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# Can online product reviews be more helpful? Examining characteristics of information content by product type

Danny Weathers [a,1,2], Scott D. Swain [a,1,2], Varun Grover [b,*]

[a] Department of Marketing, Clemson University, United States
[b] Department of Management, Clemson University, United States

## ABSTRACT

Many online retailers and other product-oriented websites allow people to post product reviews for use by shoppers. While research indicates that these reviews influence consumers' shopping attitudes and behaviors, questions remain about how consumers evaluate the product reviews themselves. With the current research, we introduce a new methodology for identifying the review factors that shoppers use to evaluate review helpfulness, and we integrate prior literature to provide a framework that explains how these factors reflect readers' general concerns about the diagnosticity (uncertainty and equivocality) and credibility (trust and expertise) of electronic word-of-mouth. Based on this framework, we offer predictions about how the relative importance of diagnosticity and credibility should vary systematically across search and experience product types. By analyzing secondary data consisting of over 8000 helpfulness ratings from product reviews posted by shoppers on Amazon.com, we find that, while review content affects helpfulness in complex ways, these effects are well explained by the proposed framework. Interestingly, the data suggest that review writers who explicitly attempt to enhance review diagnosticity or credibility are often ineffective or systematically unhelpful. Our findings have implications for both IS developers and retailers for designing online decision support systems to optimize communication practices and better manage consumer-generated content and interactions among consumers.

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## 1. Introduction

Between non-retail websites dedicated to eliciting and aggregating consumer feedback (e.g., Epinions.com, Rateitall.com, Yelp.com) and the many online retailers and manufacturers who have followed suit (e.g., Amazon.com, Sears.com, Dell, Levi's), online shoppers have increasingly greater access to other shoppers' opinions and reviews of products. The availability of consumer product reviews, henceforth referred to as reviews, is likely to continue proliferating for at least two reasons. First, the daunting number of online options leads consumers to value reviews both as a filtering mechanism and as an important source of information about product characteristics often difficult to assess in an online environment [78,94]. Indeed, due to the evolution of online retailing and social media, consumers now enter the marketplace with the expectation to access reviews [74,81]. Second, a desire to increase throughput and reduce costs associated with customer support and product returns [86] is likely to motivate retailers to facilitate

reviews in efforts to enhance customer involvement with the website and improve consumers' decision-making.

Recent research in the areas of information systems and marketing provides a number of insights on reviews. In terms of antecedents, studies identify the characteristics and motivations of those who write reviews [18,35,71], including strategic fake reviews written on behalf of organizations [57] and non-strategic deceptive reviews written by individual, non-purchasers [1]. Complementing this perspective, another stream of research examines the outcomes of reviews, finding that reviews affect aggregate consumer behavior as reflected in sales, profits, and viewership [17,21,25,31,54,76,93], website and product evaluations [12,39,49,72], competitive intelligence [90], and individual consumer choice [24,28,34].

How consumers decide whether they can rely on a particular review is less examined. Speaking to the applied importance of this issue, many retail websites elicit, summarize, and publish consumers' feedback on the "usefulness" or "helpfulness" of individual reviews. Despite recent studies examining the impact of a number of review attributes or characteristics on consumer perceptions of helpfulness, a cohesive framework of review helpfulness has yet to emerge. Given the prevalence of reviews, as well as the strategic importance of managing this information, such a framework should prove useful for both researchers and practitioners by revealing factors and contingencies that enhance or detract from review helpfulness.

* Corresponding author. Tel.: + 1 864 656 3773.
  E-mail addresses: pweath2@clemson.edu (D. Weathers), sdswain@clemson.edu (S.D. Swain), vgrover@clemson.edu (V. Grover).
[1] The first two authors contributed equally to this article.
[2] Tel.: + 1 864 656 5963.

Integrating concepts and findings from prior research, we propose that perceptions of helpfulness can be understood in terms of the interactive effects of three factors: review credibility, review diagnosticity, and product type. Going beyond extant work, we distinguish between aspects of credibility and diagnosticity based on principles of consumer information search. Whereas credibility is conceptualized as a function of trust (i.e., providing unbiased information) and expertise (i.e., being competent to provide the information), diagnosticity is conceptualized in terms of consumers' desire to not only reduce uncertainty (i.e., a lack of information), but also reduce equivocality (i.e., the plausibility of multiple, conflicting interpretations). Additionally, we predict that the type of product being reviewed (search versus experience goods) systematically impacts the influence of credibility and diagnosticity on review helpfulness. Finally, we draw on recent research on the social psychology of hubris and egocentrism to make novel predictions about the conditions in which consumers are likely to reject review writers' signals of diagnosticity and credibility. Fig. 1 illustrates the general framework.

We employ two methodological refinements with respect to existing research to enhance confidence in the validity of the findings. First, extant work relies on researcher judgment to select review characteristics for study. While this is a reasonable strategy given the linguistic complexity and contextualization of reviews, we maintain for this same reason that it is also critical to corroborate and refine these judgments in consultation with consumers to ensure that selected review characteristics are psychologically meaningful. We present a method for doing so. Second, consistent with existing studies, we leverage a search/experience product classification framework to understand how review characteristics may operate differently across product categories. However, rather than basing product classification solely on researcher judgment, we introduce a multi-dimensional scaling approach that integrates researcher *and* consumer judgments. This approach recognizes that consumers' intuitive product classifications are sensitive to variations in factors such as experience, usage occasions, and retail channel characteristics [4,59,83].

We assess the validity of the proposed framework of review helpfulness using two pretests and a main study. Pretest 1 validates the classification of a set of commonly purchased products. Pretest 2 identifies factors that are prominent in consumers' assessments of review helpfulness, thus focusing our efforts. In the main study, we analyze 8327 helpfulness ratings for reviews posted by shoppers on Amazon.com. We find broad support that review helpfulness depends not only on the ability to reduce decision uncertainty, but also on reducing informational equivocality while conveying trustworthiness and expertise. These effects vary by product type in ways that are predicted by the proposed framework. We discuss the implications of the findings for managing consumer-generated web content through online support systems and for research on IS mediated consumer-to-consumer communication.

## 2. Literature review and hypotheses

In this section, we describe the components of our framework: diagnosticity, credibility, and product type. We then present the review content factors on which we focus, and we develop predictions regarding the effects of these factors on helpfulness.

### 2.1. Overview of diagnosticity and credibility

We argue that the primary reason consumers read reviews is to move toward the ultimate goal of making a purchase decision (i.e., buy/no buy). Reducing uncertainty about the product should help achieve this goal and, indeed, reviews are seen as diagnostic to the extent that they reduce product uncertainty (e.g., [61]). However, the information search and word-of-mouth literatures suggest that reviews may play another important function. Specifically, reviews may not only reduce uncertainty but also reduce equivocality. Whereas uncertainty refers to a lack of information, equivocality refers to ambiguity or the plausibility of multiple interpretations [15,16]. Consumers are motivated to reduce equivocality because high levels of equivocality adversely affect decision-making (e.g., [53,85]).

However, product-related information alone is unlikely to fully determine consumers' perceptions of review helpfulness, as this implies that consumers take all reviews at face value. Rather, as research has found, consumers are also likely to consider the source of the information. Product reviews are mediated word-of-mouth, a form of interpersonal communication in which neither participant is a marketing source [8]. A critical factor determining the influence of word-of-mouth information is the perceived credibility of the source [6,63], particularly in the context of web-based commerce [13,26,92]. There are two dimensions of credibility: expertise, or the extent to which the communicator is perceived as a source of valid assertions (i.e., competent), and trustworthiness, or the extent to which the communicator is perceived as a source of unbiased assertions [38].

### 2.2. Product type: search versus experience goods

While several product classification paradigms are potentially relevant for understanding review helpfulness, the search/experience paradigm has proven particularly useful for explaining online shopping behavior (e.g., [41,70]) and for understanding consumer evaluations of online product reviews (e.g., [4,42,61,64,87]). Nelson [62] distinguishes between search and experience goods based on the extent to which shoppers *can* experience the goods prior to purchase. Others argue that because this search/experience distinction can vary across retail channels for a given product, a classification paradigm that is less channel-dependent is beneficial [59,83]. Consistent with this latter
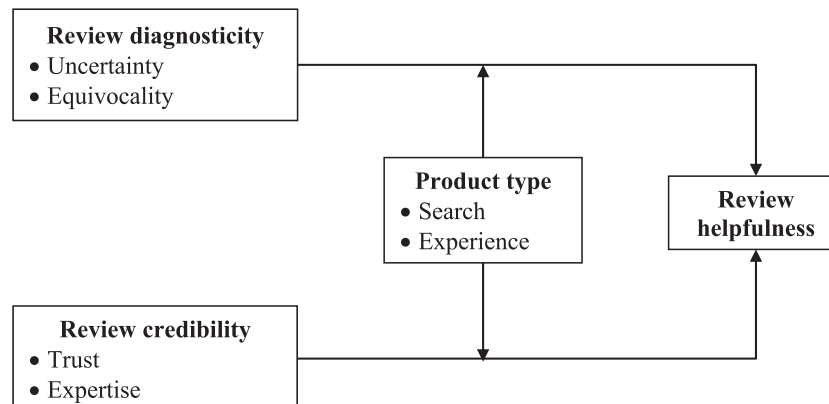


**Fig. 1.** Antecedents of perceived review helpfulness.