Chapter 15
Ratings Schemes in e-Commerce

Robin S. Poston
University of Memphis, USA

Marla B. Royne
University of Memphis, USA

ABSTRACT
Evidence has been growing that suggests Internet-based opinion systems influence users’ purchase decisions. One of the most popular systems are the rating schemes found on Web sites such as eBay.com, expertcentral.com, bizrate.com, epinions.com, slashdot.net, moviefone.com, citysearch.com, etc. Rating schemes affect user productivity by changing their ability to search and find products and services on the Internet. Regrettably, ratings schemes can provide misleading information because those inputting ratings have personal subjective opinions, or they want to manipulate other users’ behaviors. For example, an author of a book may ask family and friends to rate his or her book highly and his or her competitors’ books poorly. This chapter provides a robust summary of the rating scheme literature and delineates the sources of rating scheme bias and the potential effects of this bias on how users utilize ratings. In a research study, 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 the research findings, the chapter discusses preliminary insights and develops a set of propositions to encourage a more rigorous and indepth examination of rating scheme bias by both practitioners and academicians.

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 are designed to let parties enter ratings as feedback, usually after the completion of an online e-commerce transaction; ratings are then aggregated to create a trustworthiness or reputation score. This score is subsequently used by other online consumers to decide whether or not to engage in future transactions. Rating schemes are a type of reputation system that is collaborative in nature because it is based on the inputs of multiple online consumers. This makes ratings schemes related to systems that utilize online collaborative filtering, word-of-mouth input, reputation information, recommendation ideas, and feedback text (Josang et al. 2007).

For rating schemes to be successful, they must have the following properties: (1) they must be long lived, where every transaction prompts an expectation of future transactions, (2) their ratings about current transactions are captured and distributed, and (3) their ratings about past transactions must guide decisions about future transactions (Resnick et al., 2000). Through a variety of available rating schemes, today’s online consumers share opinions and experiences about companies, products, and services with other individuals outside of their personal network of family, friends, and acquaintances by contributing to blogs, user feedback forums, search engines, or shopping review sites (e.g. pricescan.com) (Davis and Khazanchi, 2008). This means the personal ties between raters and consumers are weak because the raters and the consumers relying on the ratings do not have a personal relationship (Chatterjee, 2001). This weak tie establishes an opportunity for misleading ratings to be published and shared.

Thus, 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. Thus, this chapter examines (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 chapter 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, and the current research literature on rating schemes. 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.
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