Chapter 15
Ratings Schemes in e-Commerce

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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 in-depth 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 increa-
singly 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 on-
line 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 expecta-
tion 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 acquain-
tances by contributing to blogs, user feedback
forums, search engines, or shopping review sites
(e.g. pricecan.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). Alter-
atively, 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 under-
stand 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 de-
termine the potential impact of these subjective
ratings. Next, we present results from a preliminary
survey that provide direction for a second explor-
atory 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.