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THE EFFECT OF FLUENCY ON REVIEW HELPFULNESS: DOES IT DEPEND ON PERSPECTIVE-TAKING?

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Abstract

In this paper, we propose to explore the effects of fluency and perspective-taking on the perceived helpfulness of online product reviews. Past research has suggested that fluency, or ease of information processing, can be used as information when individuals are making various judgments. For example, fluency increases liking. Thus, we predict that fluency can influence perceptions of review helpfulness. Moreover, researchers have found that social distance, or the distinction between self and other, can affect judgment. Specifically, taking other-perspective can reduce feelings in response to disfluency. Therefore, we further predict that a review presented in fluent information will be perceived as more helpful than one in disfluent information when individuals consider a product for themselves, but not when they imagine that another person will purchase the product. To test the theoretical model proposed, we will present a book review in easy- and hard-to-read fonts in Study 1, and prepare another review in high- and low-contrast texts in Study 2. Participants will be instructed to take self- or other-perspective when rating review helpfulness. Our results will indicate the important roles of fluency and perspective-taking in consumer evaluation of online product reviews and provide implications for consumers and online retailers.

Keywords: Fluency, Perspective-taking, Review helpfulness, Product reviews, Electronic commerce
1 INTRODUCTION

With the rapid growth of social media technologies and electronic commerce, consumers often search product information online and rely on the reviews provided by others to make purchase decisions. Online reviews are becoming increasingly important as they can be easily accessed by a wide range of audience and therefore greatly influence the popularity of product and success of electronic commerce (Chen et al. 2008; Ghose & Ipeirotis 2006). But, online reviews are not perceived by readers as equally helpful. Past research has proposed that, if a review is believed to be more helpful it is more likely to add value for a future customer (Mudambi & Schuff 2010; Yin et al. 2014). Given the growing use of online review systems, a better understanding of what makes a helpful review is essential.

In the current work, we examine if fluency, or ease of information processing, can affect perceptions of review helpfulness. It has been widely recognized in consumer psychology literature that, fluency has a strong impact on various judgments including perceived risk, liking, and confidence (Novemsky et al. 2007; Reber et al. 1998; Song & Schwarz 2008; Tsai & McGill 2011). However, to our best understanding the effect of fluency on review helpfulness ratings has not been examined yet. In particular, IS scholars have extensively explored how the characteristics of reviews and reviewers could influence perceived helpfulness (Moore 2015; Mudambi & Schuff 2010; Peng at el. 2014; Yin et al. 2014). To address this gap, we follow feelings-as-information theory and examine the impact of easy-to-process (vs. hard-to-process) information on the perceived helpfulness of online reviews.

Following past research, we further explore if the influence of fluency on review helpfulness is conditional (Greifeneder & Pham 2010; Oppenheimer 2008). Given that consumers tend to use feelings as information to evaluate product reviews, we speculate if there will be a factor that can eliminate the effect of fluency on the judgment of review helpfulness. Perspective-taking literature has shown that individuals process information differently from divergent perspectives, given the distinction between self and others (Galinsky & Moskowitz 2000; Jones & Nisbett 1971). According to construal-level theory, we then predict that focusing on self can make individuals feel psychologically close to a product. As a result, they are more likely to think concretely and use feelings to evaluate a review. By contrast, focusing on others can induce abstract thinking and reduce the likelihood that individuals use feelings as information to rate review helpfulness. In this work, we focus on the differential effects of fluency on review helpfulness when self- or other-perspective is respectively taken.

Our work contributes to established literature researching the effect of fluency on consumer judgments, but also reveals the conditions under which fluency affects the perceived helpfulness of online reviews. Specifically, we test whether the effect of fluency on review helpfulness depends upon the perspective being taken. This research complements to our existing knowledge about how consumers evaluate reviews that others create and publish through online review systems (e.g. www.amazon.com). A large body of IS research has been focusing on the informational characteristics of product reviews and the relationship between content-based features and information quality perceived by prospective customers. In the work proposed here, we extend this line of research by exploring the role of subjective feelings, particularly fluency, in the evaluation of online product reviews.

Our research attempts to provide some valuable implications for consumers in decision making and for online retailers in electronic marketing. By demonstrating that fluency can influence how consumers perceive the helpfulness of online reviews, we suggest review providers to present content as easy-to-process. So that, a review can be fluently construed by users and perceived as more helpful, at least when self-perspective is taken. If the interaction between fluency and perspective-taking exists, we would suggest review readers to differentiate self- and other-perspective when making purchase decisions. Moreover, review providers need to understand that consumers tend to evaluate a review more subjectively and often use feelings, such as fluency, when a product is considered for themselves; however, a review will be judged more objectively if one thinks the product for evaluation is considered by another person in a different situation than one’s default mode.
2 THEORETICAL DEVELOPMENT

According to past research, online reviews can be defined as peer-generated product evaluations posted on company or third party website (Mudambi & Schuff 2010). A product review, like other kinds of online word-of-mouth, discusses various attributes of a product and expresses one’s experience, often subjective and personal, with the product. So, it is important for researchers to understand how readers comprehend the content of a product review, but also how they generate feelings after reading the review. It is noteworthy that, an individual’s feelings about a product review are not determined solely by the content of the review. Rather, feelings induced by a priming manipulation, which are often irrelevant to the review, can be misattributed by individuals to the information presented (Schwarz 2004; Winkielman et al. 2003). The present research proposes that individuals use feeling of fluency when they evaluate online product reviews.

2.1 Online Review Helpfulness

Review helpfulness is defined as the extent to which a peer-generated product evaluation can facilitate the consumer’s purchase decision process (Mudambi & Schuff 2010). As an important measure of online reviews, helpfulness ratings have been widely discussed in past research (Huang et al. 2015; Korfiatis et al. 2012; Yin et al. 2014). A helpful review is believed to contain more valuable information that can help consumers make their purchase decisions easily. To recommend the most helpful reviews to future customers, online marketplaces like Amazon have adopted the measure of review helpfulness by asking the question “Was this review helpful to you?” under each review posted on its website and, based on readers’ collective responses, display the highly recommended reviews upfront (Korfiatis et al. 2012; Mudambi & Schuff 2010). According to past research, this attempt has effectively increased Amazon’s annual revenues (SPOOL 2009).

What makes a review helpful? Past research has examined the impacts of some factors related to review (e.g. length of a review), reviewer (e.g. past helpfulness record), or product type (e.g. search product) on perceived helpfulness (Korfiatis et al. 2008; Mudambi & Schuff 2010; Weathers et al. 2015; Yin et al. 2014). A recent study found that emotions embedded in reviews could influence the ratings of review helpfulness (Yin et al. 2014). While it is widely recognized in psychological literature that feelings can be triggered by external priming and become highly influential on judgment, whether manipulated fluency can affect consumers’ perception of product reviews has not been adequately discussed in IS research. The current work is intended to integrate the insights gained in psychological literature and apply them to understanding how consumers evaluate online product reviews.

2.2 Fluency Can Influence Perceived Review Helpfulness

Feelings-as-information theory states that subjective feelings can play an important role in judgment (Schwarz 2010). It further states that the use of feelings as a source of information is parallel to the use of any other information processed by individuals to complete an evaluative task (Pham 2004; Schwarz & Clore 1983, 2003). Past work has found that processing fluency, defined as the extent to which external information is processed, has a powerful influence on judgment (Alter & Oppenheimer 2009; Novemsky et al. 2007; Winkielman et al. 2003). Numerous studies have empirically shown that fluency, or ease of information processing, can form the basis on which individuals determine their willingness to be engaged in the information presented (Song & Schwarz 2008; Thomas & Tsai 2012).

When fluent (easy-to-process) information is presented, individuals perceive an information processing task as effortless, and thus positive emotions are more likely to be generated. By contrast, when individuals are exposed to disfluent (hard-to-process) information they tend to think that the task is effortful, and thus negative emotions are more likely to be experienced. Specifically, a product review presented in an easy-to-process form is more likely to be accepted while one in hard-to-process form will be considered not very helpful for a lack of readily accessible information about the product being evaluated. Thus, we predict that fluency can increase the perceived helpfulness of a product review.
2.3 Perspective-Taking Can Moderate the Effect of Fluency

Construal-level theory proposes that psychological distance can affect judgment (Trope & Liberman 2003, 2010). Psychological distance is defined as a subjective experience that an object or event is viewed as close or far away from the self, here, and now (Trope & Liberman 2010). As psychological distance increases, individuals tend to think more abstractly and focus on higher level concepts. And, they are more likely to think concretely and attend to detailed information as psychological distance decreases (Thomas & Tsai 2012; Tsai & McGill 2011). It is possible that thinking abstractly or concretely about a product review has an effect on how individuals evaluate review helpfulness.

Psychological distance can be spatial distance, temporal distance, or social distance. Given that social distance is derived from the distinction between self and other, psychological distance can then be manipulated by asking an individual to take self- or other-perspective when making judgment. In particular, we predict that imagining self in a specific situation makes an individual think that the target of judgment is psychologically close, and therefore focus on one’s own experience, such as ease or difficulty of information processing; however, thinking about another person makes one feel psychologically distant to the target, and thus become less likely to be influenced by processing fluency. Past work has found that psychological distance could reduce the feeling of difficulty (Ayduk & Kross 2008; Kross et al. 2005; Thomas & Tsai 2012; Van Boven et al. 2010). Following these research, we propose that fluency would have an effect on perceived helpfulness only when self-perspective is taken, but fluency has no effect when other-perspective is taken.

2.4 A Theoretical Framework of Perceived Review Helpfulness

Taken together, we develop a theoretical framework of perceived review helpfulness, shown in Figure 1. We claim that: 1) both review content and feeling of fluency can influence perceived review helpfulness; 2) taking self- or other-perspective can moderate the relationship between feeling of fluency and perceived review helpfulness. It is noteworthy that, feeling of fluency would be very likely to interact with review content when affecting perceived review helpfulness. In the current work, as we are interested in psychological factors, we focus on the link between fluency and review helpfulness as well as the moderating effect of perspective-taking on how fluency affects perceptions of review helpfulness.

![Figure 1](image)

*Figure 1. Past literature suggests that feeling of fluency and perspective-taking, in addition to review content, will influence perceptions of review helpfulness.*

3 HYPOTHESES

Based on the theoretical framework, we further propose a model focusing on the relationships between psychological factors, specifically fluency and perspective-taking, and perceived review helpfulness, shown in Figure 2. The relationships illustrated in this model are considered the novel aspects of the theoretical framework presented earlier. In this model, we predict that: 1) fluent (disfluent) information can increase (decrease) the perceived helpfulness of a review; 2) the effect of fluency on review helpfulness depends on the perspective (self or other) taken. We then develop our hypotheses based on this model.
Hypothesis 1: An individual is more likely to perceive a review presented in easy-to-process (fluent) information as helpful, compared to one presented in hard-to-process (disfluent) information, when self-perspective is taken.

Hypothesis 2: An individual is equally likely to perceive a review presented in easy-to-process (fluent) information as helpful, compared to one presented in hard-to-process (disfluent) information, when other-perspective is taken.

To emphasize, perspective-taking is predicted to be a moderator of the relationship between fluency and perceived review helpfulness. Here we think that psychological distance, particularly social distance or the distinction between self and other, can reduce feeling of difficulty and thus eliminate the effect of fluency on perceived helpfulness. Our theoretical model extends past research by examining whether thinking about a distant event in an unexperienced situation would reduce the likelihood that individuals are influenced by fluency in making evaluative judgment (Tsai & Thomas 2011; Ülkümen & Thomas 2013; Williams et al. 2014).

4 A PROPOSED TEST OF OUR THEORETICAL MODEL

We propose two experimental studies to investigate how fluency affects review perceptions and how perspective-taking moderates the relationship between fluency and perceived review helpfulness.

4.1 Participants

We plan to recruit two hundred undergraduate students from a public university in the Asia-Pacific region. All courses are taught in English at the university, so students can speak fluent English. Moreover, they are familiar with research conducted in a laboratory setting and have online shopping experiences. In our experiments, they will be provided instructions and then asked to complete the questionnaire individually.

4.2 Materials

According to past literature, fluency can be derived from different variables, such as print font or the contrast of figure and background. In Study 1, we will manipulate fluency by varying the fonts in which a product review is printed. In Study 2, we will prepare a product review in high-contrast print as compared to low-contrast print.

This is a between-subject design, in which each participant will be randomly assigned to one condition. A participant exposed to a review in easy-to-read font cannot work in the other condition where a review is made disfluent. Likewise, one that is introduced to a review in high-contrast text will not be allowed to participate in the other condition where a review in low-contrast text is presented. That is, each participant will provide a rating of review helpfulness in one condition explicitly. The review stimuli that will be used in Study 1 and Study 2 are respectively shown in Table 1 and Table 2.
Table 1. **In Study 1, a review is printed in easy- vs. hard-to-read font.**

<table>
<thead>
<tr>
<th>#</th>
<th>Review Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I found the novel interesting and suspenseful from a scientific point of view - the ability to exist for over a year, alone, on an alien planet where the conditions could be deadly; and there was not guarantee of rescue. It was hard to put the book down, so strong was the need to read what the character was going to do to prolong his own survival as long as possible. The introduction of some comic statements into his journal added some levity. Somehow you knew/thought he would be rescued. The only negative was the excess of scientific description of mechanical function, some beyond my comprehension. (Arial, 11 point)</td>
</tr>
</tbody>
</table>

| 2 | I found the novel interesting and suspenseful from a scientific point of view - the ability to exist for over a year, alone, on an alien planet where the conditions could be deadly; and there was not guarantee of rescue. It was hard to put the book down, so strong was the need to read what the character was going to do to prolong his own survival as long as possible. The introduction of some comic statements into his journal added some levity. Somehow you knew/thought he would be rescued. The only negative was the excess of scientific description of mechanical function, some beyond my comprehension. (Brush Script MT, 13 point) |

Table 2. **In Study 2, a review is prepared in high- vs. low-contrast text.**

<table>
<thead>
<tr>
<th>#</th>
<th>Review Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>We are currently using this guide book to plan our first trip to Japan. It is thorough &amp; well organized. Being that we are unfamiliar with Japan &amp; the thousands of places to visit, the lists, maps, &amp; attractive photographs help steer you in the right direction. In the past, we mainly used online guides (lonely planet, trip advisor, &amp; blogs) to plan our international travel. Now that I see all the info &amp; locations I have not come across online, it makes me realize that printed books are also essential. I love that the maps are organized by not only major cities, but also the areas within the city (e.g. Northern Tokyo, Central Tokyo, etc.). Having the sites plotted on the map is something that is very helpful for efficient planning of multiple sites per day. The book also includes rough maps of major museums &amp; many street level maps. (Clear text)</td>
</tr>
</tbody>
</table>

| 2 | We are currently using this guide book to plan our first trip to Japan. It is thorough & well organized. Being that we are unfamiliar with Japan & the thousands of places to visit, the lists, maps, & attractive photographs help steer you in the right direction. In the past, we mainly used online guides (lonely planet, trip advisor, & blogs) to plan our international travel. Now that I see all the info & locations I have not come across online, it makes me realize that printed books are also essential. I love that the maps are organized by not only major cities, but also the areas within the city (e.g. Northern Tokyo, Central Tokyo, etc.). Having the sites plotted on the map is something that is very helpful for efficient planning of multiple sites per day. The book also includes rough maps of major museums & many street level maps. (Blurry text) |
A past work focusing on online book reviews has revealed that, book reviews published on Amazon.com are in general positive and a majority of the books available on the site have received ratings slightly above 4 out of 5 (Chevalier & Mayzlin 2006). In the current work, we need to rule out the possibility that participants are influenced by other factors than manipulated fluency. So, we first collected reviews on a book that were collectively rated as 4-star or above, and then we selected a review providing a score that was consistent with the average rating of the book. Reviews were selected from two categories – Adult Fiction (Study 1) and Travel (Study 2) on Amazon.com, which is an online marketplace that has been extensively discussed in past research.

4.3 Procedure

The two studies involve a 2 (easy vs. hard, or clear vs. blurry) x 2 (self vs. other) experimental design. In Study 1, participants will be assigned to read a book review in easy- or hard-to-read font. In Study 2, participants will read a book review prepared in high- or low-contrast text. After reading the review, for manipulation check participants will be asked how easy it is to read the presented review. Then, each participant will rate the helpfulness of the review, in the scenario that the person, if taking self-perspective, or another, if taking other-perspective, will consider purchasing the book. A demographic question regarding age and gender will follow. An example questionnaire designed for Study 1 is shown in Figure 3.

Instructions: Imagine that you are reading the following book review on online marketplaces such as Amazon.com and JD.com. Please answer the questions below.

I found the novel interesting and suspenseful from a scientific point of view - the ability to exist for over a year, alone, on an alien planet where the conditions could be deadly, and there was not guarantee of rescue. It was hard to put the book down, so strong was the need to read what the character was going to do to prolong his own survival as long as possible. The introduction of some comic statements into his journal added some levity. Somehow you knew thought he would be rescued. The only negative was the excess of scientific description of mechanical function, some beyond my comprehension.

**Question 1:** Did you think this review was easy to read in the font we used?

1 2 3 4 5 6 7

Very easy ○ ○ ○ ○ ○ ○ ○ Not easy at all

**Question 2:** Imagine that a person named John is reading the above review, will you think this review is helpful for him to make a purchase decision?

1 2 3 4 5 6 7

Very helpful ○ ○ ○ ○ ○ ○ ○ Not helpful at all

**Question 3:** Please provide the following information that best describes you.

I am _____ years old ○ male ○ female.

**Thank you for your participation!**

*Figure 3. Example procedure used in Study 1 that examines perceived fluency and review helpfulness when participants are reading the review in an hard-to-read (disfluent) font and taking the perspective of another (other-perspective) to rate helpfulness.*
5 DISCUSSION

The results from two experiments using actual reviews from Amazon.com will explain how fluency and perspective-taking affect perceived review helpfulness. Based on expected findings, we would like to provide some important theoretical and practical implications.

5.1 Theoretical Implications

Past research has focused on the impact of informative content on rated review helpfulness. But, not much is known about the potential impact of psychological factors, such as feelings, on review perceptions. A recent study has addressed this gap by examining the relationship between review-embedded emotions and helpfulness ratings (Yin et al., 2014). We will extend this line of research and explore how feelings, induced by priming in controlled experiments, can influence review helpfulness. Our work is one of the early studies that apply feelings-as-information theory to online review research. Construal-level theory has been tested in previous work mainly in consumer psychology literature (Fujita et al., 2006; Irmak et al., 2013) but it has not been adequately addressed in IS research. To bridge this gap, our work aims to examine the role of psychological distance in consumers’ evaluation of product reviews. Psychological distance is operationalized as the distinction between self and other, following past research (Galinsky & Moskowitz, 2000). The moderating effect of perspective-taking on fluency impact on review helpfulness will be tested in the work proposed here, and the findings will supplement existing knowledge by addressing the indirect impact of perspective-taking on judgment.

5.2 Practical Implications

As consumers tend to use the most helpful reviews to make purchase decisions, a better understanding about what makes a review helpful is essential. It is possible that fluent information could increase the rating of review helpfulness. Thus, to make an influence on the attitude of prospective customers, review authors should prepare their reviews in fluent information, by using easy-to-read font, high-contrast text, or simple common words. As online retailers such as Amazon have drawn on the concern about review helpfulness, we suggest system developers to design platforms in a way that can enable authors to provide easy-to-read reviews and make them more helpful and influential. Although review content can make meaningful implications for general audience, it is unavoidable that some reviews have low readability, due to platform design or an author’s writing style. Therefore, we would like to suggest review readers to shift the perspective from themselves to others and avoid subjectivity in judgment, so that the informative content of a review will not be overlooked for its incidental disfluency.

5.3 Limitations and Future Research

Our work explores how fluency affects perceived review helpfulness. But admittedly, the characteristics of reviews and reviewers can also influence review perceptions (Korfiatis et al., 2012). As the impacts of sentiment and writing-embedded emotions on perceptions of online information have been found in past work (Berger & Milkman, 2012; Lee et al., 2008; Ullah et al., 2016; Yin et al., 2014), it will be interesting for future researchers to examine the interplay between feeling of fluency and content-based emotions in online review assessment. Moreover, previous work has indicated that, if information is perceived as accurate, familiar, and anxiety-provoking then it is more likely to be forwarded on social media (Li et al., 2014). So, we can test if these results will remain in the evaluation of online reviews. Although we focus on perceived review helpfulness in the current work, in the future we can link review helpfulness to product sales and explore if helpful reviews can make a significant economic impact on electronic commerce (Chen et al., 2004; Duan et al., 2008; Floyd et al., 2014; Ghose & Ipeirotis, 2006; Hu et al., 2008; Kokkodis & Lappas, 2015). Finally, as we only test the moderating effect of perspective-taking on how fluency affects review helpfulness, it is worth considering whether other factors related to psychological distance, such as abstract thinking versus concrete thinking, can moderate the effect of fluency on perceived review helpfulness in future research.
References


