Born Unequal: A Study of the Helpfulness of User-Generated Product Reviews

Yue Pan [a],[*],[1], Jason Q. Zhang [b],[**],[1]

[a] *Department of Management & Marketing, University of Dayton, Dayton, OH 45469, United States*
[b] *Marketing Department, The Sellinger School of Business, Loyola University Maryland, Baltimore, MD 21210, United States*

Abstract

Online user-generated product reviews have become an indispensible tool for consumers and thus for retailers who want to attract and retain consumers. Yet, relatively little is known about what causes consumers to find an online peer review helpful to their shopping tasks. Prior research examines mostly the effects of product reviews on consumer product attitude, product choice, and product sales. This paper, however, provides an analysis of the determinants of review helpfulness. In two studies, we examine the effects of review characteristics, product type, and reviewer characteristics on perceived review helpfulness. With data collected from a real online retailer, we provide empirical evidence to support our conceptual predictions. Specifically, both review valence and length have positive effects on review helpfulness, but the product type (i.e., experiential vs. utilitarian product) moderates these effects. Using content analysis of reviews, we develop a measure of expressed reviewer innovativeness (i.e., the predisposition toward new products as revealed in review content). A curvilinear relationship exists between expressed reviewer innovativeness and review helpfulness. These findings lead to pertinent managerial implications.
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Introduction

The Internet has profoundly transformed the way consumers shop and the way they exchange product consumption experiences (Grewal and Levy 2009). In recent years, a growing number of consumers seek and post product opinions on the Internet. These product opinions, as a new form of electronic word-of-mouth/mouse (eWOM), have become an indispensible tool for consumers and thus for retailers who want to attract and retain consumers. As a response to this new phenomenon, academic studies have examined what leads to eWOM (Hennig-Thurau et al. 2004; Kozinets 1999), and how eWOM affects the business bottom line, including consumer product choice (Gupta and Harris, 2009), purchase intention (Park, Lee, and Han 2007), product sales (Chevalier and Mayzlin, 2006; Dellarocas, Zhang, and Awad 2007; Duan, Gu, and Whinston

2008; Zhu and Zhang 2010), consumer evaluation of websites (Kumar and Benbasat 2006), customer value and loyalty (Gruen, Osmonbekov, and Czaplewski 2005), and the success of new product introductions (Clemons, Gao, and Hitt 2006). Yet, relatively little is known about what makes an online peer review helpful in the eyes of consumers. Given the dearth of work, both academic and industrial researchers call for additional studies in this particular area (Brown, Broderick, and Lee 2007).

As an answer to this call, in this paper, we examine the effects of several important characteristics of review, product type, and reviewer on the perceived helpfulness of an online user-generated product review. The key variable of interest, perceived review helpfulness, is defined as the extent to which a consumer perceives a product review to be useful in performing his/her shopping tasks. In this paper, "helpfulness" and "usefulness" are used interchangeably.

Based on several streams of research (e.g., WOM persuasion, virtual communities, and consumer innovativeness) which we will detail in the following sections, we are led to expect that, in evaluating user-generated reviews of a product, consumers, in general, perceive a positive (long) review to be more helpful than a negative (short) one. The effects of review

* Corresponding author. Tel.: +1 937 229 1773; fax: +1 937 229 3788.
** Corresponding author. Tel.: +1 410 617 5837; fax: +1 410 617 2117.
 E-mail addresses: Yue.Pan@notes.udayton.edu (Y. Pan),
jzhang1@loyola.edu (J.Q. Zhang).
[1] Authors' names are listed alphabetically. Both authors contributed equally to this paper.

valence and length, however, are moderated by the product type. Specifically, the effect of review valence is more pronounced for experiential than for utilitarian products, whereas the effect of review length is more prominent for utilitarian than for experiential products. Furthermore, a reviewer's expressed innovativeness (i.e., the predisposition toward new products as revealed in the review content) has an inverted-U-shaped effect on the review's perceived helpfulness. That is, the most and the least innovative reviewers are less effective than the moderately innovative reviewers in providing helpful product advice to consumers.

With data collected from a leading online retailer (i.e., Amazon.com), we empirically test our propositions in two studies. In Study 1, based on a dataset that includes over 40,000 reviews of 300 products, we examine the impact of review characteristics and product type on perceived review helpfulness. In Study 2, we treat reviewers as narrators, and, by analyzing what and how a product-related story is told (through the review content), we make inferences about reviewers' virtual presence. Using a content analysis, we develop a quantitative measure of expressed reviewer innovativeness, and examine its effect on the helpfulness of the communicated product advice. Results from both studies provide strong empirical evidence to support our propositions.

Our research attempts to make several important contributions to the literature. First, unlike many prior eWOM studies that analyze the effects of user-generated product reviews from the retailers' perspective (e.g., product choice and sales), we are among the first to examine eWOM usefulness from the consumers' perspective. From this angle, our findings offer unique insights for retailers, policy makers, and consumers. Second, our work extends conventional WOM research (e.g., Higie, Feick, and Price 1987) to a virtual environment, where social ties to WOM communicator—important contextual variables to explain WOM persuasion in the extant literature (Knapp and Daly 2002)—are usually absent. The lack of social ties forces consumers to evaluate eWOM primarily based on the content (Walther 1996). Within this context, we add to the literature by identifying several important content characteristics and a potential moderator that impact eWOM usefulness. In addition, consistent with the view of online ethnography, or netnography (Kozinets 2002), we put forth the notion of virtual presence of an online communicator (i.e., reviewer). We argue that the expressed characteristics revealed by this presence play an important role in influencing the effectiveness of communicated information. We contribute to the literature by combining qualitative and quantitative methods to assess the impact of reviewer innovativeness—an important trait closely associated with product adoption and opinion leadership—on review helpfulness.

The rest of the paper is organized as follows. First, we set forth our research questions and discuss their theoretical underpinnings. We then present empirical findings from two studies. Finally, we discuss the implications of our study and suggest directions for future research.

Conceptual framework and research questions

In this section, we present our research questions and draw on relevant theories to make predictions. In particular, we examine three types of determinants of perceived review helpfulness, including the review characteristics (RQ1), product type (RQ2), and reviewer characteristics (RQ3).

RQ1: What characteristics of a product review affect perceived review helpfulness?

WOM, online or off-line, is a form of interpersonal interaction. In an off-line context, consumers often rely on their social ties to the WOM communicator to assess WOM usefulness. Both close social ties (e.g., family and friends) (Brown and Reingen 1987) and remote ties (e.g., celebrities) (Duhan et al. 1997) can work as important contextual variables in affecting perceived WOM usefulness. In a virtual social environment, reviewers and readers are often strangers. The lack of traditional social ties forces consumers to evaluate message usefulness almost solely based on the content of the communicated message (Walther 1996). In our analysis, we choose to examine two important review characteristics (i.e., valence and length) and their effects on review helpfulness.

Prior research that examines the effects of WOM valence on consumer attitude and behavior has produced rather equivocal results. Some studies report that consumers perceive negative information as more diagnostic and persuasive than positive information of similar intensity (i.e., negativity bias) (e.g., Arndt 1967); while others find quite the opposite (i.e., positivity bias) (e.g., Skowronski and Carlston 1987). Indeed, the effect of WOM valence is rather complex, and may depend on specific conditions. For example, prior studies reporting either negativity or positivity bias have discussed several conditions/moderators including consumers' perceived risk (Arndt 1967), the presentation of WOM (e.g., vividness) (Herr, Kardes, and Kim 1991), the attribution of WOM (e.g., to the product or WOM communicator) (Mizerski 1982), cue diagnosticity of WOM (Skowronski and Carlston 1987), and past agreement with the WOM communicator (Gershoff, Mukherjee, and Mukhopadhyay 2003). Unlike prior research, we focus on a unique condition—consumers evaluate eWOM usefulness a) in the absence of conventional social ties and b) for products that consumers are sufficiently involved with. Under this condition, we argue that positivity bias is likely to prevail.

Consumers are not equally motivated to process product information in different buying situations (Petty and Cacioppo 1979). In an early purchase stage, consumers are usually not committed to a particular product. In order to narrow down product choices, consumers are likely to use various heuristics to simplify product evaluation, and therefore reduce the burden involved in the shopping task. Specifically in the context of online product reviews, consumers may simply rely on the summary statistics of consumer reviews (e.g., the average/highest/lowest product rating, or the number of ratings) or other diagnostic cues (e.g., a strong negative review) to include/exclude products in/from their consideration without systematically processing the content of individual product reviews. By contrast, in the late purchase stage, consumers are