Ratings Scheme Bias in E-Commerce: Preliminary Insights

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ABSTRACT
There is growing evidence that end-users are influenced by Internet-based opinion mechanisms before making a purchase. One of the most popular mechanisms are the rating schemes found on Web sites such as eBay.com, expertcentral.com, bizrate.com, epinions.com, slashdot.net, moviefone.com, citysearch.com, and so forth. Rating schemes affect end-user productivity in their ability to search and find products and services on the Internet. Unfortunately, ratings schemes can offer misleading information because those submitting ratings have personal subjective opinions, or those submitting ratings try to manipulate other users’ behaviors. For example, an author may ask family and friends to rate his or her book highly and his or her competitors’ books poorly. This article delineates the sources of rating scheme bias and the potential effects of this bias on how users utilize ratings. Data were gathered from 73 upper-division undergraduates completing a preliminary survey with open- and closed-ended questions and 164 additional students completing an exploratory survey to support the preliminary survey results. Based on our findings, we offer preliminary insights and develop a set of propositions to encourage a more rigorous and in-depth examination of rating scheme bias by both practitioners and academicians.

Keywords: credibility; end-user behavior; information search; ratings; Web design

INTRODUCTION
Finding products on the Internet is now a relatively easy task since search engines such as Google.com have become commonplace. A simple keyword search can potentially produce thousands of results, but poring through these results can be daunting, and finding high-quality items within the long list is even less straightforward (Drennan,
Mort & Previte, 2006; Hodkinson & Kiel, 2003; Lueg, Moore & Warkentin, 2003). For example, a search on Google.com for an Italian restaurant in Chicago produces hundreds of listings with little means for the end-user to determine which choices are best. To address this problem, Internet sites are increasingly adopting rating schemes to help users make online choices for goods and services. Popular rating schemes can be found at eBay.com (Keser, 2003; Melnik & Alm, 2002); expertcentral.com and bizrate.com (Resnick, Zeckhauser, Friedman & Kuwabara, 2000); epinions.com, slashdot.org, moviefone.com, and citysearch.com (Dellarocas, 2003); and so forth. Rating schemes offer users the opportunity to submit feedback on goods and services so future online users can utilize this information in their own purchase decisions.

Rating schemes vary in the amount of bias and manipulation incorporated into them (Dellarocas, 2003; Melnik & Alm, 2002; Resnick et al., 2000). Ratings are inherently subjective and voluntarily provided, resulting in a possible mismatch between the quality of the rated object and the rating given (Melnik & Alm, 2002). Alternatively, individuals who submit ratings may manipulate them to influence others’ thinking or to enhance their own reputation. In addition to a rater’s true feeling about the object, ratings naturally have a random component, meaning it may be impossible to derive a perfect rating. To our knowledge, little research has examined (1) if users understand the inherent bias in rating and subsequently discount ratings based on the level of perceived bias involved; or (2) whether users treat ratings similar to other forms of feedback, specifically word-of-mouth advice and advertising.

The purpose of this article is to delineate the sources of rating scheme bias and the potential effects of this prejudice on how end-users utilize ratings by reporting results from two exploratory surveys. Our intent is to gather preliminary insights and then develop a research program to encourage practitioners and academicians to examine how online consumers use rating scheme information. First, we discuss the sources of rating scheme bias and ways of mitigating this bias. Then we explore the feelings and opinions of users to determine the potential impact of these subjective ratings. Next, we present results from a preliminary survey that provide direction for a second exploratory study. Results from the second survey are then discussed. Finally, based on findings from the two studies, we offer a series of propositions for future research to encourage a more rigorous examination of rating scheme bias.

**SOURCES OF RATING SCHEME BIAS**

Ratings may be biased for several reasons. First, raters may use products in inappropriate contexts, which results in poor perceptions and low ratings (Resnick et al., 2000). For example, an end-user may buy spreadsheet software
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