Supervisor-Students Meeting/Feedback Log

**Instructions**

Please ensure that your group meet or get feedback from your supervisor at least 4 times during the entire “Critical Inquiry” process. This form has to be submitted together with the final report. Marks will be deducted from the total score if no good reason is given for inadequate attempts to get supervisor’s feedback. Feedback can either be face-to-face or via email.

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Indicate Areas Discussed (proposal/methodology/findings/discussion/conclusion/etc.)</th>
<th>Supervisor’s Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>08/20/2014</td>
<td>Proposal</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>08/25/2014</td>
<td>IRB application</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>08/28/2014</td>
<td>Implications – Literature review</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>31/10/2014</td>
<td>Methodology</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>11/05/2014</td>
<td>Results - Findings</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>11/13/2014</td>
<td>Conclusion</td>
<td></td>
</tr>
</tbody>
</table>

**Group ID** : AC-04

**Project Title** : Studying Willingness to Trust Authentic and Fake Online Hotel Reviews

**Project Supervisor** : Prof. Alton Chua

**Project Members**

1. Loo Chia Feng (Matric No.: G1301352L)
2. Rivadeneira Barreiro Lucia Bernarda (Matric No.: G1301365L)
3. Wang Bo (Matric No.: G1301325H)
ABSTRACT
Recent studies revealed that about two thirds of people trust consumer opinions they read online, placing this channel as the third most trusted advertising source. As reviews are being partly exploited as a mechanism for misleading consumers’ behaviors and influencing purchase decisions, it is relevant to explore how certain characteristics of reviews and shoppers’ profiles are associated with trust intentions when booking hotels through Internet. To address this problem, multiple regression analysis for data collected from experimental stimulus surveys conducted to random participants was performed; the resulting models were evaluated through collinearity analysis between variables by exploiting the Variance Inflation Factor criterion. The findings indicate that linguistic characteristics, types of reviews and epistemic beliefs affect individuals’ intentions to trust online reviews about hotels. The present report contributes to relevant theory in that it demonstrates how data generated in online communities may serve predictive models of consumers’ behavior.

Author Keywords
Trust Intentions, Online Reviews, Linguistic Content of Reviews, Review Types, Epistemic Beliefs.

BACKGROUND
The impact of reviews or online word-of-mouth (WOM) on hotel rooms sales have not been categorically established; yet, empirical research has found cases of significant performance improvements in hotels that generate high volumes of consumer reviews (Ye, Law, & Gu, 2009). Before the e-commerce revolution, consumers based their purchase decisions mostly on information provided by connections referrals and advertising agencies. Nowadays, with the rich amount of user-generated information available online, consumers rely not only on advertising, but also on others’ post-purchase experiences shared in all types of social networking systems (Dellarocas, 2003) to make their minds about the perceived most suitable alternatives. Marketers and spammers could exploit this mechanism by manipulating consumers’ behaviors and influencing the way common users make purchase decisions. Consequently, not all reviews posted online are guaranteed to be authentic. Some could be fake and written with misleading purposes. However, since fake reviews are deliberately written to sound authentic, it makes it challenging for consumers to distinguish between the two. Nonetheless, there is growing evidence that the linguistic characteristics of reviews could help in differentiating the two (Lappas, 2012) (Ludwig, de Ruyter, Friedman, Brüggen, Wetzels, & Pfann, 2013).

For this paper’s purposes, reviews are of two types: Extreme and moderate. Extreme reviews refer to remarkably positive-optimistic or negative-detrimental statements posted by supposed shoppers after their purchase experience, whereas moderate reviews are by most distinctly neutral (Mudambi & Schuff, 2010). Past research on reviews about movies evidence how moderate reviews were more credible than extreme ones (Schlosser, 2005). Extreme reviews could often be driven by a serious purpose of manipulation. The online directory Yelp, which has over 100 million unique visitors every month, publicly admitted that a quarter of the reviews they receive are estimated to be fake; in 2006 only 5% of them were considered fictitious, while in 2013 the proportion rose to 20% (BBC., 2013). Besides, negative fictitious reviews mostly respond to the concentration of competition, while positive fake reviews are usually used to strengthen a weak reputation (Luca & Zervas, 2013). Fake reviewer groups are turning progressively more harmful to the markets as they can reach total power of the sentiment about a product or service (Mukherjee, Liu, & Glance, 2012), making it challenging for consumers to make optimally suitable choices. Thus, failing to differentiate between fraudulent and authentic reviews may jeopardize consumer’s expected satisfaction for the money invested.
Related to this problem two research gaps are identified: First, the extent to which linguistic characteristics of reviews influence shoppers’ trust intentions are relatively unknown. Deception theory has enabled to analyze within the language structure of misleading and reliable hotel reviews, finding that both types of reviews are different in terms of lexical complexity (Yoo & Gretzel, 2009); yet, no evidence of the impact of the linguistic structure of such reviews on the propensity to trust for online shoppers has been categorically supported. A recent research on advertising trends revealed that only 68% of people trust consumer opinions they read online, placing this mechanism as the third most trusted advertising source, after WOM recommendations and advertising on branded websites (Colley, 2014). However, although there are data mining techniques and algorithms that can be used to distinguish between trustworthiness and untruthful opinions, the task to detect fraudulent online reviews is still challenging because the spammers are making their methods more complex and sophisticated and they can deliberately write the false reviews in order to appear as authentic ones (Jindal & Liu, 2008).

The second research gap extends to the ability of consumers to trust intentions of reviews across epistemic beliefs and review types. Epistemic beliefs refer to the nature of human knowledge and the means how the knowledge is acquired, articulated in theories about knowing and how those are part of the cognitive process for thinking and reasoning (Hofer & Pintrich, 1997). Individuals who are considered epistemologically robust believe that knowledge is tentative, are usually skeptical and pay great importance to the source of information; whereas, those who naively believe that knowledge is absolute adopt a static attitude towards the sources (Britten, Britt, Strømsø, & Rouet, 2011). Regarding online customer reviews, these are defined as “peer-generated product evaluations posted on company or third party websites” (Mudambi & Schuff, 2010) (p.2). Reviews can be extreme and moderate. Extreme reviews are those that are either positive or negative, while moderate reviews contain a mixture of both (Mudambi & Schuff, 2010). Past research on reviews about movies evidence how moderate reviews were more credible than extreme ones (Schlosser, 2005).

Having identified the abovementioned research gaps, the objective for the present report is to estimate consumers’ trust intentions when shopping online for hotel rooms. In order to address the objective, three research questions will be approached:

RQ 1. How linguistic content of reviews affect shoppers’ perceptions of authenticity and willingness to trust?

RQ 2. What is the role of epistemic beliefs in shoppers’ ability to discern review authenticity and willingness to trust?

RQ 3. What is the role of review types in shoppers’ ability to discern review authenticity and willingness to trust?

From the point of view of practical value, this work intends to warn consumers about the realistic contribution of reviews to the expected satisfaction when booking hotel rooms online. Likewise, for hotel marketers, to take cautious actions in their online campaigns as extreme reviews may progressively impact negatively consumers’ disposition to booking. Regarding theoretical implications, this work expects to explain, on the one hand, how fictitious reviews are mostly imperceptible at current stage of ecommerce evolution, and on the other hand, how epistemic beliefs and review types impact consumers’ propensity to assume reviews as authentic; thus, individuals who tend to believe knowledge as tentative would be less keen to fully trust reviews, whereas those naïve who believe knowledge as absolute would trust and base their decisions upon what is stated in reviews.

This report is structured as follows: The first part encompasses a literature review concerning potential perceptions consumers may have about reviews, willingness of consumers to trust reviews as authentic, how epistemic beliefs have influenced consuming behaviors and how extreme and moderate reviews are perceived by consumers. The second part explains the methodology applied for the research, embracing how data was collected and analyzed, and presents the preliminary results and finally, conclusions about the relevant findings are exposed.

**LITERATURE REVIEW**

**Linguistic Perception of reviews**

Liu & Park (2005) stated that online reviews are information resources that consumers utilize to gain knowledge about products and services. The extent to which an individual requires to comprehend the product information can present the level of readability. As noted earlier, understandability is thought to be an important qualitative
factor to display the extent to which customers accept online information on social media platforms. The readability of the review could also influence the size of a writer's audience. For genuine consumers that posted reviews in order to share their evaluation of the product, the readability of the reviews might not be of great concern. In fact, the readability of a review written by a genuine customer should be random due to the variations in customers' educational background, clarity of expression, ability to communicate their thoughts appropriately, and so on (Nan, Indranil, Noi Sian, & Ling, 2011).

According to Bar-Hillel (Ajzen, 1977), people order information by its degree of perceived relevance to the problem being considered. Furthermore, information relevance is determined by its specificity, which can be achieved by providing information on a smaller set of which the target is a member rather than on the overall population, or by providing information that is related to the judgment via causality. From this point of view, people ignore base rate information in favor of individuating information, because the latter is perceived as more specific and hence more relevant (Qiu, Pang, & Lim, 2012).

According to Kawamura (Kawamura, 2011 & 2013), the most important feature of communication involving many senders of information is that they have to compete for attention of the audience and as a result they tend to be tempted to “exaggerate” their views. For example, for an online review a reviewer who likes a product only a little may nonetheless say “it is a fantastic product” and give five stars, while if he is slightly dissatisfied with the product, he may exaggerate in the opposite direction and say “total waste of money” and give one star. Indeed, it is well known that online customer reviews under a five star rating system have disproportionately large numbers of one and five stars. This is because when many individuals express their views at the same time (or on the same website), each one of them has only a tiny influence on the decision of the audience.

Online consumers have the confidence that the credibility of an organization is defined by its overall reputation and its performance and this information can be obtained through three channels: First party, which refers to online information directly provided by the organization; second party involves outsiders somewhat related to the company and third party that transfer data online throughout different ways such as trusted sites or trust infomediaries (Daignault, Shepherd, Marche, & Watters, 2002) in order to gather information of different sources.

**Willingness to trust and perceived authenticity**

Online trust is an abstract concept because of the complex elements that involve electronic activities, however “if the web site does not lead the consumer to believe that the web merchant is trustworthy, no purchase decision will result” (Ang, Dubelaar, & Lee, 2011). Being the Web a data channel that enables users to generate all sources of information, the task of assuring quality and reliable information is thus challenging. User-generated online content can be vulnerable not only because of technical difficulties, but also due to manipulated information that is deliberately inserted to mislead other users. Trust is one of the biggest issues and challenges for e-commerce activities, as reliability is frequently an important barrier that people face when making any transaction online (Wang & Emurian, 2005).

Due to the implications of these online feedbacks, the need of honest reviews is a fundamental criterion for decision-making. Perhaps, online mechanisms face challenges due basically to the unrestricted nature of Internet, such as manipulation of the information posted in communities, resulting in frequent fraudulent online feedback in order to increase or improve reputation (Dellarocas, 2003).

**Epistemic belief**

Epistemic beliefs concern individuals’ conceptions about the nature of knowledge and knowing (Hofer, 2004)(Hofer & Pintrich, 1997). Following Hofer and Pintrich’s seminal literature review, epistemic beliefs can be defined on four continuous dimensions. The first two dimensions refer to the nature of knowledge (i.e., what one believes knowledge is) and concern the simplicity (or structure) of knowledge (i.e., the degree to which knowledge is considered as consisting of an accumulation of isolated facts vs. as highly interrelated concepts) and certainty of knowledge (i.e., the degree to which knowledge is considered as absolute and unchanging vs. tentative and evolving). The remaining two dimensions refer to the nature of knowing (i.e., how one comes to know) and concern the source of knowledge (i.e., the degree to which knowledge is considered as transmitted by external authorities vs. as constructed by the self), and justification for knowing (i.e., the degree to which
knowledge claims are considered to be justified through observation, authority, or on the basis of what feels right vs. through the use of rules of inquiry and the evaluation and integration of different sources).

In prior research, we developed Internet-specific epistemological questionnaire (ISEQ) of 55-item based on (Hofer & Pintrich, 1997) theoretical model of personal epistemology. Thus, the questionnaire was designed to assess two dimensions concerning Internet-based knowledge (what one believes knowledge is like on the Internet) and two dimensions concerning Internet-based knowing (how one comes to know on the Internet). The participants rated each item on a 5-point anchored scale (1=strongly disagree, 5=strongly agree). In prior research, both exploratory and confirmatory factor analyses identified two factors, one XX-item factor concerning beliefs about the certainty and simplicity of Internet-based knowledge, as well as beliefs about the Internet as a source of knowledge, and one XX-item factor concerning the justification of knowledge claims encountered on the Internet (Bråten, Størmsø, & Samuelstuen, 2005).

Given that “beliefs” can be understood as what individuals accept as or want to be true which may, more or less consciously, prime or guide particular actions (Bråten, Ferguson, Stømsø, & Anmarkrud, 2012)(Murphy & Mason, 2006). The items used to assess justification beliefs differed from those used to assess certainty, structure, and source beliefs by being formulated more in terms of perceived processing (e.g., I evaluate course-related knowledge claims that I encounter on the Internet by checking more knowledge sources about the same topic) than were the items included in the certainty, structure, and source dimension. While it could be argued that participants’ responses to the justification items also reflected their beliefs about the process of knowing, it can also not be ruled out that this difference in the way the items on the two scales were formulated, at least in part, may have contributed to their different relations to the dependent variables (Kammerer, Bråten, Gerjets, & Strømsø, 2013). Future research could therefore try to reformulate the justification items on the ISEQ so that they clearly are targeting beliefs in a more narrow sense.

Michael & Michael (2000) stated a relatively naïve consumer who relies on brand information to a relatively savvy consumer who has less need of brand information. Unlike the robust consumers have with traditional retailing, knowledge of the Internet and how to shop using it varies widely. The newness of the Internet and the relationship between Internet experience and shopping proficiency allow us to identify effects that may not be apparent for other forms of retailing.

Review Types
When the individual review is positive, consumers are more likely to believe that it is due to non-product-related reasons. From the consumers’ point of view, the presence of a conflicting (i.e., negative) aggregated rating provides evidence for their existing beliefs. Therefore, their tendency to make non-product-related attributions will be further enhanced. In contrast, when the individual review is negative, consumers tend to make product-related attributions. In this case, the presence of a conflicting (i.e., positive) aggregated rating, which is related to non-product-related attributions, is inconsistent with the consumers’ prior beliefs (Qiu, Pang, & Lim, 2012).

The perception for consumers will be more vulnerable to the conflicting aggregated rating when making attributions for a positive review than for a negative one (Qiu, Pang, & Lim, 2012). (Mitchell, 1986) also found that negative information results in less favourable attitudes while positive information produces higher interestingness. The perception for businesses noting that the negativity effect implies that positive and negative information does not have symmetrical influence on people’s decision making (Kahneman & Tversky, 1979)(Skowronski & Carlston, 1989). The perception for moderators found that recommendation consistency, which refers to the evaluative consistency between a particular review and other reviews, was positively related to consumers’ credibility perception and adoption intention of the target review (Cheung, Luo, Sia, & Chen, 2009).

Studies such as Danescu-Niculescu-Mizil, Kossinets, Kleinberg, & Lee, (2009) found that when the variance is very low, the reviews with the highest helpfulness ratios are those with the average star rating. With moderate values of the variance, the reviews evaluated as most helpful are those that are slightly above the average star rating. As the variance becomes large, reviews with star ratings both above and below the average are evaluated as more helpful than those that have the average star rating (with the positive reviews still deemed somewhat more helpful). The research model is shown in Figure 1.
METHODOLOGY

Experiment Design
To address the three research questions, this study uses a between-participants experimental design. Participants were randomly assigned to one of the three review type conditions, positive, negative and moderate. Participants in the positive condition saw a mock-up review website containing three positive reviews. Participants in the negative condition saw a mock-up review website containing three negative reviews. Participants in the moderate review type condition saw a mock-up review website containing three moderate reviews.

The experiment therefore required two experimental stimuli: the mock-up website, as well as sets of three positive reviews, three negative reviews, and three moderate reviews. The reviews are randomly collected from review websites such as Expedia. The selection of the reviews had to be in English, must contain meaningful titles and descriptions in English and the descriptions must be more than 150 characters in length.

A sample screenshot of the mock-up website is shown in Figure 2. This mock-up website serves as the experimental stimuli for participants. The website is given the imaginary name “LoveToTravel.com” to avoid biases. It further ensures that the reputation of no real websites is distorted through the experiment. The website also shows the imaginary hotel name “Three2One Hotel” to ensure that no existing hotel is unfairly advantaged or disadvantaged in this experiment. After viewing the three reviews for the fictitious hotel “Three2One Hotel” in the mock-up website “LoveToTravel.com”, participants will be required to answer a questionnaire, seeking both qualitative and quantitative responses. The data collected from these participants will then be analysed to address the research objectives.
The questionnaire consists of five major segments. The first segment (Appendix 1) includes items to measure shoppers’ perceived comprehensibility, perceived specificity, perceived negligence, perceived authenticity, and willingness to trust. The second segment (Appendix 2) includes items to measure shoppers’ epistemic belief, and the manipulation of review types. The third segment (Appendix 3) includes open-ended questions seeking qualitative responses to obtain a deeper understanding of participants’ perceptions towards reviews. The fourth segment (Appendix 4) solicits information about participants’ background including demographics. The fifth segment (Appendix 5) includes the participants’ familiarity of using internet, familiarity with other hotels’ websites reviews and the attitude towards the reviews. The entire first, second and fifth segments’ questions-answers are selected on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree).

Data Collection
Data were collected from a total of 48 participants. They included people from age 21 to 45 acquainted with the use of online hotel review websites. The experimental procedure comprised three steps. First, participants were randomly assigned to a version of the simulated review website, showed three reviews for a given fictitious hotel. After obtaining informed consent for voluntarily agreeing to participate in this study, they were explained the study purpose. The participants were also explained the experimental procedure and understood the experiment would only take them a few minutes.

Second, participants were asked to imagine visiting a hotel review website to evaluate a hotel prior to booking for their forthcoming trip. They were introduced to the simulated review website. Participants were instructed to assume that it was a relevant and affordable hotel choice for their trip. They were instructed to get acquainted with the website for about two minutes and they were required to have the overall understanding of the website.

Third, participants were asked to carefully read each of the three reviews, comprising titles and descriptions as shown in the website. After going through the reviews, they were asked to answer the questions in the questionnaire. After finishing the questionnaire, the data were collated and analysed to address the research objective.

Data Analysis
Given that data were collected from 48 participants, the number of cases in the dataset was 144 (three reviews for each of the 48 participants). The analysis involved two main steps. First, the reliability of all the constructs involved in the research was tested using Cronbach’s Alpha statistic. Validity and reliability tests are critical in constructs elaboration (Lee & Kozar, 2012). Alpha coefficient, which oscillates between 0 and 1, is considered a valuable tool in describing the reliability of factors extracted from multi-point formatted questionnaires or scales; the higher the score, the more reliable the generated scale is (Santos, 1999). The criteria suggested by Nunnally...
(1978) of 0.7 as an acceptable reliability coefficient led the identification and selection of reliable data; consequently, the items that did not meet this norm were dropped.

Second, to address the RQs, multiple regression analysis was used. This statistical technique is used whenever a quantitative variable is to be studied as a function of, or in relationship to, a set of independent variables; this technique is considered appropriate to test hypotheses proposed by scholars in behavioral sciences (Cohen, Cohen, West, & Aiken, 2013). For the RQ1, both perception of authenticity and willingness to trust, were evaluated as a function of perceptions on comprehensibility, specificity, exaggeration and negligence; these independent variables encompass the concept of linguistic content of reviews. To analyze the role of epistemic beliefs and review types on perceived authenticity and willingness to trust, as indicated in RQ2 and RQ3, the perceptions on comprehensibility, specificity, exaggeration and negligence were weighted against corresponding epistemic beliefs and review types factors and then tested as the explanatory components. The predictive power of the models, for all RQs, was evaluated by determining the collinearity between variables exploiting the variance inflation factor (VIF) criterion; this suggests that if the VIF value exceeds 10, collinearity between explanatory variables exists (Freund, Wilson, & Sa, 2006).

RESULTS
Suppose that we developed a model for predicting WTT (Willingness to trust) and PA (Perceived Authenticity). We have data from 48 participants on the following variables: PA (Perceived Comprehensibility), PS (Perceived Specificity), PE (Perceived Exaggeration) and PN (Perceived Negligence). The results were segregated into reliability analysis to determine the cronbach alpha and multiple regressions to determine if the variables were significant to the linguistic perception of reviews, epistemic belief and review types.

Reliability Analysis
Complete data were available for 48 participants. Basic descriptive statistics and values of Cronbach alpha are shown in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>3.73</td>
<td>1.083</td>
<td>.739</td>
</tr>
<tr>
<td>PS</td>
<td>3.21</td>
<td>1.197</td>
<td>.739</td>
</tr>
<tr>
<td>PE</td>
<td>3.02</td>
<td>1.167</td>
<td>.619*</td>
</tr>
<tr>
<td>PN</td>
<td>2.94</td>
<td>1.049</td>
<td>.455*</td>
</tr>
</tbody>
</table>

*α <= 0.7

Table 1. Basic Descriptive Statistics and Cronbach Alpha.

In this result, we do a comparison of the default reliability statistic and a new reliability statistic after removal of the positive review which did not meet the norm for Cronbach’s alpha (α) of > 0.7 for perceived exaggeration and perceived negligence are shown in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>3.73</td>
<td>1.083</td>
<td>.739</td>
</tr>
<tr>
<td>PS</td>
<td>3.21</td>
<td>1.197</td>
<td>.739</td>
</tr>
<tr>
<td>PE</td>
<td>2.995</td>
<td>1.198</td>
<td>.778</td>
</tr>
<tr>
<td>PN</td>
<td>2.985</td>
<td>1.012</td>
<td>.771</td>
</tr>
</tbody>
</table>

Table 2 Basic Descriptive Statistics and Cronbach Alpha

Multiple Regression
Correlation and multiple regression analyses were conducted to examine the relationship between WTT (Willingness to trust), PA (Perceived Authenticity) and various potential predictors.
Basic descriptive statistics and regression coefficients of the WTT related to Linguistic are shown in Table 3. Predictor variables PC, PS and PE had a significant (p < .05) zero-order correlation with WTT, but only PS and PE had a partial significant (p<.05) effects in the full model. However, PN did not had a significant (p >.05) zero-order correlation with WTT.

Only PS and PE had a significant (p<.05) effects on the standardized coefficients (β). The three predictor model PC, PS and PE was able to account for 34.0% of the variance in WTT.

<table>
<thead>
<tr>
<th>Variable</th>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>WTT</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>.540*</td>
<td>-.197*</td>
<td>.022</td>
<td>.366*</td>
<td>.105</td>
<td>.123</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>-.177*</td>
<td>.172*</td>
<td>.498*</td>
<td>.372*</td>
<td>.395</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>.263*</td>
<td>-.360*</td>
<td>-.299*</td>
<td>-.428</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PN</td>
<td>.084</td>
<td>.097</td>
<td>.123</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mean 11.20 9.36 5.99 5.97 9.08
SD 2.635 2.921 2.169 1.826 3.103 $R^2 = .340$

* P < .05

Table 3. Willing To Trust Related to Linguistic Content Of Reviews (N = 48).

Table 4 below shows predictor variables PC, PS and PE had a significant (p < .05) zero-order correlation with PA, but none of them had a partial significant effects in the full model. Same as the relationship between WTT and linguistic content of reviews, PN had a non-significant (p > 0.5) zero-order correlation with PA.

Only PS and PE had a significant (p<.05) effects on the standardized coefficients (β).The three predictor model PC, PS and PE was able to account for 33.3% of the variance in PA.

<table>
<thead>
<tr>
<th>Variable</th>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>PA</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>.540*</td>
<td>-.197*</td>
<td>.022</td>
<td>.351*</td>
<td>.058</td>
<td>.059</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>-.177*</td>
<td>.172*</td>
<td>.533*</td>
<td>.468*</td>
<td>.430</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>.263*</td>
<td>-.306*</td>
<td>-.208*</td>
<td>-.257</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PN</td>
<td>.012</td>
<td>-.015</td>
<td>-.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mean 11.20 9.36 5.99 5.97 10.15
SD 2.635 2.921 2.169 1.826 2.684 $R^2 = .333$

* P < .05

Table 4. Perceived Authenticity Related to Linguistic Content Of Reviews (N = 48).

The categorization of naive and robust was done based on median-split of the responses to the questionnaire based on the roles of epistemic beliefs. Following table 5 shows that for epistemic belief naïve consumers, predictor variables PC, PS and PE had a significant (p < .05) zero-order correlation with WTT. PN had a non-significant (p > 0.5) zero-order correlation with WTT. Compared to robust consumer, only PS and PE had a significant (p<.05) zero-order correlation with WTT.

Only PC and PE had a significant (p<.05) effects on the standardized coefficients (β) for Naïve compared to PS and PE had a significant effects on β for Robust consumers. The three predictor model PC, PS and PE was able to account for 35.4% of the variance in WTT for naïve consumers compared to 38.3% with robust consumers.
Table 5. Willingness to trust Related to Epistemic beliefs (N = 48).

<table>
<thead>
<tr>
<th>Variable</th>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>WTT</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>.615*</td>
<td>-.356*</td>
<td>.035</td>
<td>.522*</td>
<td>.297*</td>
<td>.392</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>-.196</td>
<td>.166</td>
<td>.460*</td>
<td>.217</td>
<td>.240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>.230*</td>
<td>-.382*</td>
<td>-.250*</td>
<td>-.349</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PN</td>
<td></td>
<td>.058</td>
<td>.069</td>
<td>.124</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Mean

<table>
<thead>
<tr>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>WTT</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.67</td>
<td>10.06</td>
<td>6.16</td>
<td>6.09</td>
<td>9.80</td>
<td>.354</td>
<td></td>
</tr>
</tbody>
</table>

### SD

<table>
<thead>
<tr>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>WTT</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.605</td>
<td>3.124</td>
<td>2.465</td>
<td>1.923</td>
<td>3.445</td>
<td>.393</td>
<td></td>
</tr>
</tbody>
</table>

### Robust

<table>
<thead>
<tr>
<th>Variable</th>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>PA</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>.439*</td>
<td>-.044</td>
<td>-.013</td>
<td>.132</td>
<td>-.090</td>
<td>-.090</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>-.182</td>
<td>.164</td>
<td>.518*</td>
<td>.475*</td>
<td>.462</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>.302*</td>
<td>-.396*</td>
<td>-.348*</td>
<td>-.488</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PN</td>
<td></td>
<td>.092</td>
<td>.118</td>
<td>.177</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Mean

<table>
<thead>
<tr>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>WTT</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.77</td>
<td>9.23</td>
<td>5.84</td>
<td>5.85</td>
<td>8.43</td>
<td>.383</td>
<td></td>
</tr>
</tbody>
</table>

### SD

<table>
<thead>
<tr>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>WTT</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.608</td>
<td>2.679</td>
<td>1.860</td>
<td>1.737</td>
<td>2.605</td>
<td>.393</td>
<td></td>
</tr>
</tbody>
</table>

* P < .05

Similar to table 5, presence of table 6 indicates predictor variables PC, PS and PE had a significant (p < .05) zero-order correlation with PA for both naïve and robust consumers. Only PS had a significant (p<.05) effects on the standardized coefficients (β) for Naïve compared to PS and PE had a significant effects on β for Robust consumers. The three predictor model PC, PS and PE was able to account for 39.3% of the variance in PA for naïve and 29.8% for robust.
Table 6. Perceived Authenticity Related to Epistemic beliefs (N = 48).

The data was split to three groups (Moderate, Negative and Positive) based on the review types. Table 7 shows PC, PS and PE had a significant (p < .05) zero-order correlation with WTT in all types of reviews.

The differences between the three types of review is PS in moderate, PE in negative, PS and PE in positive reviews had a significant (p<.05) effects on the standardized coefficients (β).

<table>
<thead>
<tr>
<th>Variable</th>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>WTT</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>.593*</td>
<td>- .309*</td>
<td>.062</td>
<td>.351*</td>
<td>- .038</td>
<td>-.041</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>- .199</td>
<td>.124</td>
<td>.553*</td>
<td>.525*</td>
<td>.512</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>.149</td>
<td>- .345*</td>
<td>- .253</td>
<td>- .393</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PN</td>
<td>.026</td>
<td>.000</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>10.65</td>
<td>9.4</td>
<td>6.42</td>
<td>6</td>
<td>8.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>2.693</td>
<td>2.98</td>
<td>1.866</td>
<td>1.149</td>
<td>2.904</td>
<td>R² = .364</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>WTT</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>.681*</td>
<td>- .259*</td>
<td>- .079</td>
<td>.347*</td>
<td>.139</td>
<td>.148</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>- .214</td>
<td>.193</td>
<td>.381*</td>
<td>.156</td>
<td>.181</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>.118</td>
<td>- .497*</td>
<td>- .448*</td>
<td>- .637</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PN</td>
<td>.144</td>
<td>.178</td>
<td>.257</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>11.36</td>
<td>9.71</td>
<td>5.33</td>
<td>5.47</td>
<td>8.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>2.756</td>
<td>2.537</td>
<td>2.078</td>
<td>2.040</td>
<td>2.951</td>
<td>R² = .356</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>PC</th>
<th>PS</th>
<th>PE</th>
<th>PN</th>
<th>WTT</th>
<th>β</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>.388*</td>
<td>- .035</td>
<td>.087</td>
<td>.395*</td>
<td>.228</td>
<td>.321</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>- .137</td>
<td>.201</td>
<td>.531*</td>
<td>.398*</td>
<td>.423</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>.374*</td>
<td>- .325*</td>
<td>- .276*</td>
<td>- .392</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PN</td>
<td>.032</td>
<td>.035</td>
<td>.059</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>11.59</td>
<td>9.76</td>
<td>6.18</td>
<td>6.37</td>
<td>9.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>2.426</td>
<td>3.210</td>
<td>2.406</td>
<td>2.059</td>
<td>3.414</td>
<td>R² = .392</td>
<td></td>
</tr>
</tbody>
</table>

* P < .05
Table 7. Willingness to trust Related to Review types (N = 48).

Table 8 shows PC, PS and PE had a significant (p < .05) zero-order correlation with PA in both negative and positive reviews but only PC and PS had a significant zero-order correlation with PA.

The differences between the three types of review is PS in moderate, PE in negative, PS and PE in positive reviews had a significant (p<.05) effects on the standardized coefficients (\(\beta\)).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Zero-Order r</th>
<th>(\beta)</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>.593*</td>
<td>-.045</td>
<td>-.039</td>
</tr>
<tr>
<td>PS</td>
<td>-.199</td>
<td>.572*</td>
<td>.559*</td>
</tr>
<tr>
<td>PE</td>
<td>.149</td>
<td>-.208</td>
<td>-.129</td>
</tr>
<tr>
<td>PN</td>
<td>.167</td>
<td>.119</td>
<td>.242</td>
</tr>
</tbody>
</table>

Mean 10.65  9.4  6.42  6  10.38
SD 2.693  2.98  1.866 1.149 2.330  \(R^2 = .352\)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Zero-Order r</th>
<th>(\beta)</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>.681*</td>
<td>.048</td>
<td>.047</td>
</tr>
<tr>
<td>PS</td>
<td>-.214</td>
<td>.414*</td>
<td>.286</td>
</tr>
<tr>
<td>PE</td>
<td>.118</td>
<td>-.470*</td>
<td>-.402*</td>
</tr>
<tr>
<td>PN</td>
<td>.052</td>
<td>.048</td>
<td>.064</td>
</tr>
</tbody>
</table>

Mean 11.36  9.71  5.33  5.47  10.16
SD 2.756  2.537  2.078 2.040 2.730  \(R^2 = .326\)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Zero-Order r</th>
<th>(\beta)</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>.388*</td>
<td>.228</td>
<td>.280</td>
</tr>
<tr>
<td>PS</td>
<td>-.137</td>
<td>.606*</td>
<td>.527*</td>
</tr>
<tr>
<td>PE</td>
<td>.374*</td>
<td>-.272*</td>
<td>-.139</td>
</tr>
<tr>
<td>PN</td>
<td>-.067</td>
<td>-.141</td>
<td>-.203</td>
</tr>
</tbody>
</table>

Mean 11.59  9.76  6.18  6.37  9.92
SD 2.426  3.210  2.406 2.059 2.972  \(R^2 = .464\)

* P < .05

Table 8. Perceived Authenticity Related to Review types (N = 48).

Based on this analysis results, we could find out overall only perceived specificity and perceived exaggeration had a significant effects on consumers’ willingness to trust and perceived authenticity to a review. The results also shows that for epistemic belief naive consumer willingness to trust a review show a significant relationship with comprehensibility, specificity and exaggeration compared to a robust consumer whom only trust based on specificity and exaggeration. Consumers were more willing to trust moderate or positive reviews if the linguistic
content of reviews are perceived specificity, however perceived exaggeration had negative influence on negative reviews.

**DISCUSSION**

**Linguistic Perception of reviews**
The finding of this research reveal that Perceived Comprehensibility and Perceived Exaggeration are important qualitatively factors to influence review messages' qualitative characteristics (i.e., perceived enjoyment and readability) make greater contributions to explaining the review usefulness beyond the other characteristics, such as messengers' and reviews' quantitative factors (Liu & Park, 2005)

According to the data analysis and result of this research, perceived comprehensibility increases consumers’ authenticity and willingness to trust online reviews. However, the perceived exaggeration have the negative impact on the believability of online reviews. O'Conner (2008) indicates that deceptive reviews are often posted by hoteliers to reduce the scores of competition or to improve own scores. On the other side, disgruntled customers are willing to harm a company's reputation through writing fraudulent posts. They make heavy use of exaggeration or embellishment (Elliot, 2006).

**Willingness to trust and perceived authenticity**
Sirdeshmukh, Singh, and 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.

Negative online messages are perceived to be more credible than positive online messages when the messages are discussed among net pals who are perceived to have a strong online social relationship. The difference in information trust vanishes when net pals are perceived to have weak online social relationships. In addition to the moderating effects, this study also found that, all else being equal, negative messages are seen as more trustworthy than positive messages in the case of experience goods. This effect may occur because negative information may help consumers to predict actual product performance more easily in the case of experience goods (Pan & Chiou, 2012).

**Epistemic belief**
In addition to perceived specificity and perceived exaggeration of user willingness to trust and distinguish between hotels’ reviews, the epistemic beliefs concern individuals’ conceptions about the nature of knowledge and knowing (Hofer, 2004)(Hofer & Pintrich, 1997) and different review types appears to be an important moderator on consumers’ perception for decision to book a hotel.

An interesting research finding shows that for epistemic belief naive consumer willingness to trust a review show a significant relationship with comprehensibility, specificity and exaggeration compared to a robust consumer whom only trust based on specificity and exaggeration. Another finding for epistemic belief naïve consumer on differentiating the reviews’ authenticity show a significant relationship with specificity compared to a robust consumer whom has additional attribute of exaggeration.

**Review Types**
Further research findings on different review types informs that positive reviews have more significant impacts compared to moderate and negative, being the lowest on willingness to trust the hotel reviews and how consumer perceived the authenticity. The finding is agreed with Qiu, Pang, & Lim, (2012) that the perception for consumers will be more vulnerable to the conflicting aggregated rating when making attributions for a positive review than for a negative one.

There are also more studies agreed to the finding such as Danescu-Niculescu-Mizil, Kossinets, Kleinberg, & Lee, (2009) found that when the variance is very low, the reviews with the highest helpfulness ratios are those with the average star rating. With moderate values of the variance, the reviews evaluated as most helpful are those that are slightly above the average star rating. As the variance becomes large, reviews with star ratings both above and
below the average are evaluated as more helpful than those that have the average star rating (with the positive reviews still deemed somewhat more helpful).

**CONCLUSION**

This study contributes to the hospitality literature by revealing the influence of online consumer-generated reviews on shoppers’ intentions to trust. Additionally, a methodological contribution is made by employing a questionnaire approach to estimate the amount of trust and authenticity on a travel website based on different review types. Our results suggest that online user reviews have an important impact on online hotel bookings. Findings of this research are consistent with prior studies in other fields. Hotel managers should, therefore, be well aware about the impact of online reviews on rooms demand, especially those that were posted on a third-party website about their hotels.

While the results of this research have provided supportive evidence for the research questions addressed, there are potential limitations of this study. First, participants were a relatively homogeneous sample and may not fully represent the characteristics of the population intended for analysis; and second, being the results based on correlational data, causality should not be considered conclusive (Nisbett, 2014). Future research, such as the refinement of the evaluation model, is needed to improve the generalization of research findings in this area.

**ACKNOWLEDGEMENT**

We wish to thank our supervisor, Prof Alton Chua, Nanyang Technological University, for his invaluable advance, guidance and supervision.

We would also like to thank those teachers and friends who have helped us in one way or another during the course of writing this MA critical inquiry report.

**REFERENCES**


QUESTIONNAIRE

On a scale of 1 (Strongly Disagree) to 5 (Strongly Agree), indicate the extent to which you agree with the following statements:

19) The title of the review is easy to read.
20) The description of the review is easy to read.
21) In general, the review is easy to understand.
22) The title of the review is informative.
23) The description of the review is informative.
24) In general, the review is rich in details.
25) The title of the review is exaggerated.
26) The description of the review is exaggerated.
27) In general, the review goes overboard to appear convincing.
28) The title of the review is appears tentative.
29) The description of the review appears tentative.
30) In general, the review is vague.
31) The review is a genuine account of post-trip experience.
32) The review is written after a stay in the hotel.
33) The review is an honest description of a stay in the hotel.
34) I will feel comfortable to trust the comments in the review.
35) I will feel secure in following the suggestions in the review.
36) I will be confident to rely on the review.
QUESTIONNAIRE

On a scale of 1 (Strongly Disagree) to 5 (Strongly Agree), indicate the extent to which you agree with the following statements:

1) Truth about hotels can be found in user reviews on the Internet.
2) Correct evaluation of hotels is available in user reviews.
3) Various user reviews provide correct information about hotels.
4) User reviews contain concrete information about hotels.
5) Most of what is true about hotels are available in user reviews.
6) The strength of user reviews is the vast amount of detailed information available about hotels.
7) User reviews provide me with most of the knowledge I need to select a hotel.
8) The most important aspect of user reviews is that they contain specific facts about hotels.
9) When I face difficulty in selecting hotels, I feel safe if I find user reviews about them.
10) In user reviews, the richness of detail about hotels is most prominent.
11) I often doubt if user reviews really help me understand the standard of hotels.
12) User reviews reflect accurate knowledge about hotels.
13) I am most confident that I have selected the appropriate hotel when I have used user reviews as the source of information.
14) User reviews contain more facts than speculations about hotels.
15) I evaluate hotel-related information available in user reviews by checking more sources.
16) To check the credibility of hotel-related information available in user reviews, I try to compare multiple sources.
17) I check if the hotel-related information available in user reviews is logical.
18) To check if the hotel-related information available in user reviews is reliable, I evaluate it in relation to other knowledge I have.

(37) All three reviews shown in the website indicate:
   - Negative rating (1 star)
   - Moderate rating (3 stars)
   - Positive rating (5 stars)

(38) The website is showing reviews for a property which is a:
   - Budget hotel (1 star)
   - Mid-range hotel (3 stars)
   - Luxury hotel (5 stars)
QUESTIONNAIRE

(39) Did you use review titles to determine if reviews are authentic? If yes, how?
(40) Did you use review descriptions to determine if reviews are authentic? If yes, how?
(41) Did you use review titles to determine if reviews are fake? If yes, how?
(42) Did you use review descriptions to determine if reviews are fake? If yes, how?
(43) What heuristics (if any) did you use to judge if reviews are authentic or fake?
QUESTIONNAIRE

(44) Indicate your gender.
(45) Indicate your age group: 21-25, 26-35, 36-45
(46) Indicate your nationality.
(47) Indicate your current educational background.
QUESTIONNAIRE

On a scale of 1 (Strongly Disagree) to 5 (Strongly Agree), indicate the extent to which you agree with the following statements:

(48) I feel apprehensive about using the Internet.
(49) I hesitate to use the Internet for fear of making mistakes.
(50) I avoid the Internet because it is intimidating to me.
(51) I am familiar with the use of review websites such as Amazon.com and TripAdvisor.com.
(52) I frequently visit review websites such as Amazon.com and TripAdvisor.com.
(53) I generally like reading online user reviews for hotels.
(54) I generally find it interesting to read online user reviews for hotels.
Dear Assoc Prof Alton Chua Yeow Kuan,

The IRB Application submitted by you titled Studying Willingness to Trust Authentic and Fake Online Hotel Reviews (CAY201415S1-002) was approved.

The Approval Letter is attached together with this email. You can also download the Approval Letter from within WKWSCI Research Portal.

Please go to [http://researchportal](http://researchportal) to access WKWSCI Research Portal.

(This is an auto-generated email from WKWSCI Research Portal. Please do not reply to this email.)