



The impact of online reviews on hotel booking intentions and perception of trust

Author

Sparks, Beverley A, Browning, Victoria

Published

2011

Journal Title

Tourism Management

DOI

[10.1016/j.tourman.2010.12.011](https://doi.org/10.1016/j.tourman.2010.12.011)

Downloaded from

<http://hdl.handle.net/10072/42587>

Griffith Research Online

<https://research-repository.griffith.edu.au>

The impact of online reviews on hotel booking intentions and perception of trust.

Authors

Dr Beverley A. Sparks*
Professor of Hotel Management
Griffith Business School
Griffith University
PMB 50, GCMC Australia 9726
Phone: +61 7 5552 8766
Email: B.Sparks@griffith.edu.au

Dr Victoria Browning
Senior Lecturer
School of Management
Queensland University of Technology
GPO Box 2434
Brisbane, QLD 4001, Australia
Phone: +61 7 31382648
E mail: vicky.browning@qut.edu.au

*** Corresponding author**

Acknowledgements: This research was funded by Griffith University's Tourism, Sport, and Service Innovation Research Centre. The authors would like thank Jan Mattsson and three anonymous reviewers for helpful comments on the manuscript. We also acknowledge Rochelle Callaghan who worked as a research assistant on the project.

Sparks, B. A. & Browning, V. (2011). The impact of online reviews on hotel booking intentions and perception of trust. *Tourism Management* ,32, 1310-1323.

Abstract

A growing reliance on the Internet as an information source when making choices about tourism products raises the need for more research into electronic word of mouth.

Within a hotel context, this study explores the role of four key factors that influence perceptions of trust and consumer choice. An experimental design is used to investigate four independent variables: the target of the review (core or interpersonal); overall valence of a set of reviews (positive or negative); framing of reviews (what comes first: negative or positive information); and whether or not a consumer generated numerical rating is provided together with the written text. Consumers seem to be more influenced by early negative information, especially when the overall set of reviews is negative.

However, positively framed information together with numerical rating details increases both booking intentions and consumer trust. The results suggest that consumers tend to rely on easy-to-process information, when evaluating a hotel based upon reviews.

Higher levels of trust are also evident when a positively framed set of reviews focused on interpersonal service.

Key words: Online reviews; E-Complaints; Travel choice; Trust; Electronic Word of Mouth; Consumer generated communication; Hotel bookings

1. Introduction

Imagine for a moment that you are planning to visit another city and need to book a hotel. Not being familiar with the destination you ponder how to make a decision about where to stay. You could ask friends, check out a travel agency, or perhaps do a search on the Internet. What all these strategies have in common is that people often seek the advice of others as part of their decision-making. It is widely recognised that word of mouth, both positive and negative, has the potential to influence customer purchase decisions. Thus, word of mouth communication has been of interest to marketing personnel for some time (Anderson, 1998; Ritchins, 1984). More recently, as a result of easy consumer access to the Internet and the ability to produce online content, a new form of word of mouth has emerged. Commonly known as social media and enabling an extensive distribution of comments, this new channel of communication offers individuals the ability to distribute information via blog sites or specific product review sites (e.g. <http://www.epinions.com/>; <http://www.tripadvisor.com/>; <http://www.virtualtourist.com/>). Hart and Blackshaw (2006) assert: “Where traditional word of mouth is limited by the size of a social network, “*Word of Web*” can include a social network that spans the globe.” (p. 21). Sigala (2010) makes a pertinent observation that many Internet tools now available enable users to create, collaborate, distribute or consume information in cyber space, with important implications for product decision making or purchase.

Consumer access and use of the web present a challenge to businesses as ‘technology reach’ continues to grow. Hennig-Thurau, Gwinner, Walsh and Gremler (2004) have stressed the relevance and importance of research into electronic word of mouth

(eWOM) since people now have the opportunity and ability to post positive or negative consumption-related experiences and evaluations for any interested party to see. For future consumers, these reviews have the potential to enhance or detract from a brand and, consequently, to impact on a firm's reputation. Importantly, eWOM originates from multiple consumers who discuss a range of product attributes in order to give others insight into the target product. Thus, as part of product decision-making or choice, potential buyers can enter a community of past-purchasers to obtain information prior to making a purchase. Traditionally, WOM has influenced consumer information search and buying decisions (Brown, Broderick & Lee, 2007) and it appears more consumers are now willing to rely on eWOM as a key source of information about specific products (Litvin, Goldsmith & Pan, 2008). Thus, understanding eWOM is especially important for those products whereby consumers potentially obtain information (search), book or buy online, such as hotels, airlines and restaurants.

Tourism destination images may be formed through online information and comments (e.g. Li, Pan, Zhang, & Smith, 2009). For researchers and managers, this raises many questions including: How do online blogs or reviews (eWOM) left by past consumers influence future customers? How does the e-context of what is written influence future customer intentions? This paper seeks to understand how a range of factors influence consumer decision-making when searching and purchasing a product online. This current research takes an experimental design approach to test the effects of four key variables inherent within an online review of a hotel. These are: the specific aspect or part of the service offering reviewed (core functional attributes or customer service staff); the overall valence of the available set of reviews (positive or negative); valence

of the information presented first (framed positive or negative) and whether or not easy-to-process graphical information is present (consumer numerical ratings).

Inarguably, consumers are relying more on online search strategies, by using blog pages, forums or review sites when making product decisions (Li & Bernoff, 2008; Xiang & Gretzel, 2010). An enormous growth in online search and review engines, where consumers seem to be willing to search and review products based on a mix of firm and consumer information, now exists and is especially relevant for service-type products, (such as travel, accommodation, computers, phones or banking). As Xiang and Gretzel (2010) note, social media also play an important role as information sources for travellers. This may, in part, be due to consumer need to reduce risk and obtain 'independent' third party opinion regarding online purchasing. As Riegelsberger, Sasse and McCathy (2005) have noted, one component of online trust emanates from reputation of the firm or website. The online eWOM is likely to contribute to the development of reputation and trust.

Consumers may make a post on an online discussion site as part of a retaliation response when they feel betrayed by the organisation (Gregoire & Fisher, 2008; Gregoire, Tripp, & Legoux, 2009) or disappointed by a tourist destination (Buzinde, Manuel-Navarrete, Kerstetter & Redclift, 2010). However, Hennig-Thurau et al. (2004) note the motivation to make a post can be attributed to a multitude of reasons, one of which is concern for other customers. Importantly, future consumers may rely on other consumer reviews as these are seen as relatively unbiased and independent from marketing personnel (Li & Bernoff, 2008). Chen (2008) found that recommendations

of other consumers exerted more influence on product choice than did reviews from expert or firm related advisors. Similarly, in relation to trip planning, Xiang and Gretzel (2010) report on data that suggest a large proportion of travellers use search engines and social media when evaluating a destination.

The content of reviews may vary depending on the product attributes being evaluated. Broadly speaking, for many products, these can be categorised into core functional attributes or more peripheral service experiences. Many review sites comprise a number of reviews on the product, some positive and some negative. In addition, many reviewers provide a numerical rating of the product as part of the review process. Consumers are faced with a range of information that can potentially influence search or purchase decisions. From a business perspective, gaining a better understanding of how communication or informational aspects of product review sites influence consumer choice is vital to further understanding the relationship between online customer reviews and business performance of hotels (Ye, Law & Gu, 2009). Indeed, Ye et al. (2009) conclude that hotel managers need to be more cognisant of what is written about their hotels in third party online reviews.

2. Conceptual Background

This paper seeks to better understand a range of factors that have the potential to influence whether prospective tourists trust a product and would purchase it online. While it is acknowledged that there is a myriad of factors that could be studied within this context, it is only through developing a program of research that researchers can start to isolate and test selected factors. The current study focuses specifically on the

characteristics of online review messages as an influence on consumer decision- making and perception. It complements and adds to the previous tourism specific literature in this field, as an example, some of the recent work by Papathanassis and Knolle (in press, 2010), Vermeulen and Seegers, (2009) and Xiang and Gretzel (2010).

2.1 Booking intent and perceptions of trust

There is wide agreement (Gretzel & Yoo, 2008; Sen & Lerman, 2007) that with the advance of technology (especially the Internet) the information sources available to prospective consumers have grown. For many consumers of tourism or hospitality product a review of what is being ‘said’ in cyber space forms part of the information collection process when selecting a product. This means there is a growing need to understand how various elements of online information search and review influence consumer behaviour (Vermeulen & Seegers, 2009), especially the propensity to book a hotel room. Related to willingness to book is whether or not a potential consumer forms a view that the hotel can be trusted. Sichtmann (2007) and Comegys, Hannula and Väisänen (2009) found that trust in a firm positively affects purchase intentions. As previous researchers (e.g. Sichtmann, 2007) note, marketers often want to reduce potential consumer uncertainty associated with purchasing a product. To do so firms often attempt to build trust in their product.

Sirdeshmukh, Singh & Sabol (2002) define consumer trust as the expectation that a firm is dependable and will deliver on its promises. Wang and Emurian (2005) review the concept of trust in the online purchase space used by companies selling goods or services. They argue that trust is one of the most important factors in determining

whether people will purchase online. While trust can be influenced by the broader context such as the industry itself or by firm level web site design features, it is often the actions of the frontline employee and the firm itself which has the most impact on building trust (Grayson, Johnson & Chen, 2008). Consumer satisfaction in previous interactions with frontline service staff influences cognitive trust, which is consumer confidence or willingness to trust the service provider in the future (Johnson and Grayson, 2005). Consumer reviews, found on travel and hospitality online communities, provide customers with vicarious access to prior service experience on which they can base their belief or trust that a firm will deliver quality service. Chen (2008) also argues that potential consumers use online consumer reviews as one way to reduce risk and uncertainty in the purchase situation. The reviews and recommendations of other customers can assist in determining whether to trust the hotel under consideration. This study investigates how a range of factors could be causally linked to two key evaluations: likelihood of purchase and trust in the target entity. As mentioned, there is a range of potential influencing factors but some that are of practical and theoretical importance include the content or target of reviews, the overall tone or valence of the reviews (as a collection), the framing of the review set (what is read first) and easy-to-process peripheral information such as consumer generated numerical ratings.

2.2 Core features versus customer service staff issues

A service offering such as legal advice, hotel accommodation, or airline travel can be conceptualised as comprising a core and relational component (Iacobucci & Ostrom, 1993). The core of the product is the essential element of what is on offer, for example

legal advice, a room, transport, whereas the relational aspect is the more peripheral element such as friendly or polite customer service. Similarly, other researchers (e.g. Danher & Mattsson, 1998) discuss service offering in terms of tangible features (such as hotel room size, lighting, and furnishings) and person based service (such as a restaurant waiter or hotel receptionist). When discussing service products it is usually acknowledged that most offerings will vary on a continuum from tangible to intangible. Many tourism services, such as hotels, transport or restaurants may comprise a mix of tangible features such as the décor, fittings and fixtures as well as intangible features such as an experience, which may be largely derived from interacting with customer service staff. As one of the seminal writers (Lovelock, 1983) on services marketing argues, customers often have to enter the service factory (e.g. restaurant) and subsequent satisfaction will be influenced by both the interactions with customer service staff and the standard of service facilities.

Extensive research into both service expectations and service failures has classified a range of targets that can trigger customer satisfaction or dissatisfaction. Broadly, these service targets can be either core system type features (e.g. hotel room poorly designed / maintained /cleaned) or more staff level customer service events (Hoffman & Bateson, 2006; Keaveney, 1995). Thus, for example, within a hotel context, a core failure could be an unexpectedly small or dingy room, or not being able to check into a room.

Interpersonal service shortcomings could include a frontline service provider's poor communication style (i.e., being unfriendly, or rude) (see for example, Stringham & Gerdes, 2010). A review of online commentary suggests that both positive and negative reviews tend to be categorized around these two dimensions. Harrison-Walker (2001)

found many reviews related to employee rudeness, similarly Lee and Hu (2005) found e-complaints included a decline in service quality, rude frontline service representatives and service not being provided at all. Sparks and Browning (2010) report the majority of hotel reviews analysed in their study were either about core functions of the hotel (dirty rooms, malfunctioning equipment) or customer service (unpleasant interactions with staff). Bitner, Booms, and Tetreault (1990) have argued that service interactions are especially important as an evaluating mechanism for firms, as staff represent the ‘face’ of the firm. Further, Danaher and Mattsson (1998) classify service delivery dimensions, such as friendliness, as an emotional evaluation, which is believed to be more likely related to building a relationship of trust, than the more practical evaluations made about the functional aspects of a product. Thus, it is argued in this paper that reviews about either core attributes of the product or service staff elements will have an effect on consumer perceptions of the hotel but those about staff or interpersonal aspects of the service will have a greater effect than core or functional reviews.

2.3 Valence

Online reviews not only vary in content but also vary in the valence of the success or failure of the product. It is possible that the overall reviews for any given product can be predominantly positive or negative. Positively valenced communication is likely to be characterised by pleasant, vivid or novel descriptions of experiences, whereas negatively valenced communication is likely to include private complaining, unpleasant or denigrating product descriptions (Anderson, 1998). The overall valence of a communication could also be neutral but this is less likely given the impetus for writing

a review is most likely to be due to a deviation from the norm resulting in disconfirmation of expectations; that is, the experience is likely to be either good or bad. Ye, Law and Gu (2009), using hotel data, report that *positive* online reviews contribute significantly to an increase in hotel bookings. However, research suggests that negative information tends to be over emphasised and is more influential in forming impressions (see Fiske, 1993). Furthermore, Smith, Bolton and Wagner (1999) note, service failures are perceived as losses and receive a more negative weighting from a consumer. Similarly, it is argued that predominantly negative reviews will be given more weighting than positive reviews. This is consistent with Papathanassis and Knolle's (in press, 2010) grounded theory based study that revealed a tendency for negative reviews to have more impact than positive reviews and Lee, Park and Han's (2008) finding that as the proportion of negative reviews increased so too did consumer negative attitudes.

2.4 Framing

Most information is embedded within a larger dialogue (e.g. several reviews) and consumers need to extract pertinent points from that dialogue. Consumer researchers (e.g. Dardiz & Shen, 2008; Donovan & Jalleh, 1999; Levin & Gaeth, 1988) have drawn on literature to demonstrate the role of framing in consumer decision making. Framing within the context of these studies has tended to draw upon the seminal works of Kahneman and Tversky (1984). As Donovan and Jalleh (1999) assert, framing can be conceptualised as the manner in which information is presented. In a study by Levin (1987), a framing effect was found whereby evaluations of the target received higher ratings with positive frames. The present study defines framing based on whether the information present is positively or negatively valenced. Framing has an especially

strong effect on evaluation in the absence of direct first-hand experience (see for example, Levin & Gaeth, 1988). Related literature in the field of social cognition on primacy effects (Pennington, 2000), also lends support to the manner in which information is presented as an influential factor in shaping evaluation. More specifically, “Research ... has consistently demonstrated a primacy effect: Information we receive first has a greater impact on the impression formed than information coming later” (Pennington, 2000, p. 77). Hartman, De Angeli and Sutcliffe (2008), in a study investigating information biases on website quality judgements, found framing influenced respondent service quality evaluations. Positive frames resulted in significantly higher evaluations of service quality than the same content presented with a negative frame. A reasonable expectation might be that product reviews framed positively or negatively will influence the judgement a prospective customer makes, and negative framing will have the greater effect. In justice literature there has been some research that suggests that evaluations are influenced more by what comes first than what is received subsequently (van den Bos, Vermunt & Wilke, 1997). Although not directly covered in our research, the online search process could include multiple points or opportunities for framing. For example, a consumer could initially go into a review site and see positively framed reviews and subsequently review the site several days later and find the reviews to be negatively framed. In sum, information received early, especially if negatively worded, is likely to be more influential on consumer evaluations.

2.5 Using categorical information for efficiency

Another factor that may affect consumer evaluation or choice is the addition of easy-to-process graphic information such as numerical or star ratings. It has been suggested that people tend to be 'cognitive misers' (Fiske & Taylor, 1991), that is, they take short cuts when making evaluations or decisions. Pennington (2000) argues that cognitive misers take shortcuts when making judgements and may rely on readily accessible informational cues. Similarly, drawing on the person perception literature (e.g. Macrae & Bodenhausen, 2001), it is possible that consumers may use categorical thinking processes when making sense of information in order to make overall evaluations.

Other researchers (van Schaik & Ling, 2009), report that in contexts where the consumer is in a goal oriented mode (e.g. such as making a booking), an easy information processing approach is preferred. Reliance on easy to evaluate information, such as general category ratings (e.g. star ratings for hotels or customer ratings of products) may have a greater influence on product purchase decisions compared with more detailed information. Such an approach is an efficiency tool that can be easily employed when an individual is faced with a large quantity of information. One piece of information that is often salient on review web-sites is a rating system - usually numerical in form. A common example is a number out of five or ten. Ratings tend to be quite influential in product choice (Chen, 2008) and provide potential customers with a short-cut means to assess and evaluate a product (Tsang & Prendergast, 2009).

Furthermore, it has been demonstrated that hotels with higher online star ratings receive more online bookings (Ye et al., 2009).

Hypotheses

H1: The *target* of the content of review – core or staff – will affect customer (1a) willingness to make an online hotel booking and (1b) perceptions of trust in a hotel.

H2 : The overall valence of a set of hotel reviews will affect customer evaluations, with (2a) a willingness to book online being higher when hotel reviews are predominantly positive than when the reviews are predominantly negative and (2b) trust in a hotel being higher when hotel reviews are predominantly positive than when the reviews are predominantly negative.

H3: When the overall valence of the set of reviews is held constant, a series of hotel reviews that is *framed* with negative reviews results in (3a) a lower level of willingness to book the hotel than when the reviews are *framed* with positive reviews and (3b) lower levels of trust in the hotel than when the reviews are *framed* with positive reviews.

To test the notion that more extreme combinations of framing and valence (positive plus positive or negative plus negative) would affect the dependent variables, we formulated hypotheses 4a and 4b.

H4: Framing will interact with valence so that (4a) a set of reviews framed positively and valenced overall good will be evaluated more positively than the other three conditions; and (4b) a set of reviews framed negatively and valenced overall bad will be evaluated more negatively than the other three conditions.

H5: The presence of ratings will lead to higher online booking intentions

In line with the current discussion of the use of easy-to-process categorical information (Fiske & Taylor, 1991; Tsang & Prendergast, 2009), it is expected the presence of ratings will not only have a main effect but will interact with other information such as

framing and valence. When ratings are available it is expected the information will potentially influence or shape the other independent variables. Thus it is proposed:
H6: The presence of ratings will moderate the influence of framing and valence on consumer' intentions to book online and trust a hotel.

3. Method

This study seeks to extend current knowledge by combining four factors in an experimental study and investigating main and interactive effects. In particular, the addition of framing as a key potential moderating variable provides an additional layer of investigation to previous studies. This study also investigates a *collection* or *set* of reviews rather than just one or two reviews and tests the function of categorical numerical data. As a result, unique contributions are made that are complementary to past research.

Experimental designs are useful for generalising about theoretical effects of variables rather than generalising statistical effects to wider populations (Highhouse, 2009). As the goal of this study was to investigate the influence of selected factors (e.g. valence of reviews; framing) on the change in others (booking intent and trust) a decision was taken to apply an experimental design. Thus, the stimulus materials were designed to allow the manipulation of the target constructs within a reasonably realistic setting. A 2 (target: core features or customer service) X 2 (valence: high or low) X 2 (frame: positive or negative) x 2 (ratings: present or absent) independent groups factorial design was used.

3.1 Simulation material and manipulation of independent variables

The study involved the development of a set of simulated web sites to accommodate the manipulation of the selected independent variables. The fictional travel review website was developed by a professional graphic artist in consultation with the research team and pretested over a number of iterations. The final simulated website included some standard features such as: the name of the website (Travel Deal: Premier Hotel & Accommodation Review), a photo (the outside of an unrecognisable hotel), links to other parts of the website (these were not active), and a description of the hotel being reviewed (named VBR Hotel). To control for a range of elements evident in a web site, all aspects of the simulated web site remained identical apart from the manipulated variables of valence, complaint target (service or core features), frame, and ratings. The final design appeared to have reasonable ecological validity (Viswanathan, 2005), whereby the materials used reflected a realistic web site. The reviews were short and to the point, avoiding long narrative. It seemed this approach was most suited to the task and consistent with other research that has suggested it is what customers prefer to see as review content (Papathanassis & Knolle, 2010 in press). There was a total of 16 simulated web sites each containing 12 reviews.

3.2 Participants

When selecting a target group from which to sample for participation in an experimental design study, eligibility decisions should be made by matching the sample participant knowledge to the task (Viswanathan, 2005). For this reason a sample was sought and obtained from a market list company with a large national lifestyle survey that included consumers who had completed the survey online. The sample drawn from an Australian

database comprised 554 community members who had been randomly assigned to one of 16 conditions. The sample included 308 females (56%), 180 males (32%), and 66 individuals (12%) who did not disclose their sex. Ages varied from 22 to 82 years ($M = 46.6$, $SD = 14.1$). While all respondents spoke English, approximately 97% of the sample indicated English as their first language. Most of the sample (93%) had experience with booking accommodation online and many (63%) indicated they relied on reviews when making a hotel booking. Thus, the sample seemed well matched to the task, although somewhat biased toward females.

3.3 Design and measures

Independent variables

Target of complaint

The target of the review was either the customer service or the core features of the hotel. Wording of the reviews was developed from existing reviews, pre-tests and pilot testing. Service-targeted reviews included phrases such as: very helpful/unhelpful staff, polite/rude staff, or great/poor service. Core-targeted reviews included phrases such as: impressive/dreadful décor, clean/dirty rooms, or spacious/small rooms.

Overall valence of ratings

Each simulated web site contained a total of 12 reviews, eight of which were valenced either positive or negative, whereas four remained constant as 'filler' (neutral) reviews. Predominance of valence was operationalised by varying the valence of the eight reviews: 42% (positive or negative) versus 25% (positive or negative) with the remaining reviews set as neutral (33%). Thus, for predominantly positive the set of 12

reviews contained five positive, three negative and four neutral evaluations; this was reversed in the negative condition. Positive and negative reviews were paired and, where possible, were worded so as to be the opposite of each other. For example “Try it: Try this hotel, the staff are polite and helpful” versus “Won’t go back: Avoid this hotel. Hotel staff are rude and unhelpful”. As a result the paired opposite reviews were similar in length and wording. Opposite reviews did not appear within the same condition. In sum, the independent variable was the *predominance* of either positive or negative reviews, rather than the presence of all positive or all negative reviews, since the latter would seem unrealistic.

Frame

An order approach was adopted whereby each condition started with *either* two positive or two negative reviews to achieve the framing manipulation. Thus, the framing was a recency effect in that the most recent reviews were either positive or negative. All 16 conditions ended with a neutral review. It should be noted that the frame construct was orthogonal to valence. Table 1 provides an overview of the set up of the study conditions.

Insert Table 1 about here

Ratings

The reviews either contained a numerical rating out of five next to the heading (1.5 for the negative reviews, 3 for the neutral reviews and 4.5 for the positive reviews) or the rating information was omitted. The overall star classification (side panel of hotel webpage) remained the same for all conditions at 3.5.

Appendix A shows an example of the stimulus material for two out of the 12 conditions. All information was kept constant apart from the manipulations described. Thus, the website contained the same colours, photo and hotel description side panel for each condition.

Dependent, manipulation check and believability variables

Two dependent variables (DV) were measured in this study: booking intention and levels of trust in the target hotel. Booking intention was measured using a single item “After reading the reviews about VBR Hotel it is very likely that I would book a room at this hotel if it was in a location I was travelling to” (with a response scale of 1= *Strongly disagree* to 7 = *Strongly agree*). Trust in the target hotel was measured using a nine-item scale adapted from Sichtmann (2007). An example question was: “I think this hotel would have high integrity”. See Appendix C for the full list of trust items.

A series of pre-tests were conducted to develop the stimuli, set the strength of the independent variables and to assess the external validity of the study. The pre-tests included assigning participants to the various conditions of the proposed experiment and seeking feedback on clarity of the task, specific wording as well as effectiveness (strength) of manipulations. Three pre-tests of this kind were applied with the final one including a ‘think aloud’ task about the study. The think aloud task requested participants to talk through what they thought about the stimuli. For example, some probing was undertaken by the researcher to determine the appropriate content of reviews required to operationalise valence and what could be changed (i.e., individual words) for the rating to move in either direction (unless already extreme). A final online

pilot test was undertaken with a small convenience sample and included both fixed choice scale items as well as open ended feedback boxes on all components of the study. A number of changes were made in response to participant feedback: some questions were slightly reworded, some items were removed (to shorten the questionnaire), the hotel star rating was increased from 3 to 3.5 stars, and some review headings were modified to make them more positive or negative. In each pre-test and pilot phase undergraduate and post graduate business or psychology students participated as did selected 'expert' respondents (comprising tourism, marketing and psychology academic staff). The pre-test and pilot phases were conducted over a six month period and aimed at getting the material and manipulations such as wording, numerical rating levels, or clarity of instructions developed for the main study.

As framing was operationalised using an order approach (by either placing the first two reviews as negative or positive), no specific manipulation check was sought in the main study. Similarly, consumer numeric ratings were either present or absent on the reviews, therefore no additional tests were needed. The other two manipulations (valence and target) were more abstract in their operationalisation and additional manipulation checks were conducted.

Valence was checked in the main study using a single item that asked participants to rate their level of agreement with the following question: "Overall, I felt the reviews were more positive than negative" (with a response scale of 1 = *Strongly disagree* to 7 = *Strongly agree*). Target was checked using two questions: "Overall, any complaints made by the reviewers were mainly about the service", and "Overall, any complaints

made by the reviewers were mainly about the rooms” (with a response scale of 1 = *Strongly disagree* to 7 = *Strongly agree*). Finally three believability questions were asked - see Appendix C for the full list of believability items.

3.4 Procedure

Email addresses of 5500 people were purchased from an Australian market list company: 2750 were male and 2750 were female. Of each sex, 916 were from each of the following age classes: 20-34; 35-44; and 45 and over. All members of the sample were randomly assigned to one of 16 conditions represented by different combinations of the four independent variables (see Appendix B for a sample). Data were collected using the *Questionpro* online survey facility (<http://www.questionpro.com/>). Each member of the sample was sent an email inviting participation in the study by clicking a link. Participants were given detailed information (in English) and asked to review the simulated website page, imagine that they were a customer, and then to respond to the questions regarding how they were likely to think, feel and act when in such circumstances. All responses were anonymous. Participants had the option of entering a prize draw for shopping vouchers.

4. Results

Prior to the main analysis, preliminary data screening was conducted (Field, 2009). Any case with substantial (more than half) missing data was removed. This resulted in the deletion of 29 cases. Where missing data were evident for the ANOVA a listwise deletion approach was adopted. To ensure assumptions of analysis of variance (ANOVA) were met checks for outliers (using standard SPSS explore outlier analysis)

were undertaken and none was evident. Items comprising the trust DV scale were summed and averaged, with higher scores indicating more favourable trust perceptions. The Cronbach's alpha coefficient for the trust scale was .96. As some past research (e.g. Hasan, 2010) has found some gender differences on behavioural intentions toward online shopping, we investigated whether there were any gender or age effects for the two dependent variables but none was found. Similarly, there was no significant difference in past booking online behaviour by age of respondent.

4.1 Manipulation checks

The two experimental manipulations (valence and target) were tested in the pre-test and main study. Following Perdue and Summers' (1986) recommendations, a 2 (valence) x 2 (target) ANOVA on the target (core) manipulation check item was conducted. This revealed a main effect for target but not valence (see Table 2). Next, a 2 (valence) x 2 (target) ANOVA on the valence manipulation check item was conducted, which revealed a main effect for valence but not target (see Table 2). The results for both ANOVAs confirmed convergent validity for the manipulations tested. For target (core) the mean was significantly higher in the core versus service condition; and for valence the mean was higher for the positive valence and lower for the negative valence condition. Discriminant validity was also demonstrated with the treatments having a significant effect on the manipulation check variables and not on the confound variables. While there was potential for overall review valence to confound the manipulation check of target (core), in that it approached significance ($p = .07$), the extremely small effect size in comparison to the manipulated variable suggested confounding is not a concern. The strength of manipulations is an important issue in

experimental design (Viswanathan, 2005); the results reported in Table 2 show a moderate to strong effect size for the manipulations (8% of variance for valence and 42% of variance for core target, respectively), which was deemed appropriate for manipulating these variables without leading to demand effects or hypothesis guessing. The strength of the valence effect was not as powerful as perhaps desired but this is reflective of the use of the *predominantly* positive or negative valenced stimuli we elected to use rather than an *entirely* positive or negative set of stimuli.

Insert Table 2 about here

Finally, responses to the three believability manipulation check items were summated and averaged. High scores on the scale indicate greater believability in the simulation exercise (Cronbach's alpha for this scale was .79). A one-sample *t* test demonstrated that the mean believability score ($M = 5.21$, $SD = 1.03$) was significantly higher than the neutral scale point, $t(486) = 25.85$, $p < .001$. An ANOVA was also conducted to test whether the believability means varied across the 16 simulated conditions. No significant difference was found, $F(15, 471) = 783$, $p = .70$.

Taken together the manipulation and believability results suggest the manipulation of the independent variables of target and valence were perceived as intended and were not confounded. Similarly, the believability of the simulated task was satisfactory and consistent across conditions.

4.2 Effects of simulated website material on booking intention and trust

To test the various hypotheses, analysis of variance (ANOVA) was used to test main and interaction effects. For the interaction effects, simple effects tests (Field, 2009) were applied. Simple effects tests are used to look at the effects of one independent variable at the various levels of another independent variable.

4.2.1: Booking intentions

A 2 (valence: high or low) x 2 (target: core features or customer service) x 2 (frame: positive or negative) x 2 (ratings: present or absent) independent groups factorial design was utilised to test the likelihood of making a booking with the hotel.

There was a significant main effect associated with the valence manipulation, $F(1, 506) = 13.48, p < .001$, partial $\eta^2 = .026$ (small-moderate effect), and frame manipulation $F(1, 506) = 4.45, p = .035$, partial $\eta^2 = .009$ (small effect). No main effect was evident for either target ($p = .080$) or ratings ($p = .171$). Ratings of booking intentions were higher in the positive valence ($M = 3.81, SD = 1.65$) than in the negative valence ($M = 3.22, SD = 1.67$) condition. Ratings of booking intentions were higher in the positive frame ($M = 3.71, SD = 1.656$) than in the negative frame ($M = 3.33, SD = 1.69$) condition.

Two significant interaction effects were found for booking intention: frame x valence, $F(1, 506) = 4.72, p = .030$, partial $\eta^2 = .009$ (small effect), and frame x rating, $F(1, 506) = 5.11, p = .024$, partial $\eta^2 = .01$ (small effect). For the frame x valence interaction (Fig. 1), simple effects tests, $F(1, 519) = 21.13, p < .001$, showed that booking intention was greater when the reviews were predominantly positive than negative in the negative

framed condition (small to medium effect size $r = .26^1$); there was no significant difference within the positively framed condition, $F(1,519) = 1.13$ $p = .288$. There was a significant effect $F(1,519) = 12.74$, $p < .001$ for framing on booking intention within the valenced overall poor reviews, with a positively framed review resulting in a more favourable booking intention than a negative framed review (small effect size $r = .19$). No significant effect was evident for framing within the predominantly favourable reviews $F(1,519) = .00$ $p = .985$. See Table 3 for interaction condition means.

Insert Table 3 about here

For the frame x rating interaction (Fig. 2), simple effects tests, $F(1,519) = 4.35$, $p = .038$, showed that booking intention was greater when the reviews contained ratings versus no ratings for the positively framed condition (small effect size $r = .14$); there was no significant difference within the negatively framed condition, $F(1,519) = 1.25$ $p = .264$. Framing had an effect for the set of reviews that included ratings $F(1,519) = 11.76$, $p = .001$ (small effect size $r = .22$) but not for the set of reviews without ratings, $F(1,519) = .04$, $p = .839$.

Insert Figures 1 and 2 about here

4.2.2: Trust in the hotel

¹ Significance of product moment r .10 (small), .30 (medium) and .80 (large) (Cohen, 1992)

A 2 (valence: high or low) x 2 (target: core features or customer service) x 2 (frame: positive or negative) x 2 (ratings: present or absent) independent groups factorial design was utilised to test the extent of trust in the hotel.

There was a significant main effect associated with the valence manipulation, $F(1, 466) = 6.17, p = .013$, partial $\eta^2 = .013$ (small effect), and frame manipulation, $F(1, 466) = 6.16, p = .013$, partial $\eta^2 = .013$ (small effect). No main effect was evident for either target ($p = .617$) or ratings ($p = .406$). Ratings of trust were higher in the positive valence ($M = 3.88, SD = 1.24$) than in the negative valence ($M = 3.57, SD = 1.24$) condition. Ratings of trust were higher in the positive frame ($M = 3.89, SD = 1.28$) than in the negative frame ($M = 3.58, SD = 1.21$) condition.

Two significant interaction effects were found: frame x target, $F(1, 466) = 7.97, p = .005$, partial $\eta^2 = .017$ (small effect); and frame x rating, $F(1, 466) = 3.83, p = .051$, partial $\eta^2 = .008$ (small effect).

For the frame x target interaction (Fig. 3), simple effects tests, $F(1,479) = 6.22, p = .013$ showed that trust was greater when the reviews were about customer service rather than core features within the positively framed condition (small effect size $r = .16$); there was no significant difference within the negatively framed condition, $F(1,479) = .89, p = .346$. Framing had a significant effect within target, $F(1,479) = 14.12, p < .001$, when the target of reviews was about customer service incidents (small effect size $r = .24$).

See Table 3 for means. No effect for framing within core incidents was evident, $F(1,479) = .04, p = .835$.

For the frame x rating interaction (Fig. 4), simple effects tests revealed that framing had an effect for the set of reviews that included ratings $F(1,479) = 11.56, p = .001$, with higher trust evaluations for the positive frame than the negative frame (small effect size $r = .22$) but was not significant without ratings $F(1,479) = .18, p = .670$. There were no significant effects for ratings (included or excluded) within either positive $F(1,479) = 1.71, p = .192$, or negative $F(1,479) = 2.86, p = .091$ framing.

Insert Figures 3 and 4 about here

A summary of the hypotheses tested and their confirmation or rejections is presented in Table 4.

Insert Table 4 about here

5. Discussion

Our research adds to the growing literature (e.g., Vermeulen & Seegers, 2009) concerned with the effect of online reviews on willingness to book a room at a target hotel as well as on perception of trust in the hotel. The research sought to develop an understanding of some key influences on consumer evaluations in this context, rather than testing the best type of website or review process. Perhaps not surprisingly, intentions to book and trust in the target hotel were higher following exposure to positively valenced reviews than negatively valenced reviews. A similar effect was found for framing, with positively framed reviews resulting in more favourable

evaluations than negatively framed reviews. Both these findings reinforce the persuasive impact that positive comments can have on the perceptions and decisions of other consumers (Donovan & Jalleh, 1999). However, as evident in other research into the influence of framing (Dardis & Shen, 2008), findings of this study point to more complicated effects with the frame variable interacting with the other variables such as valence, ratings and target to produce differential results for booking intent and trust in hotel.

In general, it is concluded that more recent reviews (the frame of what is presented first) are likely to influence other characteristics of a set of reviews. That is, framing tended to interact and contribute to variation of other independent variables. In respect of an overall positive valence for a set of reviews, booking intentions remained constant despite positive or negative frames. It seems that the positive message ‘shines’ through. Interestingly, even when the reviews were valenced overall bad, booking intentions were *relatively* high in a positive frame compared to a negative frame. When the overall set of reviews was valenced negatively the effect was intensified (that is, lower booking intent) when there was also a negative frame. This is consistent with our proposition that people tend to weight negative information more strongly, with a magnified effect for a negative frame and negative content overall. Like other research, current results confirm the greater impact of negative information on consumer evaluations (e.g. Lee, Park & Han, 2008; Papathanassis & Knolle, 2010; Smith, Bolton & Wagner, 1999). These results can be partly explained through Fiske’s (1993) observations that people tend to place greater emphasis on negative information as it is more ‘alerting’, possibly triggering a ‘be cautious’ attitude in potential consumers.

The inclusion or exclusion of ratings alone did not result in an effect on booking intentions or trust. However, this characteristic did interact with framing to produce differential effects. A positively framed set of reviews together with the inclusion of ratings resulted in significantly higher levels of booking intentions and trust in the target hotel. Consumers appear to rely on peripheral information (especially influence of frame and valence) in forming judgements of the target product. These results lend support to the ‘cognitive miser’ (Fiske & Taylor, 1991) hypothesis, suggesting that easy-to-access information, in this case frame and rating is often, but not always, used. This further supports the suggestion that eWOM information such as online reviews can play an important role in reducing the uncertainty and the amount of information that must be processed to make a decision (Chatterjee, 2001). Also, these results are consistent with propositions that people use categorical knowledge structures based on various schema (Macrae & Bodenhausen, 2001), such as numerical ratings. Thus, it appears that the use of categories or heuristics such as ‘recent reviews’ or ‘numerical ratings’ as indicators can assist in efficient information processing and potential decision making. Other researchers (Roth, Schmutz, Pauwels, Bargas-Avila. & Opwis, 2010) have found that consumers tend to use mental models when processing information on web sites. Likewise, it is quite plausible that consumers develop mental models about consumer review sites and apply short cuts, selectively processing simple to access information.

While there was no main effect for target (core or service), there was an interaction between this variable and frame, for trust in the hotel. Higher levels of trust were

recorded with a positively framed set of reviews that were mainly about service issues. Customers will therefore be more likely to trust firms whose employees engage in a positive way with customers to deliver good customer service. This is supported by research into the service encounter, which shows that actions taken by employees such as providing accurate information, dealing with customers with respect and providing them a sense of security, can develop consumer trust (Vaux Halliday, 2004; Schneider and Bowen, 1995). Overall, it appears that a positively framed set of comments about the standards of customer service can engender perceptions of trust in the target hotel.

5.1 Practical Implications

As recent research (Parra-Lopez, Bulchand-Gidumal, Gutierrez-Tano & Diaz-Armas, 2010) found, consumers are willing to use social media when planning travel due to the perceived benefits received. Access and exchange of information is important, thus consumers are likely to continue to rely on the reviews of other customers, which may vary in positive or negative valence. However, an important finding of our research is that the occurrence of recent positive reviews can over-ride or moderate the effect of a set of negative reviews, in respect of booking intentions. This was demonstrated by an interaction effect between valence and frame that reveals a positive frame increases booking intentions even though the valence is negative. From a practical standpoint managers should monitor customer eWOM and attempt to rectify any shortcomings and create more positive experiences so that reviews are turned around. Online reviews are a valuable source of 'real time' information on consumer attitudes that can provide indicators of where service managers can take corrective action to improve the service quality (Dellarocas, Zhang & Awad, 2007). These current findings support suggestions from researchers (Ye, Law, Gu & Chen, in press) that hotels should invest resources in

improving the valence of reviews, as this is directly related to increases in bookings / sales.

The interaction effect between service features and framing indicates that focusing on improving service provided by employees can have a significant impact on improving the trust consumers have in a firm. While core features play an important role in consumer service experience, it is the quality of the interactions with staff that is critical in influencing trust perceptions of the hotel. Hartline, Ross-Wooldridge and Jones (2003) suggest that service staff performance is a necessary or a key cue for consumers when assessing service quality. Related research by Kim, Kim and Park (2010) reported that when online consumers found the provision of information by firms as informative, they tended to trust the website more. Online comments by other customers about customer service levels seem to provide a clue as to whether the target firm can be trusted.

It also appears that two bits of easy- to- obtain information work synergistically to produce either more or less positive ratings for both booking intentions and trust. That is, framing and rating information interact to produce either more positive assessments in the case of a positive frame and ratings or more negative assessments in the case of a negative frame and ratings. This finding adds to our understanding of the complex decision- making process consumers engage in when making purchase decisions and suggests that consumers, to some extent, rely on easy- to- access and easy- to -process information when online. Again, it reinforces the importance of service firms taking timely corrective action to address service failures so the most recent consumer feedback is positive rather than negative. Other factors not directly covered in our

research may influence trust perceptions. Research by Casaló , Flavián and Guinalú (2010) indicate that consumers will follow the advice provided by other members of an online community if they perceive the advice as useful in informing their purchasing decision. Based on the perceived usefulness of the advice provided, consumers trust the online community. Their trust in the online community is based on whether they perceive the advice as honest, factually accurate and in the interest of other community members (benevolence).

In summary, this paper demonstrated that the impressions formed and likely booking intentions are influenced by multiple factors, some of which interact to show simple main effects are not sufficient to understand the tourism consumer. The effect of information such as overall valence (positive or negative), target (content focus) of reviews and inclusion or exclusion of numerical ratings have differential effects based upon framing (negative positive). Framing in this study was operationalised to represent recent reviews; those read first. Consumers now have the opportunity to take control of the dissemination of information about tourism and other products, framing these descriptions within their personal experiences versus that of a marketer (Pan and Fesenmaier, 2006). As result, research investigating how consumer generated and Internet mediated information impacts prospective consumer impression formation or decision- making is vital. As Xiang and Gretzel (2010) note, social media websites focussing on travel advice and/or reviews are becoming increasingly popular with tourists and are likely to continue to be used as an information source. Research such as that presented in the current paper provides further theoretical and practical knowledge to this important area.

6. Limitations and future research

The current research contributes to an emerging understanding of the influence of e-WOM as major source of pre-purchase information. While the study employed a simulation of a web site that was professionally designed, this required a limitation to what information could be presented and made active. It may be useful to apply the same constructs but use different content across a range of web site types to reflect a broader set of sample stimuli (Highhouse, 2009).

While an experimental approach is a strong research design it does limit the investigation to selected variables. Therefore, it must be acknowledged that numerous other variables may also influence the dependent variables and could be researched at another time. For instance, consumer trust in information provided by virtual third parties (de Laat, 2005), particularly other end users who share similar interests, could be investigated. This virtual trust, in turn, forms the basis for developing trust in the company itself (Salo & Karjaluoto, 2007; Wu, Chen & Chung, 2010). Similarly, the reviews of other consumers posted on review sites might influence other reviewer comments, which in turn might influence prospective consumer evaluations. In addition, the area of website design could also add to the growing interest in intention to book, actual bookings and trust perceptions. For instance, the aesthetics (Pandir & Knight, 2006) or visual complexity (Tuch, Bargas-Avila, Opwis & Wilhelm, 2009) of a webpage may influence how booking intentions are formed and interact with consumer reviews. Thus, future research could investigate factors such as: whether the reviewers are perceived as similar to, or different from, the potential customer; how the inclusion

of hotel brand affects the evaluation process; and whether different age groups (or groups differing by technological competence) use information differently.

Brown et al. (2007) conducted a series of studies to investigate how social network factors influence eWOM. Some insights from their research could be useful in future research. In particular, perception of eWOM can be influenced by factors that affect source credibility (the writer), a sense of closeness to the web-site (membership) and a match between self and reviewer (demographics). It is possible that some businesses may violate the intentions of some review sites by posting 'false' reviews. This is also an area for future research. We acknowledge that the experimental design is artificial and, as such, further investigation in the field, using other methods, may have the potential to shed further light on the research raised in this paper. Furthermore, a field study could further address actual (booking) behaviour rather than its precursor of intention. A final limitation involves the statistical versus practical significance of the findings. As others (e.g Robinson & Levin, 1997) have argued, researchers need to carefully reflect upon both significance levels and effect sizes. In the case of our research, the effect sizes for the significant results were quite small thus suggesting the need to investigate other explanatory variables.

References

- Anderson, E. (1998). Customer satisfaction and word of mouth. *Journal of Service Research, 1*, 5-17.
- Bitner, M. J., Booms, B. H., & Tetreault, M. S. (1990). The service encounter: Diagnosing favorable and unfavorable incidents. *Journal of Marketing, 54*(1), 71-84.
- Brown, J., Broderick, A. J., & Lee, N. (2007). Word of mouth communication within online communities: Conceptualising the online social network. *Journal of Interactive Marketing, 21*(3), 2-20.
- Buzinde, C. N., Manuel-Navarrete, D., Kerstetter, D. & Redclift, M. (2010). Representations and Adaptations to Climate Change. *Annals of Tourism, 37*(3), 581-603.
- Casaló, L. V., Flavián, C., & Guinalú, M (2010 in press). Understanding the intention to follow the advice obtained in an online travel community. *Computers in Human Behavior*.
- Chen, Y. (2008). Herd behavior in purchasing books online. *Computers in Human Behavior, 24*, 1977-1992.
- Comegys, C., Hannula, M., & Väisänen, J. (2009). Effects of Consumer Trust and Risk on Online Purchase Decision-making: A Comparison of Finnish and United States Students. *International Journal of Management, 26*(2), 295-308.
- Chatterjee, G. (2001). Online Reviews. Do Consumers Use Them? *Advances in Consumer Research, 28*, 129-133.
- Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*(1), 155-159.

- Danaher, P. J. & Mattsson, J. (1998). A comparison of service delivery processes of different complexity. *International Journal of Service Industry Management*, 9 (10), 48-63.
- Dardis, F. E., & Shen, F. (2008). The influence of evidence type and product involvement on message-framing effects in advertising. *Journal of Consumer Behaviour*, 7, 222-238.
- Dellarocas, C., Zhang, X. & Awad, N.F. (2007). Exploring the value of online product reviews in forecasting sales: the case of motion pictures. *Journal of Interactive Marketing*. 21(4), 23-45.
- de Laat, P.B. (2005). Trusting virtual trust. *Ethics and Information Technology*, 7, 167–180.
- Donovan, R. J., & Jalleh, G. (1999). Positively versus negatively framed product attributes: Influence of involvement. *Psychology and Marketing*, 16, 613-630.
- Field, A. (2009). *Discovering Statistics Using SPSS (3rd Ed.)* London: Sage.
- Fiske, S. (1993). Social cognition and social perception. *Annual Review of Psychology* 44, 155-94.
- Fiske, S. T., & Taylor, S. E. (1991). *Social Cognition*. New York: McGraw-Hill.
- Grayson, K., Johnson, D., & Chen, D.R. (2008). Is Firm Trust Essential in a Trusted Environment? How Trust in the Business Context Influences Customers *Journal of Marketing Research*, XLV, 241–256. (April).
- Gregoire, Y., & Fisher, R. J. (2008). Customer betrayal and retaliation: When your best customers become your worst enemies. *Journal of the Academy of Marketing Science*, 36, 247-261.

- Gregoire, Y., Tripp, T. M., & Legoux, R. (2009). When customer love turns into lasting hate: The effects of relationship strength and time on customer revenge and avoidance. *Journal of Marketing*, 73(6), 18-32.
- Gretzel, U., & Yoo, K. H. (2008). Use and impact of online travel reviews. In P. O'Connor, W. Hopken, & U. Gretzel (Eds.), *Information and communication technologies in tourism* (pp. 35–46). New York: Springer.
- Harrison-Walker, L. J. (2001). E-complaining: A content analysis of an Internet complaint forum. *Journal of Services Marketing*, 15, 397-412.
- Hart, C., & Blackshaw, P. (2006). Internet inferno. *Marketing Management*, 15(1), 18-25.
- Hartline, M.D., Ross-Wooldridge, B., & Jones, K.C. (2003). Guest Perceptions of Hotel Quality: Determining Which Employee Groups Count Most. *Cornell Hotel and Restaurant Administration Quarterly*. 44(1):43-52.
- Hartman, J. De Angeli, A. & Sutcliffe, A. (2008). Framing the user experience: Information biases on website quality judgment. *CHI Proceedings*, 855-864.
- Hasan, B. (2010). Exploring gender differences in online shopping attitude. *Computers in Human Behaviour*, 26, 597-601.
- Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word of mouth via consumer opinion platforms: What motivates consumers to articulate themselves on the internet? *Journal of Interactive Marketing*, 18 (1), 38–52.
- Highhouse, S. (2009). Designing Experiments That Generalize. *Organizational Research Methods* 12(13), 554-566.
- Hoffman, K. D., & Bateson, J. E. G. (2006). *Essentials of services marketing*.

- Orlando, FL: Dryden Press.
- Iacobucci, D., & Ostrom, A. (1993). Gender differences in the impact of core and relational aspects of services on the evaluation of service encounters, *Journal of Consumer Psychology*, 2, 257-286.
- Johnson, D., & Grayson, K (2005). Cognitive and affective trust in service relationships. *Journal of Business Research*, 58,500– 507.
- Kahneman, D., & Tversky, A. (1984). Choices, values and frames. *American Psychologist*, 39, 341-350.
- Keaveney, S. M. (1995). Customer switching behaviour in service industries: An exploratory study. *Journal of Marketing*, 59, 71-82.
- Kim, J. U., Kim, W. J. & Park, S. C. (2010). Consumer perceptions on web advertisements and motivation factors to purchase in the online shopping. *Computers in Human Behaviour*, 26, 1208-1222.
- Lee, C. C., & Hu, C. (2005). Analyzing hotel customers' e-complaints from an Internet complaint forum. *Journal of Travel and Tourism Marketing*, 17(2/3), 167-181.
- Lee, J., Park, D. H., & Han, I. (2008). The effect of negative online consumer reviews on product attitude: An information processing view. *Electronic Commerce Research and Applications*, 7, 341–352.
- Levin, I. P. (1987). Associative effects of information framing. *Bulletin of the Psychonomics Society*, 25, 85-86.
- Levin, I. P., & Gaeth, G. J. (1988). How consumers are affected by the framing of attribute information before and after consuming the product. *Journal of Consumer Research*, 15, 374-378.
- Li, C., & Bernoff, J. (2008). *Groundswell*. Boston: Harvard Business School.

- Li, X., Pan, B., Zhang, L. & Smith, W. W. (2009). The Effect of Online Information Search on Image Development: Insights from a Mixed-Methods Study. *Journal of Travel Research*, 48 (1), 45-57.
- Litvin, S. W. Goldsmith, R. E. & Pan, B. (2008). Electronic word-of-mouth in hospitality and tourism management. *Tourism Management*, 29, 458-468.
- Lovelock, C. H. (1983). Classifying Services to Gain Strategic Marketing Insights, *Journal of Marketing*, 47(3), 9-20.
- Macrae, C. N., & Bodenhausen, G. V. (2001). Social cognition: Categorical person perception. *British Journal of Psychology*, 92, 239–255.
- Pan, B. & Fesenmaier, D.R. (2006). Online information search, *Annals of Tourism Research*, 33(3), 809–832.
- Pandir, M. & Knight, J. (2006). Homepage aesthetics: The search for preference factors and the challenges of subjectivity. *Interacting with Computers*, 18, 1351-1370.
- Parra-Lopez, E., Bulchand-Gidumal, J., Gutierrez-Tano, D. & Diaz-Armas, R. (2010 in press). Intentions to use social media in organizing and taking vacation trips. *Computers in Human Behavior*.
- Papathanassis, A. & Knolle, F. (2011). Exploring the adoption and processing of online holiday reviews: A grounded theory approach. *Tourism Management*, 32, 215-224.
- Park, D., & Kim, S. (2008). The effects of consumer knowledge on message processing of electronic word-of-mouth via online consumer reviews, *Electronic Commerce Research and Applications*, 7, 399–410.
- Pennington, D. C. (2000). *Social Cognition*. London: Routledge.
- Perdue, B. C., & Summers, J. O. (1986). Checking the success of manipulations in marketing experiments. *Journal of Marketing Research*, 23, 317-326.

- Richins, M. L. (1984). Word of mouth communication as negative information. In Thomas C. Kinnear (Ed). *Advances in Consumer Research*, 11, Provo, UT : Association for Consumer Research, 697-702.
- Riegelsberger, J., Sasse, M. A., & McCathy, J. D. (2005). The mechanics of trust: A framework for research and design. *International Journal of Human-Computer Studies*, 62, 381-422.
- Robinson, D. H. & Levin, J. R. (1997). Reflections on statistical and substantive significance, with a slice of replication. *Educational Researcher*, 26(5), 21-26.
- Roth, S. P., Schmutz, P., Pauwels, S. L., Bargas-Avila, J. A. & Opwis, K. (2010). Mental models for web objects: Where do users expect to find the most frequent objects in online shops, news portals, and company web pages. *Interacting with Computers*, 22, 140-152.
- Salo, J., & Karjaluoto, H (2007). A conceptual model of trust in the online environment. *Online Information Review*, 31(5), 604-621.
- Schneider, B., and Bowen, D.E. (1995). *Winning the Service Game*. Boston: Harvard Business School Press.
- Sen, S., & Lerman, D. (2007). Why are you telling me this? An examination into negative consumer reviews on the web. *Journal of Interactive Marketing*, 21(4), 76–94.
- Sichtmann, C. (2007). An analysis of antecedents and consequences of trust in a corporate brand. *European Journal of Marketing*, 41, 999-1015.
- Sigala, M. (2010 in press). Preface, Special issue on Web 2.0 in travel and tourism: Empowering and changing the role of travellers. *Computers in Human Behavior*.

- Sirdeshmukh, D., Jagdip Singh, J., & Sabol, B. (2002). Consumer trust, value, and loyalty in relational exchanges. *Journal of Marketing*, 66(1), 15-37.
- Smith, A. K., Bolton, R. N., & Wagner, J. (1999). A model of customer satisfaction with service encounters involving failure and recovery. *Journal of Marketing Research*, 36, 356-372.
- Sparks, B. A., & Browning, V. (2010). Complaining in cyberspace: The motives and forms of hotel guests' complaints online. *Journal of Hospitality Marketing and Management*, 19(7), 797-818.
- Stringham, B. B. & Gerdes, J. (2010). An analysis of word-of-mouth ratings and guest comments of online hotel distribution sites. *Journal of Hospitality Marketing and Management*, 19(7), 773-796.
- Tsang, A.S.L , & Prendergast, G (2009). Is a "star" worth a thousand words? The interplay between product-review texts and rating valences. *European Journal of Marketing*, 43, 11/12: 1269-1280.
- Tuch, A. N., Bargas-Avila, J. A., Opwis, K. & Wilhelm, F. H. (2009). Visual complexity of websites: Effects on users' experience, physiology, performance and memory. *International Journal of Human Computer Studies*, 67, 703-715.
- Van den Bos, K. Vermunt, Riel & Wilke, H. A. M. (1997). Procedural and distributive justice: What is fair depends more on what comes first than what comes next. *Journal of Personality and Social Psychology*, 72(1), 95-104.
- Van Schaik, P. & Ling, J. (2009). The role of context in perception of aesthetics of web ages over time. *International Journal of Human Computer Studies*, 67, 79-89.
- Vaux Halliday, S. (2004). How "place trust" works in a service encounter. *The Journal of Services Marketing*. 18(1),45.

- Vermeulen, I. E., & Seegers, D. (2009). Tried and tested: The impact of online hotel reviews on consumer consideration. *Tourism Management*, 30, 123-127.
- Viswanathan, M. (2005). *Measurement Error and Research Design*. Thousand Oaks, CA: Sage.
- Wang, T. D. & Emurian, H. H. (2005). An overview of online trust: Concepts, elements, and implications. *Computers in Human Behavior*, 21, 105-125.
- Wu, J., Chen, Y. & Chung, Y. (2010). Trust factors influencing virtual community members: A study of transaction communities. *Journal of Business Research*, 63, 1025-1032.
- Xiang, Z., & Gretzel, U. (2010). Role of social media in online travel information search. *Tourism Management*, 31, 179-188.
- Ye, Q., Law, R., & Gu, B. & Chen, W. (2010 in press). The influence of user-generated content on traveller behaviour: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings. *Computers in Human Behavior*.
- Ye, Q., Law, R., & Gu, B. (2009). The impact of online user reviews on hotel room sales. *International Journal of Hospitality Management*, 28, 180-182.

Table 1Ordinal position of reviews in each experimental condition (target, valence, frame) ^a

Service				Core			
Predominantly positive		Predominantly negative		Predominantly positive		Predominantly negative	
Frame +	Frame -	Frame +	Frame -	Frame +	Frame -	Frame +	Frame -
+ S	- S	+ S	- S	+ C	- C	+ C	- C
+ S	- S	+ S	- S	+ C	- C	+ C	- C
- S	+ S	- S	+ S	- C	+ C	- C	+ C
Filler	Filler	Filler	Filler	Filler	Filler	Filler	Filler
+ S	+ S	- S	- S	+ C	+ C	- C	- C
- S	+ S	- S	+ S	- C	+ C	- C	+ C
Filler	Filler	Filler	Filler	Filler	Filler	Filler	Filler
+ S	- S	+ S	- S	+ C	- C	+ C	- C
+ S	+ S	- S	- S	+ C	+ C	- C	- C
Filler	Filler	Filler	Filler	Filler	Filler	Filler	Filler
- S	+ S	- S	+ S	- C	+ C	- C	+ C
Filler	Filler	Filler	Filler	Filler	Filler	Filler	Filler

Note. S = Service, C = Core. + = positive descriptor; - = negative descriptor^aThe design was duplicated with or without ratings

Table 2 Manipulation checks

Check type	IV	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	ω^2
Dependent variable: Target core							
Confounding	Valence			1,488	3.26	.07	.003
	Positive	4.37	1.56				
	Negative	4.23	1.70				
Manipulation	Target			1,488	362.07	<.001	.42
	Core	5.31	1.20				
	Service	3.19	1.28				
Check type	IV	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	ω^2
Dependent variable: Valence							
Confounding	Target			1,485	1.48	.22	.007
	Core	3.54	1.68				
	Service	3.73	1.68				
Manipulation	Valence			1,485	43.46	<.001	.08
	Positive	4.11	1.65				
	Negative	3.15	1.57				

Table 3 Means for significant two-way interaction effects

Dependent variable	Framing	
	Positive	Negative
Booking Intention		
Positive valence	3.83 (1.71)	3.84 (1.59)
Negative valence	3.61 (1.60)	2.98 (1.67)
Ratings included	3.98 (1.59)	3.34 (1.67)
Ratings excluded	3.45 (1.70)	3.47 (1.72)
Trust in Hotel		
Target - core	3.68 (1.27)	3.66 (1.22)
Target - service	4.09 (1.26)	3.47 (1.92)
Ratings included	4.03 (1.22)	3.49 (1.15)
Ratings excluded	3.75 (1.32)	3.68 (1.28)

7 point scale used – 1 = Strongly Disagree and 7 = Strongly Agree

Table 4 Summary of Hypotheses Outcomes

Hypotheses	Outcome
1a: The <i>target</i> of the content of review – core or staff – will affect customers’ willingness to make an online hotel booking.	Not supported
1b: The <i>target</i> of the content of review – core or staff – will affect customers’ perceptions of trust in a hotel.	Not supported but interaction effect with frame
2 a: The overall valence of a set of hotel reviews will affect customers’ evaluations, with a willingness to book online being higher when hotel reviews are predominantly positive than when the reviews are predominantly negative.	Supported
2 b: The overall valence of a set of hotel reviews will affect customers’ evaluations, with trust in a hotel being higher when hotel reviews are predominantly positive than when the reviews are predominantly negative.	Supported
3 a: When the overall valence of the set of reviews is held constant, a series of hotel reviews that is <i>framed</i> with negative reviews the willingness to book the hotel will be lower than when the reviews are <i>framed</i> with positive reviews.	Supported
3 b: When the overall valence of the set of reviews is held constant, a series of hotel reviews that is <i>framed</i> with negative reviews trust in the hotel will be lower than when the reviews are <i>framed</i> with positive reviews.	Supported
4a: Framing will interact with valence so that a set of reviews framed positively and valenced overall good will be evaluated more positively than the other three conditions.	Not Supported
4b: Framing will interact with valence so that a set of reviews framed negatively and valenced overall bad will be evaluated more negatively than the other three conditions.	Supported
5: The presence versus absence of ratings will lead to higher online booking intentions.	Not supported

6: The presence of ratings will moderate the influence of framing and valence on consumers' intentions to book online and trust a hotel.	Supported for ratings by framing interaction
------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------

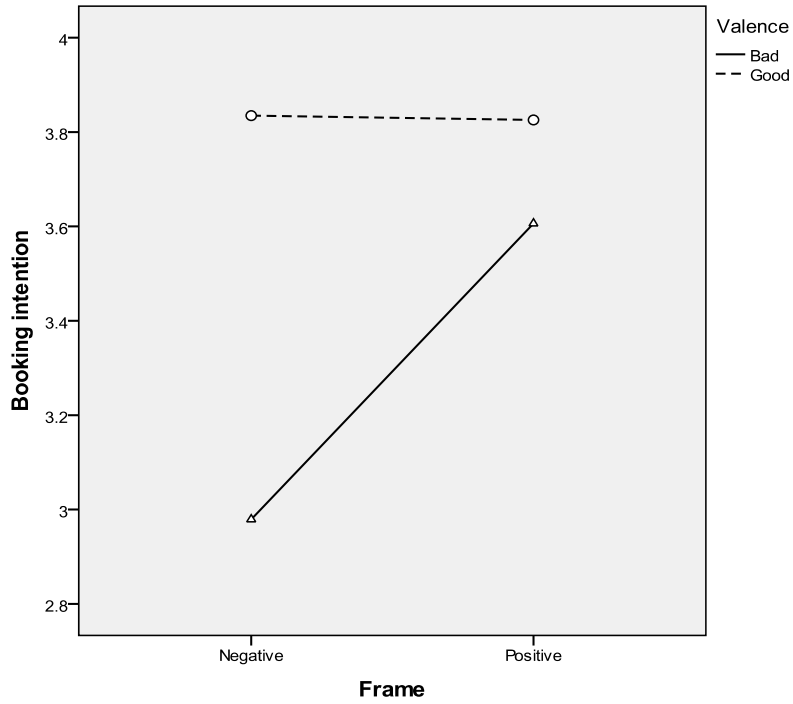


Figure 1: The valence x frame interaction effect for booking intentions.

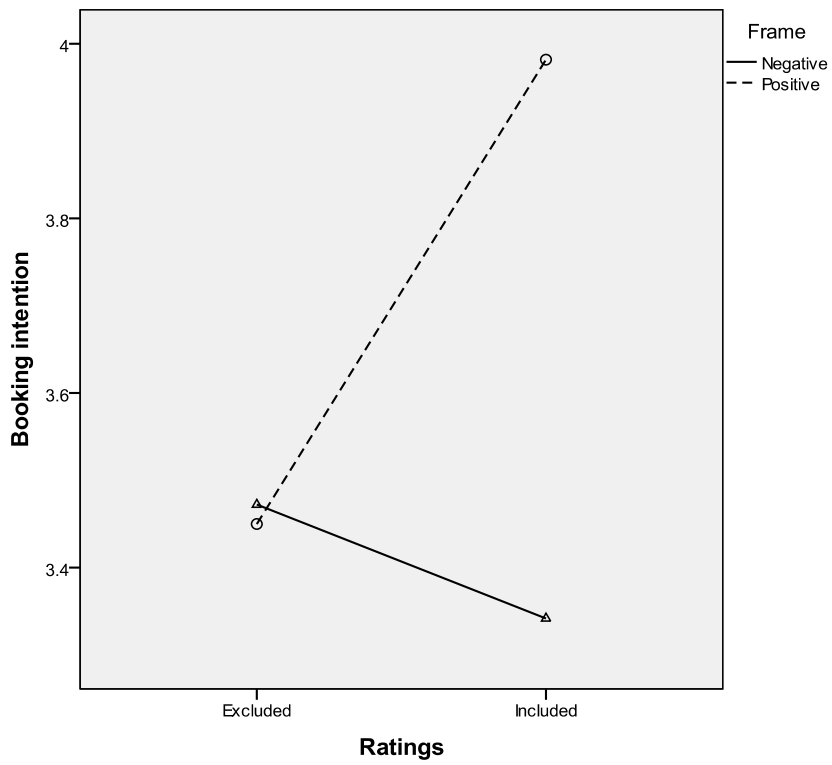


Figure 2: The ratings x frame interaction effect for booking intentions.

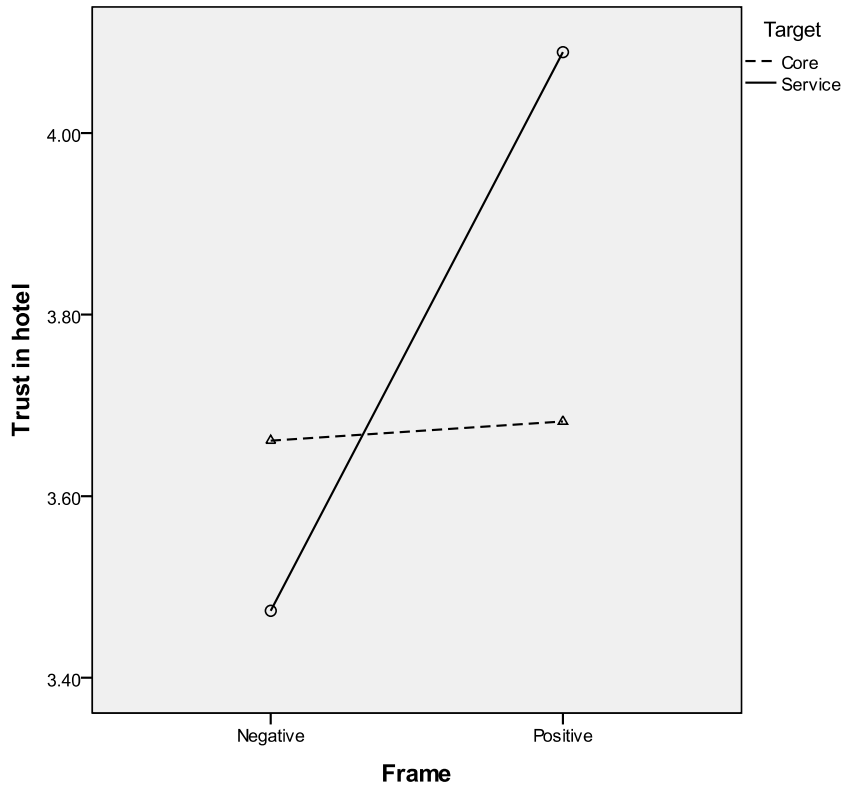


Figure 3: The target x frame interaction effect for trust in hotel.

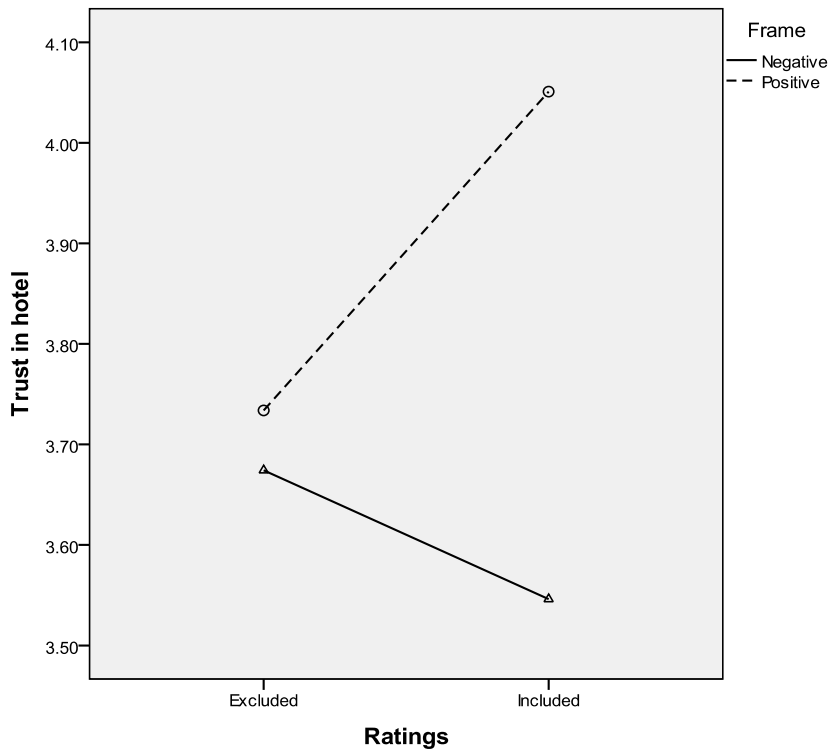



Figure 4: The ratings x frame interaction effect for trust in hotel

Appendix A

Sample of simulated material (target: core; valence: negative; frame: positive; with ratings)²

Travel Deal
Home
Read Reviews
Write Reviews
Contact Us

Premier Hotel & Accommodation Review



VBR Hotel

Rooms: 185
Rating: 3.5 star
Location: CBD

Facilities

All rooms have ensuites.

Rooms are also equipped with TV, reverse cycle aircon, broadband, telephone, fan, fridge, tea and coffee making facilities.

Description

VBR Hotel is the perfect accommodation choice when you wish to stay in the heart of the city. Close to museums, restaurants, cafés and only a short walk from City Park and many fashionable shops. The train station is just 100 metres away.

This Hotel has 12 reviews

Reviewer Ratings Based on
1 = Poor
3 = Average
5 = Excellent

· Privacy Policy · Terms Of Use · Feedback ·

Review 1

Fantastic technology 4.5 out of 5

Try this hotel. The rooms are large, quiet and have great technology that is very easy to use.

Review 2

Bright and cheery 4.5 out of 5

I stayed in a room that was so light and bright that I was very happy to spend time in it. The windows in the room provided lots of natural daylight and the furnishings were brilliant.

Review 3

Badly needs refurbishing 1.5 out of 5

Looks fine from the outside but this hotel was very disappointing. The whole hotel needs a major refurbishment and the carpets were disgusting.

Review 4

Okay 3 out of 5

Reasonable staff. Okay value. Double room on 1st floor was clean but not big. Full shower, reasonable supply of hot water, okay water pressure.

Review 5

Small size, very pokey 1.5 out of 5

The room was supposed to accommodate four people. It was so small and pokey there wasn't enough room to move! There wasn't enough storage space either.

Review 6

Dirty rooms 1.5 out of 5

Unattractive rooms, whole room very dirty along with bed, bedspread and bathroom, only have bad things to say about this hotel.

Review 7

Adequate 3 out of 5

Our room was basically clean and quite adequate (double and a single bed) but not sure if that's standard for all rooms. Bathroom was fine. No problems with staff.

Review 8

Great, spacious, comfortably furnished room 4.5 out of 5

We stayed in a room that was above standard in quality and it included a very nice sofa, desk, table and chairs. It was spacious, comfortable and made our stay.

Review 9

Dreadful décor 1.5 out of 5

The rooms were dirty and untidy and not well maintained and the décor in this hotel was dreadful.

Review 10

Reasonable 3 out of 5

Reasonable price for one night's stay. Check-in was relatively smooth, staff did their job. Room basic and clean, shower okay but water pressure a bit low. Functional.

Review 11

Horrible hotel 1.5 out of 5

The hotel was horrible, some of the appliances did not work, the room was awful, and the place was dirty.

Review 12

Satisfactory 3 out of 5

Staff were satisfactory. Rooms basic and tidy; average size for this type of accommodation. Fair hotel.

² A full set of the 16 stimulus conditions is available from the first named author; actual size of stimulus was larger in experiment

Sample of simulated material (target: service; valence: positive; frame: negative; with ratings)

Travel Deal
Home
Read Reviews
Write Reviews
Contact Us

Premier Hotel & Accommodation Review



VBR Hotel

Rooms: 185
Rating: 3.5 star
Location: CBD

Facilities

All rooms have ensuites.

Rooms are also equipped with TV, reverse cycle aircon, broadband, telephone, fan, fridge, tea and coffee making facilities.

Description

VBR Hotel is the perfect accommodation choice when you wish to stay in the heart of the city. Close to museums, restaurants, cafés and only a short walk from City Park and many fashionable shops. The train station is just 100 metres away.

This Hotel has 12 reviews

Reviewer Ratings Based on
1 = Poor
3 = Average
5 = Excellent

· Privacy Policy · Terms Of Use · Feedback ·

Review 1

Dreadful staff 1.5 out of 5

Avoid this hotel. Hotel staff rude and unhelpful.

Review 2

Horrible service 1.5 out of 5

The service in this hotel was bad; the staff were rude, surly and unhelpful.

Review 3

Exceptionally friendly staff 4.5 out of 5

We will return to this hotel! The staff were very friendly and helpful, it was a good experience.

Review 4

Okay 3 out of 5

Reasonable staff. Okay value. Double room on 1st floor was clean but not big. Full shower, reasonable supply of hot water, okay water pressure.

Review 5

Extremely polite staff 4.5 out of 5

Service with a smile seems to characterise this hotel. The staff were extremely polite, helpful and appeared very interested in meeting your needs.

Review 6

Great customer service 4.5 out of 5

The staff in this hotel were very competent, they take customer service very seriously.

Review 7

Adequate 3 out of 5

Our room was basically clean and quite adequate (double and a single bed) but not sure if that's standard for all rooms. Bathroom was fine. No problems with staff.

Review 8

Unwelcoming staff 1.5 out of 5

The unfriendly and unwelcoming staff made our stay very unpleasant.

Review 9

Very helpful staff 4.5 out of 5

The staff were excellent at this hotel, they amended my booking without any fuss, that was a relief.

Review 10

Reasonable 3 out of 5

Reasonable price for one night's stay. Check-in was relatively smooth, staff did their job. Room basic and clean, shower okay but water pressure a bit low. Functional.

Review 11

Very efficient staff 4.5 out of 5

The check-in was very efficient and the staff were amazingly friendly and they appeared to enjoy their job which was a nice change.

Review 12

Satisfactory 3 out of 5

Staff were satisfactory. Rooms basic and tidy; average size for this type of accommodation. Fair hotel.

Appendix C

Trust in target hotel

I think this hotel would have high integrity
I would warn others against dealing with this hotel (R)
I believe this hotel would be trustworthy
I believe this hotel would be dependable
I believe this hotel would be reliable
I believe this hotel would be responsible
If I was to discuss this hotel with others (friends, family, work associates) I would probably say positive things
I would have confidence in this hotel
This seems like a good quality hotel

1 = strongly disagree through to 7 = strongly agree

Alpha for scale = .96

Realism items

I think the hotel review site was realistic
I felt I could imagine myself using a website like this to search for hotels
For the purpose of this survey I was able to imagine using this website to evaluate this hotel

1 = strongly disagree through to 7 = strongly agree

Alpha for scale = .79