Evaluating Effects of Information Incongruence and Gender on Online Review Helpfulness

Emergent Research Forum (ERF) Paper

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Abstract
Empirical research has shown mixed results regarding the effect of online review attributes (e.g., tone, valence, congruence) on consumer perceptions of reviews. Drawing on selectivity theory and cognitive dissonance theory, we dive deeper into decision making to understand how different people perceive helpfulness. The study explores the interplay between review attributes and gender on perceptions of review helpfulness. We conducted a between-subject, controlled laboratory experiment to test our model. We propose that review information congruence plays an important role in evaluating online review helpfulness. We also expect that women consider negative informative and positive persuasive online reviews more helpful whereas men consider positive informative and negative persuasive online reviews more helpful. The study brings important extensions to existing research on relationships between online review helpfulness and online review attributes.

Keywords
Review helpfulness, information congruence, informative review, persuasive review, gender, selectivity theory, cognitive dissonance

Introduction
Online word-of-mouth communication, particularly online reviews, has increasingly become an important source of information that helps consumers make online purchase decisions. Online reviews, defined as peer-generated evaluations of products or services on e-commerce websites (Mudambi and Schuff 2010), complements the description provided by sellers. Due to the powerful effects of social influence and electronic word-of-mouth, online reviews help e-commerce companies attract and retain customers (Baek et al. 2013; Cheung and Thadani 2012; Chevalier and Mayzlin 2006).

Those who research online review effectiveness have focused on review effectiveness in terms of how helpful potential customers find a review (Mudambi and Schuff 2010). Perceived review helpfulness is “the extent to which a peer-generated evaluation is perceived by consumers to facilitate their purchase decision process” (Mudambi and Schuff 2010 pp.186). The question of what makes a helpful review has received much attention within e-commerce research and scholars have identified various review attributes that appear to impact perceived helpfulness (Chevalier and Mayzlin 2006; Forman et al. 2008; Mudambi and Schuff 2010). There has also been some pioneering work on differentiating the real effect of the design of online reviews on consumers' purchase decisions from the products themselves (Ghose and Ipeirotis 2011; Archak et al. 2011).

Despite much progress, empirical studies have been inconclusive about the effect of review attributes on consumer perceptions of reviews (Hao et al. 2010). To help resolve inconsistencies in the literature, this study aims to shed light on the complex interplay between different review attributes. We examine three of the most widely examined review attributes: review tone, valence, and congruence (Mudambi and Schuff 2010; Kronrod and Danziger 2013; Kusumasondjaja et al. 2012; Van Rompay et al. 2010). Table 1 provides the definitions of these constructs, as well as sample content from fictitious reviews of a service.
Review tones refer to informative and persuasive information. Informative and persuasive wording was first discussed by Hunt (1976) in the context of advertising. Informative reviews provide externally verifiable information about products, which may aid consumers in imagining and in predicting the utility of the products that they are considering. Informative reviews contain detailed information regarding product attributes and may be viewed as being more objective (Darley and Smith 1993), which indicates that informative reviews provide information for the consumers to make their own judgments. In comparison, reviews that are exclusively persuasive contain information that attempts to induce changes in another (Hunt 1976). For example, a review containing the words “I like it a lot, you should get it too” may indicate persuasion of purchase. In other words, persuasive reviews are more subjective and emotional in an attempt to influence another person’s thinking. In reality, for example, a review can be a little persuasive and very informative or vice versa, depending on the review contents.
Reviews framed as persuasive do not meet consumers’ information processing needs because persuasive reviews do not provide product information. This is important because consumers may lack the ability to understand and recognize whether a product or service can satisfy their needs. Moreover, informative reviews can provide helpful information for consumers to identify whether the product features would fit their requirements. In sum, different review tones may lead to consumer behavior change due to the different mechanisms that work towards people’s perceptions over the expressions.

Our study focuses on the interplay of review tone and review valence together. In other words, we look at interactions between positive informative, negative informative, positive persuasive, negative persuasive. This is inevitable because it’s impossible to provide informative or persuasive feedback that does not have any valance. The closest you could get to this might be a very technical “specifications” type of description like what a retailer provides. But this is not what reviews are about. Reviews are about people’s experience and experiences generally fall on some continuum from positive or negative.

**Review Incongruence and Review Helpfulness**

We theorize that review incongruence, which refers to inconsistency between review tone and valence (e.g., “The service was great, but I didn’t like it”), is likely to cause cognitive dissonance. Cognitive dissonance theory suggests that mental discomfort is caused by holding two or more contradictory beliefs, ideas, or values at the same time or by conflicts between new information and existing beliefs, ideas, or values (Festinger 1957).

People strive for internal consistency (Festinger 1957); if a review is consistent from the beginning to the end, there will be no conflict in cognition from the reviewer’s perspective. A consumer who encounters incongruence in a review will likely experience confusion and psychological discomfort due to cognitive dissonance. As a result, they will consider the review less helpful. Therefore, we hypothesize:

**H1:** Review incongruence is negatively associated with online review helpfulness.

**Gender and Review Helpfulness**

Prior literatures suggest men and women differ in information search behavior, information processing, information diagnosis, and decision making (Lorigo et al 2006; Slama and Tashchian 1985). The causes of these different behaviors may result from the distinctive traits of men and women that are developed during childhood and early adulthood. In general, men are socialized to be more independent, confident, competitive, and willing to take risks, compared to women (Darley and Smith 1993). In contrast, women tend to be socialized to be more responsible for others, emotionally open, and desire to keep harmony compared to men (Birditt and Fingerman 2003).

The reason for gender differences may be explained in terms of the selectivity theory and socialization of genders. According to selectivity theory, men are considered to be “selective processors” who often do not engage in comprehensive processing of all available information before rendering judgment (Kempf and Palan 2006; Meyers-Levy and Masheswaran 1991). Instead, they seem to rely on various heuristics in place of detailed message elaboration. These heuristics involve a cue or cues that are highly available and salient and imply a particular inference. Such processing implies that men often base their judgments on a select subset of all available information. In contrast, women are considered to be “comprehensive processors” who attempt to assimilate all available information before rendering judgment (Kempf and Palan 2006; Meyers-Levy and Masheswaran 1991). Women usually attempt effortful elaboration of all available information unless they are restricted by memory constraints. Therefore, women give equal weight to self- and other-generated information, encode more message claims, and more extensively elaborate on specific claims.

Because men are selective processors, they are more likely to focus on information that helps them recognize the attributes of the product rather than process all the information from online reviews. Positive information of the product satisfies men’s need to be more assertive and independent, and leads to greater perception of helpfulness. In contrast, women are comprehensive processors; they are more prone to take all information into account, including negative information. Thus, negative information is considered more helpful by women. Moreover, women may consider positive information as less comprehensive and may suspect a reviewer has not discovered the negative attributes of a product or service. Therefore, we hypothesize:

**H2a:** Negative informative online reviews will have a stronger, positive effect on online review helpfulness for women than for men.
H2b: Positive informative online reviews will have a stronger, positive effect on online review helpfulness for men than for women.

Not only do men and women exhibit differences in how they process information, but in how they interact with and regard others (Guadagno and Cialdini 2002; Brunel and Nelson 2003). We consider processing online review information an interpersonal event that involves two or more people exchange information. When interacting with others, men are more interested in establishing independence through assertiveness (Tannen 1990). Men may be more likely to consider negative persuasive reviews more helpful because this may help them avoid failure that could be incurred by using a poor product or service. Negative persuasive reviews provide information that can help a person avoid making the same mistakes the reviewer did. Women, however, are likely to consider positive persuasive reviews more helpful because women are more attuned to conflict and negative emotions and typically feel more responsible for the maintenance of harmonious interactions (Antonucci 2001). Additionally, women usually report experiencing negative emotions more often than men do (Fischer and Manstead 2000). Positive persuasive reviews may allow women to feel connected with others in a positive, harmonious environment. Therefore, we hypothesize:

H3a: Negative persuasive online reviews will have a stronger, positive effect on online review helpfulness for men than for women.

H3b: Positive persuasive online reviews will have a stronger, positive effect on online review helpfulness for women than for men.

**Research Methodology and Pilot Study**

To test our hypotheses, we conducted a between-subject, controlled 2x2 laboratory experiment with 2 levels (informative review valence: positive vs. negative) x 2 levels (persuasive review valence: positive vs. negative) has been designed. When informative review and persuasive review are both positive or negative, review congruence scenarios are represented whereas one review tone is positive and the other review is negative represent review incongruence.

We drew our participants from Amazon Mechanical Turk. Subjects were guided to click a URL link that randomly redirected the subject to one of the four different treatment conditions. In this way, we sought to hold a truly randomized experiment and alleviate the likelihood that any systematic individual differences would affect the results. Every participant went through the same procedure across different conditions: firstly, one online review page was shown to them, and they were asked questions about their impression of the service. They were also asked about their gender, age, online shopping experience, and questions pertaining to a manipulation check. At the end of each session, the participants were debriefed, thanked, and paid for their service.

**Proposed Contributions**

Drawing on selectivity theory and cognitive dissonance theory, we examine how gender and review attributes interact to influence review helpfulness. Our study brings important extensions to existing research on the relationships between online review helpfulness and both review and consumer characteristics. We expect that women consider negative informative and positive persuasive online reviews more helpful whereas men consider positive informative and negative persuasive online reviews more helpful. We also propose that review information congruence plays an important role in evaluating online review helpfulness.

Our findings will help bring clarity and resolve mixed findings in the literature on review attributes and review effectiveness. We expect this research to demonstrate that there are significant differences between women and men in terms of attitude about review helpfulness as well as online information search behavior.

In practice, the findings of the study can be used to tailor websites with products that are male/female-centric to emphasize certain types of information in reviews. Moreover, our research may help online market owners optimize web pages to help avoid cognitive overload by recognizing what factors constitute helpful reviews, and ultimately, help practitioners design better online product review systems.

**Conclusion**

Drawing on the selectivity theory and cognitive dissonance theory, we examine how different information congruence in online review tones and valence are associated with online review helpfulness. Then, we explore moderation of these relationships by gender. We expect that women and men perceive online reviews differently. Thus, companies may want to consider more different designs of online review systems that targeting gender differences. In addition, this paper highlights the role of information congruence in the context of online review helpfulness. To maximize the effect of online word of mouth, we suggest e-commerce
companies not only focus on promoting services to consumers by encouraging them to write reviews but also pay more attention to information congruence in reviews.

REFERENCES


