 5-point Likert scale (from “strongly disagree” = 1 to “strongly agree” = 5). The scale and items used to measure the constructs in this study are displayed in **Table 2**.

Question items measuring online review transportation are adapted from Wong et al. (2016) and Chen et al. (2019) and include seven items. To evaluate tourists' prior knowledge of the characteristics of Gulangyu, questions were developed referring to the Outstanding Universal Value proposed by UNESCO (Gulangyu Wanshi Scenic Management office, 2018). The construct of the perceived usefulness of online reviews was adapted from Liu and Park (2015) and Hu, Liu, and Zhang (2008) but was slightly modified to suit tourism and travel research, such as “Online reviews provided a good reference for me to visit Gulangyu” and “Online reviews were useful in helping me arrange the whole trip”. As this study mainly attempts to examine the influencing effects of online reviews on tourists' destination selection and purchasing behaviour, five items were created to measure the impacts of different forms of online reviews on destination selection, and four items were created to measure the specific purchasing behaviour regarding the main tourism products or services.

Data Analysis

Structural equation modelling (SEM) was used to test the proposed persuasion effects of online reviews on tourists' behaviour in the model. Before performing SEM, a preliminary

data analysis was conducted. Several missing values were identified, but they were deemed trivial; thus, no corrective action was needed. Additionally, the figures for skewness and kurtosis were examined to check for a normal distribution, and they ranged from -0.680 to 0.526 and from -0.647 to 2.3, respectively, in all the constructs (25 items); both fell well within the conventional criteria of Kline (2015) (skewness < 2; kurtosis < 7) for multivariate normality, sustaining the normality condition for the use of maximum likelihood estimation in SEM.

An exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) were conducted to verify the dimensionality of the online reviews. SEM was used to empirically test the direct and indirect effects of online reviews on tourists' destination selection and actual purchasing behaviour using AMOS 21.0 with the maximum likelihood estimation method.

Results

Respondent Profile

The profile of the respondents is shown in **Table 1**. Of the 439 respondents, 59.9% were female, 73.4% were between 18 and 30 years old, 24.3% were between 30 and 50 years old, and only 2.3% were over age 50. In terms of education level, approximately 81.3% of the respondents had a university degree or higher. Fewer had only a senior secondary level of education (13.4%), and only 5.3% had a junior secondary level or less. With respect to occupation, the majority of the respondents were employed (71.3%), followed by students (24.8%). Regarding personal monthly income, approximately 36.7% of the respondents

earned between 3001 RMB and 6000 RMB per month, followed by 3000 RMB and below (27.6%) and 6001-9000 RMB (19.1%). Only 8.2% of the respondents had a monthly income of more than 12000 RMB. Among all the respondents, 412 were nonlocal Xiamen residents (94.1%).

Common method variance

Common method variance (CMV) can be a major concern in self-administered surveys when the data were gathered from the same participants. In the ex-post control procedures for CMV, Harman's single-factor test is frequently employed (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The present study applied Harman's single factor test to provide a check for common method variance. Since Harman's test showed a multi-factor rather than a single-factor solution and the first factor explained only 29.8% (<50%) of the total variance. Hence, common method variance is unlikely to be a pervasive problem in this study.

Measurement Model

The skewness statistics of all the variables of each construct ranged from -0.680 to 0.215, and kurtosis statistics ranged from -0.647 to 2.3, which indicated that the data did not violate the normality assumption. An EFA was then conducted on the subsample (N=200) to purify the structure of the 28-item measurement scales. The Kaiser-Meyer-Olkin (KMO) measure was used to measure sampling adequacy, while Bartlett's test of sphericity was utilized to ensure that sufficient correlations existed among the variables. The KMO value in this study was 0.878 (>0.5), indicating desirable sampling adequacy (Kaiser, 1974), and Bartlett's test

of sphericity was significant ($p < 0.001$), indicating sufficient correlations among the selected variables. Individual KMO values for each variable exceeded 0.5. Therefore, 28 items remained and were subjected to EFA.

Further reduction of items was performed by employing a principal component factor analysis with a varimax rotation. Items with factor loadings lower than 0.5 and items with cross-loadings greater than 0.5 on more than one factor were dropped on principle (Hair, Black, Babin, Anderson, & Tatham, 1998) because items with these characteristics failed to be pure measures of a specific construct. One item was deleted from the analysis because of lower loadings. After deletion, each individual KMO was re-examined in case any item failed to meet the criteria. Ultimately, a total of 25 items remained, and the factorial structure explained 69.28% of the total variance (>cut-off value 60%).

After identifying the five-factor structure, internal consistency was evaluated. The calculated Cronbach's alpha values ranged from 0.827 to 0.916 (> 0.70), representing substantial reliability and internal consistency among the items within each factor.

CFA was conducted on a different sample ($N=439$) to verify the factor structure identified from EFA analysis and to further purify the scale, with all the constructs allowed to freely intercorrelate with one another. The findings indicated an acceptable model fit: $\chi^2=760.56$, $df=335$, comparative fit index (CFI)=0.94, Tucker-Lewis index (TLI)=0.94, and root mean square error of approximation (RMSEA)=0.06. t values for the standardized factor loadings of the items were significant ($p < 0.001$), suggesting that the indicators were representative of each construct.

Construct validity was next assessed to validate the measurement scales. In accordance

with (Campbell & Fiske, 1959), the convergent validity and discriminant validity of the scale were examined. Convergent validity was measured by examining the significance of the factor loadings as well as the average variance extracted (AVE) for each factor (Fornell & Larcker, 1981). As presented in Table 2, the factor loadings for each item were substantial and significant, ranging from 0.51 to 0.90; all the AVE scores were above 0.5, demonstrating sufficient convergent validity. The square root for each construct (see Table 3) was greater than its correlation with other factors (Fornell & Larcker, 1981). Therefore, discriminant validity was also supported. In summary, the 25-item measurement scale exhibited considerable construct validity and reliability.

Structural Equation Modelling

To test the hypotheses, a structural equation model was used. The model fit indices indicated that the model fit the data well for the overall group ($\chi^2=864.34$; $df=267$; $CFI=0.90$, $TLI=0.90$; $RMSEA=0.07$). The hypotheses testing the persuasive effects of online travel reviews on destination selection and tourists' actual purchasing behaviour are reported in Table 4.

Online reviews were confirmed to positively influence prior destination knowledge ($\beta=0.520$, $p < 0.001$), supporting hypothesis 1. However, online reviews did not directly affect impact destination selection ($\beta=0.042$, $p > 0.05$) or tourists' actual purchasing behaviour ($\beta=0.027$, $p > 0.05$), invalidating hypotheses 2 and 3. Prior destination knowledge was found not to impact destination selection ($\beta=0.093$, $p > 0.05$) or tourists' actual purchasing behaviour ($\beta=0.016$, $p > 0.05$), invalidating hypotheses 4 and 5. Tests for

hypothesis 6 showed a positive relationship between prior destination knowledge and tourists' perceived usefulness of online reviews ($\beta=0.351$, $p < 0.001$); thus, the hypothesis was supported. Significant paths emerged between tourists' perceived usefulness of online reviews and destination selection ($\beta=0.166$, $p < 0.01$) and actual purchasing behaviour ($\beta=0.200$, $p < 0.01$); thus, hypotheses 7 and 8, respectively, were accepted.

General Discussion and Conclusions

By expanding narrative transportation theory, the present study intended to explore the general mechanism of how online reviews affect individuals' travel and purchase decisions. It proposed a transportation reflection behaviour model and empirically tested the relationships among online reviews, prior destination knowledge, perceived usefulness of online reviews, destination selection and purchasing behaviour at a destination by using a structural equation modelling approach. The empirical results of this research in the tourism context supported the persuasive impact of online reviews on tourist behaviour and confirmed the mediating role of reflection in the narrative persuasion process.

First, the findings indicate that online review transportation can significantly enhance tourists' prior knowledge about a destination. However, the empirical results show that online review transportation does not have a direct positive effect on tourists' destination selection and purchasing behaviour. These findings are similar to those of Wong et al. (2016), who found that narrative transportation can influence tourists' perceived destination image, but the impacts of travel narratives on tourists' intention to visit depend on the themes of the narrative content. Online reviews about a travel destination can serve as a kind of interpretation that includes rich information regarding cultural traditions and local

environments. Such aggregated online travel narratives have the potential to substantially affect tourist destination awareness and enhance tourists' knowledge of a travel destination. According to dual-processing theory (Kahneman, 2011), the results of this study also indicate that tourists are likely to apply an analytic system rather than a heuristic system when they make travel and purchasing decisions. Tourists may assess the quality of the information gathered from online travel reviews and decide whether it is persuasive to inform a subsequent decision. Tourists need to carefully review the online reviews to evaluate and assess whether those comments on destinations, services and products are fair and reliable before making their decision. With flooding of online review, they may need to take extra time to make up their mind.

Furthermore, this study does not find direct effects of destination knowledge on destination selection and purchasing behaviour, meaning that enhanced knowledge about a destination does not transfer to action by tourists. This finding is not consistent with prior studies that indicate that tourists' prior destination knowledge is a powerful predictor of behaviour (Sharifpour, Walters, Ritchie, & Winter, 2014; Wong & Yeh, 2009). This may be due to the fact that purchasing behaviours are a kind of tourist response that requires stronger drivers than knowledge (Bagozzi, 1992). Fair and reliable comments on services and products from the online reviews are playing more prominent role to trigger for making purchasing decision. Although destination knowledge can help tourists shape their impression of what aspects of the destination can be experienced or consumed (Lew & McKercher, 2006), as suggested in previous studies, tourists' travel decisions and actual purchasing behaviours are also constrained by external factors, such as the value for money, quality of service and

scheduling feasibility.

Moreover, the empirical results indicate that destination knowledge can indirectly influence tourists' destination selection and actual purchasing behaviour through tourists' perceived usefulness of online reviews. Consistent with previous findings (Assaker, 2020; Lu, Ye, & Law, 2014), these results confirm the critical role of the perceived usefulness of online reviews in tourists' travel decision making. The perceived usefulness of online reviews is a response to narratives in which weighing online reviews is more relevant to a specific decision (Hamby et al., 2015). Although online travel reviews may offer a comprehensive understanding of destinations and attractions in a convenient form, the quantity of information available online may overload tourists, making them feel confused and lost and resulting in intangible pressure (Bellman, Johnson, Lohse, & Mandel, 2006; Schuckert, Liu, & Law, 2015) and hesitation to make a decision. Therefore, tourists may not make their decision on products and service decision based entirely on the online review. They would rather like to evaluate the usefulness of the online information and make their decision accordingly.

Theoretical Implications

From the theoretical perspective, this research offers a significant theoretical contribution to the body of knowledge on narrative persuasion and tourist behaviour by extending transportation theory in the tourism destination marketing context. First, this study's results empirically support the transportation reflection behaviour intention model in explaining the persuasive effect of online reviews on tourist decision making. Transportation (destination knowledge) and the reflection process (perceived usefulness of online reviews)

are proven to be the core processes in the narrative persuasion mechanism. Second, this study's results reveal a possible tourist decision-making process through which potential tourists' feelings and thoughts induced by online travel reviews are transformed into their travel decisions and actual purchasing behaviour at a destination. There have been limited studies that integrate the constructs of online reviews, destination knowledge, perceived usefulness of online reviews and tourist behaviour into one model to explore the general mechanism of online review persuasion. The proposed model supports the idea that online reviews persuade tourists through mechanism variables of both destination knowledge and the perceived usefulness of online reviews. Third, most research has focused on investigating the impacts of online reviews on single decisions by tourists, such as visiting intention or online hotel booking intention. However, the influenced behavioural intention in the current study is extended beyond single travel-related decisions to a series of travel purchasing decisions at the destination.

Managerial Implications

As online travel review sites are one type of Internet source that can effectively influence travellers, destinations today are facing a variety of new challenges to gain and maintain a competitive advantage. To formulate appropriate destination marketing strategies, tourism operators and destination marketers must understand how online reviews lead to tourist decisions and consumption behaviour. The results of this study have important practical implications for the strategic development of online travel platforms to formulate appropriate destination marketing strategies and improve the service quality of tourism operators.

Online travel reviews themselves are an important starting point in the narrative persuasion mechanism. Online reviews containing real tourists' travel stories enable prospective tourists to review many aspects of a vacation. For destination managers, the findings of this study imply that online travel reviews have the potential to help tourists acquire in-depth knowledge about a destination and attract more visits. Therefore, destination marketers should establish strategies to encourage and guide tourists to actively share their travel experiences on websites. Additionally, destination managers could recruit people with unique travel experiences or bloggers who can share their travel stories about the destination in detail from the tourist perspective, increasing the destination's visibility.

For online travel platforms, the findings of this study imply that the perceived usefulness of information is a strong predictor of travel consumers' decision-making. Therefore, online websites can design peer-reviewing systems that allow people to vote on whether they find a review useful in their decision-making. Websites should also improve their platforms' keyword matching and increase their search engine optimization, which will allow them to provide the most relevant and helpful reviews – and thus the most valuable and reliable information – to website users.

For tourism enterprises, the findings of this study reveal that the potential information extracted from useful online reviews reflects tourists' evaluation of travel products or services, which significantly influences and guides other travellers' decision-making. Identifying popular topics and useful online reviews can help enterprises better and more accurately understand the needs of their customers. Enterprises should also focus on these topics and accordingly design brand advertisements to increase the sales of tourism services and

products.

Limitations and Future Research

This study has several limitations. It collected data from Gulangyu. Gulangyu is a cultural World Heritage Site, and the findings and implications of its online travel reviews may apply only to similar destinations. Moreover, data were collected only from Chinese tourists, and there may be a cultural difference in Chinese tourists' perception of the usefulness of online travel reviews. The effects of online reviews may not be equally important for all tourists; thus, the generalizability of the findings might be extended by examining the impacts of online reviews on tourists' travel decision making across different types of destinations and different populations. Second, this study did not include individual differences, such as personality differences. Future studies could include such factors to understand individual differences in the relationships between online review persuasion and tourists' travel decision making.

References

- Abubakar, A. M., & Ilkan, M. (2016). Impact of online WOM on destination trust and intention to travel: A medical tourism perspective. *Journal of Destination Marketing & Management*, 5(3), 192-201.
- Alcázar, M. d. C. H., Piñero, M. S., & Maya, S. R. d. (2014). The effect of user-generated content on tourist behavior: the mediating role of destination image. *Tourism & Management Studies*, 10(ESPECIAL), 158-164.
- Assaker, G. (2020). Age and gender differences in online travel reviews and user-generated-content (UGC) adoption: extending the technology acceptance model (TAM) with credibility theory. *Journal of Hospitality Marketing & Management*, 29(4), 428-449.

- Bagozzi, R. P. (1992). The self-regulation of attitudes, intentions, and behavior. *Social psychology quarterly*, 178-204.
- Banerjee, S. C., & Greene, K. (2012). Role of transportation in the persuasion process: Cognitive and affective responses to antidrug narratives. *Journal of health communication*, 17(5), 564-581.
- Bellman, S., Johnson, E. J., Lohse, G. L., & Mandel, N. (2006). Designing marketplaces of the artificial with consumers in mind: four approaches to understanding consumer behavior in electronic environments. *Journal of Interactive Marketing*, 20(1), 21-33.
- Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research. *Tourism Management*, 29(4), 609-623.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological bulletin*, 56(2), 81.
- Chakraborty, U. (2019). The impact of source credible online reviews on purchase intention. *Journal of Research in Interactive Marketing*, 13(2), 142-161.
- Chen, Y., Liu, P., Zhang, J., & Xiao, X. (2019). Falling in love with a place because of a song: the transportation effects of music on place attachment. *Asia Pacific Journal of Tourism Research*, 24(9), 882-893.
- Chung, N., & Koo, C. (2015). The use of social media in travel information search. *Telematics and Informatics*, 32(2), 215-229.
- Cox, C., Burgess, S., Sellitto, C., & Buultjens, J. (2009). The role of user-generated content in tourists' travel planning behavior. *Journal of Hospitality Marketing & Management*, 18(8), 743-764.
- Ctrip. (2017). Retrieved from <http://www.pinchain.com/article/101675>
- Deighton, J., Romer, D., & McQueen, J. (1989). Using drama to persuade. *Journal of Consumer research*, 16(3), 335-343.
- Ellis, D., & Mattison Thompson, F. (2018). The effect of wine knowledge type on variety seeking behavior in wine purchasing. *Journal of wine research*, 29(2), 71-86.
- Escalas, J. E. (2007). Self-referencing and persuasion: Narrative transportation versus analytical elaboration. *Journal of Consumer research*, 33(4), 421-429.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- Frias, D. M., Rodriguez, M. A., & Castañeda, J. A. (2008). Internet vs. travel agencies on

- pre-visit destination image formation: An information processing view. *Tourism Management*, 29(1), 163-179.
- Frost, W. (2010). Life changing experiences: Film and tourists in the Australian outback. *Annals of Tourism Research*, 37(3), 707-726.
- Green, M. C. (2004). Transportation into narrative worlds: The role of prior knowledge and perceived realism. *Discourse processes*, 38(2), 247-266.
- Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of personality and social psychology*, 79(5), 701.
- Green, M. C., & Clark, J. L. (2013). Transportation into narrative worlds: implications for entertainment media influences on tobacco use. *Addiction*, 108(3), 477-484.
- Green, M. C., & Sestir, M. (2017). Transportation theory. *The international encyclopedia of media effects*, 1-14, <https://doi.org/10.1002/9781118783764.wbieme0083>.
- Gulangyu Wanshi Scenic Management office. (2018). Retrieved from <http://www.glysyw.com/>
- Gursoy, D., Del Chiappa, G., & Zhang, Y. (2018). Impact of destination familiarity on external information source selection process. *Journal of Destination Marketing & Management*, 8, 137-146.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5): Prentice hall Upper Saddle River, NJ.
- Hamby, A., Daniloski, K., & Brinberg, D. (2015). How consumer reviews persuade through narratives. *Journal of Business Research*, 68(6), 1242-1250.
- Hu, N., Liu, L., & Zhang, J. J. (2008). Do online reviews affect product sales? The role of reviewer characteristics and temporal effects. *Information Technology and management*, 9(3), 201-214.
- Jurafsky, D., Chahuneau, V., Routledge, B. R., & Smith, N. A. (2014). Narrative framing of consumer sentiment in online restaurant reviews. *First Monday*.
- Kahneman, D. (2011). *Thinking, fast and slow*: Macmillan.
- Kaiser, H. (1974). An index of factorial simplicity, *Psychometrica*. vol, 39, 6-31.
- Karl, M. (2018). Risk and uncertainty in travel decision-making: Tourist and destination perspective. *Journal of Travel Research*, 57(1), 129-146.
- Keller, K. L. (2003). Brand synthesis: The multidimensionality of brand knowledge. *Journal of Consumer research*, 29(4), 595-600.

- Kim, K., Cheong, Y., & Kim, H. (2017). User-generated product reviews on the internet: the drivers and outcomes of the perceived usefulness of product reviews. *International Journal of Advertising*, 36(2), 227-245.
- Kim, K., Park, O.-j., Yun, S., & Yun, H. (2017). What makes tourists feel negatively about tourism destinations? Application of hybrid text mining methodology to smart destination management. *Technological Forecasting and Social Change*, 123, 362-369.
- Kim, M., & Kim, J. (2020). The Influence of Authenticity of Online Reviews on Trust Formation among Travelers. *Journal of Travel Research*, 59(5), 763-776.
- Kim, S., Lehto, X., & Kandampully, J. (2019). The role of familiarity in consumer destination image formation. *Tourism Review*, 74(4), 885-901.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*: Guilford publications.
- Kucukusta, D., Law, R., Besbes, A., & Legohérel, P. (2015). Re-examining perceived usefulness and ease of use in online booking. *International Journal of Contemporary Hospitality Management*, 26(5), 727-750..
- Law, R., Buhalis, D., & Cobanoglu, C. (2014). Progress on information and communication technologies in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 26(5), 727-750.
- Le, D., Scott, N., & Lohmann, G. (2019). Applying experiential marketing in selling tourism dreams. *Journal of Travel & Tourism Marketing*, 36(2), 220-235.
- Lee, P.-J., Hu, Y.-H., & Lu, K.-T. (2018). Assessing the helpfulness of online hotel reviews: A classification-based approach. *Telematics and Informatics*, 35(2), 436-445.
- Lew, A., & McKercher, B. (2006). Modeling tourist movements: A local destination analysis. *Annals of Tourism Research*, 33(2), 403-423.
- Litvin, S. W., Goldsmith, R. E., & Pan, B. (2008). Electronic word-of-mouth in hospitality and tourism management. *Tourism Management*, 29(3), 458-468.
- Liu, Z., & Park, S. (2015). What makes a useful online review? Implication for travel product websites. *Tourism Management*, 47, 140-151.
- Lu, Q., Ye, Q., & Law, R. (2014). Moderating effects of product heterogeneity between online word-of-mouth and hotel sales. *Journal of electronic commerce research*, 15(1), 1-12.
- Marchiori, E., & Cantoni, L. (2011). The online reputation construct: Does it matter for the tourism domain? A literature review on destinations' online reputation. *Information*

Technology & Tourism, 13(3), 139-159.

- Mavragani, E., Nikolaidou, P., & Theodoraki, E. (2019). Traveler segmentation through Social Media for intercultural marketing purposes: The case of Halkidiki. *Journal of Tourism, Heritage & Services Marketing*, 5(1), 15-23.
- Mehraliyev, F., Choi, Y., & King, B. (2020). Expert online review platforms: Interactions between specialization, experience, and user power. *Journal of Travel Research*, 60(2), 384-400.
- Pabel, A., & Prideaux, B. (2016). Social media use in pre-trip planning by tourists visiting a small regional leisure destination. *Journal of vacation marketing*, 22(4), 335-348.
- Park, D.-H., Lee, J., & Han, I. (2007). The effect of on-line consumer reviews on consumer purchasing intention: The moderating role of involvement. *International journal of electronic commerce*, 11(4), 125-148.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), 879.
- Purnawirawan, N., De Pelsmacker, P., & Dens, N. (2012). Balance and sequence in online reviews: How perceived usefulness affects attitudes and intentions. *Journal of Interactive Marketing*, 26(4), 244-255.
- Purnawirawan, N., Eisend, M., De Pelsmacker, P., & Dens, N. (2015). A meta-analytic investigation of the role of valence in online reviews. *Journal of Interactive Marketing*, 31, 17-27.
- Rozier-Rich, S., & Santos, C. A. (2011). Processing promotional travel narratives. *Tourism Management*, 32(2), 394-405.
- Ruiz-Mafe, C., Chatzipanagiotou, K., & Curras-Perez, R. (2018). The role of emotions and conflicting online reviews on consumers' purchase intentions. *Journal of Business Research*, 89, 336-344.
- Ryu, K., Lehto, X. Y., Gordon, S. E., & Fu, X. (2019). Effect of a brand story structure on narrative transportation and perceived brand image of luxury hotels. *Tourism Management*, 71, 348-363.
- Schmallegger, D., & Carson, D. (2008). Blogs in tourism: Changing approaches to information exchange. *Journal of vacation marketing*, 14(2), 99-110.
- Schuckert, M., Liu, X., & Law, R. (2015). Hospitality and tourism online reviews: Recent trends and future directions. *Journal of Travel & Tourism Marketing*, 32(5), 608-621.
- Sharifpour, M., Walters, G., Ritchie, B. W., & Winter, C. (2014). Investigating the role of

- prior knowledge in tourist decision making: A structural equation model of risk perceptions and information search. *Journal of Travel Research*, 53(3), 307-322.
- Slater, M. D., & Rouner, D. (2002). Entertainment—education and elaboration likelihood: Understanding the processing of narrative persuasion. *Communication theory*, 12(2), 173-191.
- Tan, H., Lv, X., Liu, X., & Gursoy, D. (2018). Evaluation nudge: Effect of evaluation mode of online customer reviews on consumers' preferences. *Tourism Management*, 65, 29-40.
- Tan, W.-K., & Wu, C.-E. (2016). An investigation of the relationships among destination familiarity, destination image and future visit intention. *Journal of Destination Marketing & Management*, 5(3), 214-226.
- Tussyadiah, I. P., & Fesenmaier, D. R. (2009). Mediating tourist experiences: Access to places via shared videos. *Annals of Tourism Research*, 36(1), 24-40.
- Van Laer, T., De Ruyter, K., Visconti, L. M., & Wetzels, M. (2014). The extended transportation-imagery model: A meta-analysis of the antecedents and consequences of consumers' narrative transportation. *Journal of Consumer research*, 40(5), 797-817.
- Van Laer, T., Feiereisen, S., & Visconti, L. M. (2019). Storytelling in the digital era: A meta-analysis of relevant moderators of the narrative transportation effect. *Journal of Business Research*, 96, 135-146.
- Vermeulen, I. E., & Seegers, D. (2009). Tried and tested: The impact of online hotel reviews on consumer consideration. *Tourism Management*, 30(1), 123-127.
- Wang, L., Wang, X.-k., Peng, J.-j., & Wang, J.-q. (2020). The differences in hotel selection among various types of travellers: A comparative analysis with a useful bounded rationality behavioural decision support model. *Tourism Management*, 76, <https://doi.org/10.1016/j.tourman.2019.103961>.
- Willemsen, L. M., Neijens, P. C., Bronner, F., & De Ridder, J. A. (2011). “Highly recommended!” The content characteristics and perceived usefulness of online consumer reviews. *Journal of Computer-Mediated Communication*, 17(1), 19-38.
- Wong, J.-Y., & Yeh, C. (2009). Tourist hesitation in destination decision making. *Annals of Tourism Research*, 36(1), 6-23.
- Wong, J. Y., Lee, S. J., & Lee, W. H. (2016). ‘Does it really affect me?’ tourism destination narratives, destination image, and the intention to visit: Examining the moderating effect of narrative transportation. *International Journal of Tourism Research*, 18(5), 458-468.
- Xiang, Z., Du, Q., Ma, Y., & Fan, W. (2017). A comparative analysis of major online review

platforms: Implications for social media analytics in hospitality and tourism. *Tourism Management*, 58, 51-65.

Yen, C.-H., & Teng, H.-Y. (2015). Celebrity involvement, perceived value, and behavioral intentions in popular media-induced tourism. *Journal of Hospitality & Tourism Research*, 39(2), 225-244.

Yukawa, J. (2006). Co-reflection in online learning: Collaborative critical thinking as narrative. *International Journal of Computer-Supported Collaborative Learning*, 1(2), 203-228.