Intra-Orgnizational sharing of Online Service Reviews

Heuristic, Systematic, and Affective Components of Online Service Reviews: Their Impact on Intra-Orgnizational Adoption and Sharing

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Minwoo Lee
University of Houston
mlee37@central.uh.edu

Kiljae Lee
Emory-Riddle Aeronautical University
kay.lee@erau.edu

Kyung Young Lee
Dalhousie University
ky354506@dal.ca

Agnes DeFranco
University of Houston
adefranco@uh.edu

Abstract

There are plenty of studies on how online service reviews (OSRs) influence customers’ behavior in the hospitality industry. However, little is known about how the reviews affect managers’ behavior. Drawing on the heuristic-systematic model (HSM), this study proposes a model that explains how the key attributes of OSRs affect managers’ intention to adoption and sharing. Further, building on the emotional contagion theory, this study demonstrates that the affective intensity (but not the valence) elicited by the reviews alters the likelihood of intra-organizational diffusion by moderating the relationship between adoption and sharing.

Keywords

Online Service Reviews, Heuristic-systematic model, Service innovation, Emotional intensity

Introduction

The ratings and opinions about hotels and restaurants posted on community websites (e.g., TripAdvisor.com) or travel-booking websites (e.g., Expedia.com) affect the sales by influencing customers’ attitudes and behaviors: purchasing intention (Park et al., 2007), booking intention and trust (Lee et al., 2011), attitude and satisfaction (Sparks and Browning, 2011; Gretzel and Yoo, 2008; Li et al., 2013), and service ratings of other customers (Zhang et al. 2010). Many of these studies provide an in-depth understanding of how online service reviews (OSRs) influence customers’ attitudes and behaviors (Filieri and McLeay, 2014; Zhao et al., 2013). Unfortunately, however, little research has explained how the OSRs influence attitudes and behaviors of the service managers who may use the reviews as a source of information that would trigger decisions on service improvement and innovations (Anderson and Magruder, 2012; Lee and Yang, 2015). The service innovation, in the hospitality industry, aims to improve the customer experience by delivering value and reconfiguring the value creation process (Hu et al., 2009). Such innovation requires firms to build an agile capacity to adopt the externally generated signals (Chen et al., 2009; Ordanini and Parasuraman, 2011) and diffuse them within the organization (Agarwal and Selen, 2009; Chen et al., 2009; Hu et al., 2009). To provide a conceptual basis for developing such a capacity, this study seeks to identify the key attributes of OSRs that influence managers’ likelihood to adopt and diffuse the information.
Theoretical Development

In this study, we define “information adoption” as the extent to which service managers accept the value of information expressed in the OSRs to recognize or solve problems (Lee and Yang, 2015; Watts and Zhang, 2008). Drawing on extant studies (Park et al., 2009; Zhang et al., 2011), we also define “intention to share” as the extent to which managers intend to diffuse the information acquired from OSRs in their organization.

To capture the cognitive side of assessing OSRs, we take the heuristic-systematic model (HSM) as a basis for outlining our model (Chaiken 1980; Chaiken and Ledgerwood 2011). While the two cognitive processes assumed in HSM appear to play the major role in shaping attitudes and actions, it is important to consider the influence of affective side of it to get closer to the entire picture of reality. It is so because the latest advances in cognitive psychology and neuroscience revealed that emotion is an integral part of rational judgment (Damasio 1994; Lee et al. 2019; Norman 2004; Picard 2010) which continuously guide and modify our interpretation of any environmental stimuli (LeDoux 1996). Below, we discuss how OSRs may affect managers’ attitude and intention through the two processes in the cognitive route and through a moderating process in the affective route.

**Heuristic and Systematic Model (HSM) of information processing**

HSM (Chaiken, 1980, 1987) posits that there are two distinct modes of information processing: 1) heuristic processing vs. 2) systematic processing (Chaiken, 1980). Heuristic processing focuses on salient and easily comprehensible cues that engender quick and simple judgments (Chaiken and Ledgerwood 2011). In the online environment, this mode of processing relies on readily accessible cues such as the identity (e.g., gender, appearance), or ratings (e.g. popularity or helpfulness ratings) (Watts and Zhang, 2008). On the other hand, systematic processing involves efforts to scrutinize the information thoroughly (Chaiken and Ledgerwood 2011). People, as cognitive misers, tend to rely on the effortful systematic processing only when they have both motivation and ability to devote a certain amount of attention (Chaiken 1980; Chaiken and Ledgerwood 2011; Watts and Zhang 2008).

These two modes of processing could co-occur and often interact with each other (Chaiken and Ledgerwood 2011). When the two modes yield assessments incongruent with each other, the systematic assessment will attenuate the judgment; when they yield assessments congruent with each other, systematic processing additively affect the judgment of heuristic processing. OSRs posted on travelers’ communities contain various attributes that may affect either of these two cognitive processes (Gretzel and Yoo 2008; Lee et al. 2011). Below we propose a research model (see Figure 1) that illustrates the relative impacts of the key attributes of OSRs on managers’ adoption and intention to share.

**Figure 1. Research model**
Hypotheses

There are three attributes of OSRs -- 1) service rating, 2) helpfulness rating, and 3) reviewers’ contribution ranking (i.e., expertise and reputation) -- that may serve as key heuristic cues for managers. Research suggests that these type of summary indicators influence readers’ assessment of the message by presetting the perception of credibility (Lee and Yang, 2015; Watts and Zhang, 2008). However, when such a heuristic-processing does not yield sufficient confidence, people engage in systematic processing which would mainly focus on the information quality. Through these additional efforts on details, however, people achieve their desired level of judgmental confidence (Chaiken and Ledgerwood, 2011).

Perceived information quality

The information quality is the core target to attain when managers engage in systematic processing. It is not surprising that the perceived quality of argument is highly correlated with the adoption of the readers of reviews (Cheung et al. 2008; Watts and Zhang 2008). In travelers’ community websites, there are three sub-dimensions of information quality most closely associated with the adoption of readers: timeliness, relevance, and accuracy (Filieri and McLeay, 2014). Under a systematic processing mode, managers would make efforts to take the standpoint of customers to understand the reviews and sympathize the reviewers better. Thus, we expect that managers will also focus on those top three dimensions of information quality in shaping their attitude toward each review. We hypothesize that:

H1: The information quality of OSRs will be positively associated with information adoption by managers.

Extremity

Research suggests that, in the communications among customers, the moderately star-rated reviews (e.g., three out of five-star ratings) are considered more beneficial than extremely star-rated ones (e.g., one or five out of five-star ratings). Reviews with moderate (vs. extreme) ratings were more helpful for making a purchasing decision (Mudambi and Schuff, 2010). Customers perceived two-sided messages as more credible as they felt less pressure to “discount” the message as was often needed when a message was grossly one-sided (Schlosser, 2005). One-sided opinions are often tainted by the exaggerated expressions that may lead to a suspicion of potential bias which in turn engenders a reactive perceptual discount. A similarly adverse effect of extremity on adoption was reported in the communications between customers and product developers (Lee and Yang, 2015). As an extension of these studies, we predict a negative impact of extremity on adoption for the managers in processing OSRs. We hypothesize that:

H2a: The extremity service-rating in the OSRs (1 & 5 and 2 & 4 over 3) will be negatively associated with information adoption by managers.

Helpfulness

The collective assessment of “helpfulness” ratings (i.e., a degree to which a review is identified by other customers as helpful) is found to be an important heuristic cue that affects the credibility of the reviews (Chevalier and Mayzlin, 2006; Watts and Zhang, 2008). Its impact on adoption, therefore, would be additive over and above that of systematic processing. We hypothesize that:

H2b: The helpfulness rating will be positively associated with information adoption by managers.

Reviewers expertise and reputation

Reviewers’ number of comments posted (i.e., expertise) and likes received (i.e., reputation) are important heuristic cues that would influence managers’ adoption. Given the anonymous nature of the online community, a reviewer’s expertise has to be inferred from the past behaviors available (Liu and Park, 2015; Weiss, Lurie, & MacInnis, 2008). Thus, the reviews posted by reviewers with high expertise rating (Cheung et al., 2008) and reviewers with a greater number of accumulated reviews (Racherla and Friske, 2012; Liu and Park, 2015) are perceived more useful than others.
For the same reason, more readers tend to rely on social validation for credibility judgment. And, thus, reviewer’s reputation score becomes a significant predictor of readers’ perceived helpfulness of the reviews (Liu and Park, 2015; Cheung et al., 2008; Cialdini, 2001; Fang et al., 2016; Racherla and Friske, 2012).

Extending these findings to the context of managers’ attitude formation, we hypothesize that:

**H2c:** The reviewer’s expertise rating will be positively associated with information adoption by managers.

**H2d:** The reviewer’s reputation rating will be positively associated with information adoption by managers.

**Adoption vs. sharing**

For a successful intra-organizational diffusion, research in Knowledge Management Systems (KMS) suggests that voluntary adoption of information is an essential precondition. For instance, He and Wei (2009) argue that, for a success in KMS continuance (i.e., willingness to seek out, codify, and share knowledge in the system), a firm needs to secure two types of individual beliefs: contribution belief (i.e., belief on reasons for contribution such as reputation, enjoyment, and reciprocity) and seeking belief (i.e., belief on reasons for seeking such as perceived usefulness and benefit of the information). And these two should follow a conjunctive decision-rule where both conditions should be met beyond certain cutoff level. That is, managers’ seeking belief is one of the two major preconditions for the successful diffusion of ideas. Considering that one’s information adoption indicates that her seeking belief is on steroid, we extend this finding to predict that improved adoption will increase intention to share. We hypothesize that:

**H3:** Information adoption from OSR is positively associated with information sharing by managers.

**Emotional Intensity**

Emotions, or core affect, refers to a neurophysiological state that is a blend of valence (i.e., positive vs. negative) and activation (i.e., aroused vs. not aroused). For instance, an emotional state of agitation (i.e., negative valence with high activation) is qualitatively different from sadness (i.e., negative valence with low activation) although they are both negatively valenced emotions; similarly, relatedness (i.e., positive valence with high activation) is a different from calmness (i.e., positive valence with low activation) in terms of activation (i.e., physiological arousal) level. And, most information artifacts, be they contents or design, contain affective quality -- a property that can change emotional state of an individual who interacts with them (Lee et al. 2013; Russell 2003; Zhang 2013). We notice that many emotionally charged OSRs take on such affective qualities that may alter the emotional state of readers shifting their subsequent attitudes and behavioral potentials.

Research on social transmission suggests that the affective quality influences the likelihood of a message becoming “contagious”. Specifically, a message that instigates more intense arousal (i.e., higher activation) in the readers’ mind spreads faster across the social network than others regardless of its associated valence; this effect holds even after controlling for how surprising, interesting, or useful the content is (Berger and Milkman, 2012). Because the “activated” state increases action-related behaviors such as helping others or responding faster in negotiation (Gaertner and Dovidio 1977; Brooks and Schweitzer 2011), the social transmission, which requires action, is increased when a message contains an affective quality that boosts activated emotions (Berger and Milkman 2012; Lee et al. 2013). Applying the same reasoning to managers reading OSRs, we hypothesize that:

**H4:** The intensity of emotions will moderate the relationship between adoption and sharing such that the higher the level of arousal the contents elicit, the greater the strength of the relationship will be.

**Methodology**

Between July and August 2019, OSRs about hotels in New York City on Tripadvisor.com will be collected to examine the proposed model. JavaScript will be used to crawl 1) the review-data (i.e., review text; review rating), 2) reviewer-data (i.e., reviewer’s number of comments; likes received; location; previous activity), and 3) hotel-data (i.e., average rating; total number of reviews). We will use listwise deletion to exclude records with missing values, with non-English languages, and with no text content. Analyses will be performed following the steps briefly illustrated below.
First, from the crawled dataset, the values in the message headers (i.e., service-rating; helpfulness rating; reviewers’ contribution ranking—the number of comments posted and number of likes received) will be selected to form the three exogenous variables that correspond to our theorizing of heuristic processing. Second, to evaluate one remaining exogenous variable (i.e., information quality) and the two endogenous variables (i.e., information adoption; intention to share), we will invite six to ten managers currently working in the hotel industry to perform a content analysis. These participants will follow the exact procedure defined in the coding scheme developed by authors according to an extant study (Krippendorff 2004). Third, a sentiment analysis will be performed on the review text to compute emotional intensity scores using the Linguistic Inquiry and Word Count 2015 (LIWC)(Pennebaker et al. 2015). We will customize the entries in LIWC by subdividing them into activated versus non-activated keywords before the analysis. Lastly, we will perform a Structural Equation Modeling analysis to estimate the significance of the hypotheses proposed.

Conclusion

This is a research-in-progress. Upon completion, the study will identify the key characteristics of OSRs and their relative magnitudes that affect the intra-organizational diffusion of ideas on services and innovation in the hospitality industry.

REFERENCES


