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## e-Reputation: Building Trust in Electronic Commerce

Susan Block-Lieb\*

Who would place a bid in an online auction in which a stranger, identified only by pseudonym, offers to sell an object based on a brief written description and a grainy digital photograph? Why would any set of strangers engage in commerce over the Internet, whether retail, wholesale or tag sale? If something goes wrong in the electronic transaction, legal redress may be problematic. Where e-commerce involves small dollar amounts or transaction partners in distant or foreign jurisdictions, breach is unlikely to be followed by litigation since litigation may be too time-consuming, expensive, or unpredictable.

The academic community has long understood that, while clearly articulated legal rules and predictable legal enforcement of those rules enhance commercial transactions, commerce can occur, and may even flourish, in their absence. Commercial norms can supplement commercial law,<sup>1</sup> while verification institutions<sup>2</sup> and non-legal sanctions<sup>3</sup> supplement judicial enforcement of that law. Moreover, traders can manage the risks that underlie commercial transactions by acquiring information about others' reputation in the market,<sup>4</sup> but "relying only on direct personal experience is both inefficient and perilous: inefficient, because any one individual will be limited in the number of exchange partners she or he has, and perilous, because one will discover untrustworthy partners only through hard experience."<sup>5</sup> As a result, markets have

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1. See, e.g., Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions*, 99 Mich. L. Rev. 1724 (2001); Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. Pa. L. Rev. 1765 (1996).

2. Ronald J. Mann, *Verification Institutions in Financing Transactions*, 87 Geo. L. J. 2225 (1999) [hereinafter "Mann, *Verification Institutions*"]; Ronald J. Mann, *Information Technology and Non-Legal Sanctions in Financing Transactions*, 54 Vand. L. Rev. 1627 (2001) [hereinafter "Mann, *Information Technology*"].

3. David Charny, *Nonlegal Sanctions in Commercial Relationships*, 104 Harv. L. Rev. 373 (1990).

4. See, e.g., Lewis A. Kornhauser, *Reliance, Reputation, and Breach of Contract*, 26 J.L. & Econ. 691 (1983).

5. Peter Kollock, *The Production of Trust in Online Markets* at 3, in 16 *Advances in Group Processes* (Edward J. Lawler, et al eds. 1999).

developed mechanisms<sup>6</sup> for sharing and selling reputation information.<sup>7</sup>

In *Reputation and Intermediaries in Electronic Commerce*,<sup>8</sup> Clayton P. Gillette considers whether reputation intermediaries and reputation sanctions offer plausible substitutes for contractual enforcement in e-commerce,<sup>9</sup> and focuses his attention on the performance of feedback forums like that provided by eBay, the largest online auction.<sup>10</sup> In the end, he is skeptical that the eBay feedback forum can provide customers with a reliable means for transmitting accurate information about traders' commercial reputation and sanctioning those who do

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6. Reputation intermediaries do not present the only method for resolving online traders' reluctance to engage in e-commerce. Law reform, particularly reform efforts geared toward the adoption of bright-line statutory provisions to govern e-commerce transactions, can assist in fostering trust in electronic commerce. See, e.g., Uniform Computer Information Transactions Act, available online at [www.ucitaonline.com](http://www.ucitaonline.com). Online non-judicial dispute resolution mechanisms can also encourage traders to engage in e-commerce. See, e.g., [www.squaretrade.com](http://www.squaretrade.com); [www.BBBonline.com](http://www.BBBonline.com); and [www.ombuds.org](http://www.ombuds.org). Polls consistently show consumers' greatest concern regarding electronic commerce pertains to issues of privacy. See, e.g., Princeton Survey Research Associates, *A Matter of Trust: What Users Want from Web Sites; Results of a National Survey of Internet Users for Consumer WebWatch* (Jan. 2002), available at [www.consumerwebwatch.org](http://www.consumerwebwatch.org). For a discussion of regulation and self-regulation of users' rights to privacy, see Lynn Chuang Kramer, Comment, *Private Eyes Are Watching You: Consumer Online Privacy Protection—Lessons From Home and Abroad*, 37 Tex. Int'l L. J. 387 (2002); Panel Discussion, *Internet Privacy Law, Policy and Practice: State, Federal and International Perspectives*, 54 Me. L. Rev. 95 (2002); William McGeeveran, Note, *Programmed Privacy Promises: P3P and Web Privacy Law*, 76 N.Y.U. L. Rev. 1812 (2001).

7. See, e.g., Mann, *Information Technology*, *supra* note 2, at 1637-44; Mann, *Verification Institutions*, *supra* 2, at 2252-57; Charny, *supra* note 3, at 408-420; Werner Raub & Jeroen Weesie, *Reputation and Efficiency in Social Interactions: An Example of Network Effects*, 96 Am. J. Soc. 626 (1990); Anatol Rapoport et al., *Experiments with Social Traps IV: Reputation Effects in the Evolution of Cooperation*, 7 Rationality & Society 431 (1995).

8. Clayton P. Gillette, *Reputation and Intermediaries in Electronic Commerce*, 62 La. L. Rev. 1165 (2002).

9. Gillette, *supra* note 8, at 1180 (arguing that eBay feedback scores may "not provide a complete alternative to the threat of contract enforcement as a means of reducing distrust" online). He contends that reputation intermediaries can provide an assurance of contractual performance and substitute for legal enforcement in electronic commerce, even among strangers, if "(a) credible positive and negative information about the trader is available; (b) there exists a mechanism for communicating that information to potential trading partners; and (c) the market in which the trader deals is sufficiently thick that potential trading partners have a choice about the parties with whom they trade." *Id.* at 5. In this way, reputation intermediaries can make lemonade in the market for information about a potential traders' reputation for performance. Cf. George Akerlof, *The Market for Lemons: Qualitative Uncertainty and the Market Mechanism*, 84 Q.J. Econ. 488 (1970) (discussing "lemons' markets" and methods for resolving them).

10. See [www.eBay.com](http://www.eBay.com).

not engage in reasonable commercial conduct in online auctions.<sup>11</sup> He argues that the usefulness of a reputation system is undermined by participants' limited capacities to verify the accuracy or inaccuracy of reputation information available over the Internet.<sup>12</sup>

Gillette's ambivalence about feedback forums' success stems from the fact that only a small fraction of online traders post negative or even neutral commentary with eBay. He suspects, not just that too little feedback is posted, but, more damning, that participants under-report their dissatisfaction with online auctions. He raises both theoretical and practical reasons why dissatisfied buyers and sellers would refrain from posting negative remarks more frequently than they would refrain from posting positive ones. Gillette is quick to note the existence of empirical studies, such as that conducted by Paul Resnick and Richard Zeckhauser, which show a significant correlation between a feedback score and the likelihood that an auction will be concluded successfully.<sup>13</sup> Nonetheless, Gillette remains unconvinced by this data. He disagrees that these studies demonstrate, as Resnick and his co-authors claim, "that reputation systems appear to perform reasonably well" online.<sup>14</sup> Gillette fears that the data show only that "successful bidders might have believed

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11. Gillette, *supra* note 8, at 1168-69.

12. Gillette, *supra* note 8, at 1169 ("In this paper, I suggest that even where participation rates are high, the quality of information may be of limited utility to potential users of the system.")

13. More than a handful of studies conducted by economists and other social scientists demonstrate a significant correlation between feedback score and the likelihood that an auction will be concluded successfully, precisely the result one would expect of a successful reputation system. Patrick Bajari & Ali Hortaçsu, *Winner's Curse, Reserve Prices, and Endogenous Entry: Empirical Insights from eBay Auctions*, (Jan. 10, 2001 Stanford Dept. of Economics working paper), available at [http://www\\_econ.stanford.edu/faculty/workp.swp00004.pdf](http://www_econ.stanford.edu/faculty/workp.swp00004.pdf); Kollock, *supra* note 5; Daniel Houser & John Wooders, *Reputation in Internet Auctions: Theory & Evidence from eBay*, (Feb. 14, 2001 working paper) available at [http://w3.arizona.edu/~econ/working\\_papers/Internet\\_Auctions.pdf](http://w3.arizona.edu/~econ/working_papers/Internet_Auctions.pdf); David Lucking-Reiley, Doug Bryan, Naghi Prasad & Daniel Reeves, *Pennies From eBay: The Determinants of Price in Online Auctions*, (Jan. 2000 working draft) available at <http://eller.arizona.edu/~reiley/papers/PenniesFromEBay.pdf>; Cynthia G. McDonald & V. Carlos Slawson, *Reputation in an Internet Auction Market*, (Jan. 28, 2000 SSRN working draft) available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=207448](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=207448); Paul Resnick & Richard Zeckhauser, *Trust Among Strangers in Internet Transactions: Empirical Analysis of eBay's Reputation System*, (Feb. 5, 2001 working paper for review by NBER workshop participants), available at <http://www.si.umich.edu/~presnick/#publications>.

14. Paul Resnick, Richard Zeckhauser, Eric Friedman & Ko Kuwabara, *Reputation Systems: Facilitating Trust in Internet Interactions*, 43 *Comm. ACM* 45 (2000), available at <http://portal.acm.org/citation.cfm?doid=355112.355122>, at 5.

that Feedback Forum ratings conveyed valuable information, even though that was not the case, and even though unsuccessful visitors more appropriately discounted the quality of the signal."<sup>15</sup> According to Gillette, traders' perception that eBay feedback forums accurately convey reputation information, their naive faith in this reputation mechanism, is not enough to establish eBay's success as a reputation intermediary.<sup>16</sup> Resnick and Zeckhauser contest this view and instead claim that "it is the perception of how the system operates, not the facts, that matters."<sup>17</sup>

In this paper, I consider the circumstances under which an online reputation system enables participants to deter fraud, share information about commercial quality, and otherwise encourage market participants to engage in electronic commerce. Part I considers whether there exists an inherent selection bias against negative commentary on eBay's feedback forum, as Gillette suggests. Part II asks whether imperfect feedback forums can still "perform reasonably well," as Resnick, Zeckhauser, and others argue, because they employ informal mechanisms for punishing online transgressions, at least some of the time. Finally, Part III explores the importance of perception to electronic reputation systems and the development of trust in e-commerce.

## I.

Commerce—including electronic commerce over the Internet—creates a sort of Prisoner's Dilemma. Both of us would be better off if our bilateral performance obligations were completed, but the temptation to shirk may preclude us from maximizing our collective welfare. I am tempted by the thought that I will be best off if I receive the goods or services you agreed to provide, but fail to pay for them; you are tempted by the thought that you would be best off if you were to pocket my payment, but deliver boxes of sawdust rather than valuable widgets. The common law sets contract damages at levels intended to discourage the temptation to shirk and resolves this Prisoner's Dilemma. However, for all of the reasons set out by Gillette—small transaction size; imprecise legal rules; traders in distant, perhaps, foreign locations—legal rules may not sufficiently deter shirking on the Internet.

In the end, e-commerce requires commercial actors to trust one another just as trust binds commercial actors in "bricks and mortar" marketplaces. Scholars explain that traders trust one another, in part,

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15. Gillette, *supra* note 8, at 1189.

16. Gillette, *supra* note 8, at 1189-90.

17. Resnick & Zeckhauser, *supra* note 13, at 23 ("The system may still work, even if it is unreliable or unsound, if its participants think it is working.").

based upon their reputations in the marketplace. Economic actors who conduct themselves consistent with commercial norms create and preserve a reputation for good conduct in the marketplace.<sup>18</sup> A reputable commercial actor is unlikely to shirk, not only because there is a good chance that the trader will act as reputably in future transactions as she has in the past, but also because the trader knows that breach will be sanctioned in the commercial community by the loss of her valuable reputation. Scholars predict that reputation sanctions work best against large-sized businesses,<sup>19</sup> especially those that frequently engage in similar transactions and must return to the market with their reputations intact.<sup>20</sup> This literature also ties the effectiveness of reputation sanctions to the market's ability to assess a potential trader's reputation. Markets limited to a small, homogeneous group of participants easily share reputation information,<sup>21</sup> whereas diffuse markets may only be able to share information about a trader's reputation using technology.<sup>22</sup> Reputation systems that utilize advanced information technology are said to work best when they evaluate simple and objective information<sup>23</sup> regarding present or past occurrences.<sup>24</sup> Where these costs of assessment are affordable, traders can avoid "bad deals" ex ante by evaluating the reputation of their counterparty before entering into the transaction.

At first blush, the Internet seems especially well suited to assist traders or their intermediaries in acquiring and broadcasting reputation information to interested parties.<sup>25</sup> Advanced information storage and retrieval functions enhance potential traders' abilities to access and manipulate the reputation information at a low cost. Moreover, the effectiveness of reputation sanctions need not be

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18. Bernstein, *supra* note 1.

19. Mann, *Verification Institutions*, *supra* note 2, at 2254-57.

20. Charny, *supra* note 3, at 414-15; Mann, *Verification Institutions*, *supra* note 2, at 2255; Mann, *Information Technology*, *supra* note 2, at 1637-44.

21. E.g., Lisa Bernstein, *Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. Legal Stud. 115 (1992); Charny, *supra* note 3, at 418.

22. Charny, *supra* note 3; Mann, *supra* note 2.

23. Mann, *Information Technology*, *supra* note 2, at 1636 ("If the information is more complicated or subjective (Is this company a good investment? Is this the best mountain-bike on the market for my needs?), information technology is less likely to result in direct verification of the information because the costs to the individual user of verifying the information are likely to remain higher than the value of the information.").

24. *Id.* at 1635 ("Direct verification of information can be helpful in transactions in which the information already exists at the time of the transactions.").

25. Mann, *Verification Institutions*, *supra* note 2, at 2271-72.

limited to geographically or culturally tight-knit commercial communities because the information can be disseminated with ease and little cost over the Internet.

Despite the obvious technological advantages of conducting a reputation system over the Internet, commentators have uncovered a number of obstacles, some theoretical and some practical. In their paper *Facilitating Trust in Internet Interactions*, Paul Resnick, Richard Zeckhauser, Eric Friedman, and Ko Kuwabara describe the significant challenges that reputation systems face in eliciting reputation information from participants.<sup>26</sup>

First, Resnick, Zeckhauser, Friedman, and Kuwabara contend that the system must overcome collective action problems inhibiting people from taking the time to provide any feedback.<sup>27</sup> I am uncertain that eBay participants face a collective action problem in deciding whether to post feedback. Feedback imposes minimal costs and creates a significant benefit for users, at least for those who anticipate returning to the auction. A participant is unlikely to build an online reputation by failing to comment on a counterparty's conduct, and, thus, has every incentive to post. In any event, actual practices contradict what the collective-action theory predicts. As Gillette notes,<sup>28</sup> empirical studies of eBay show that buyers and

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26. Resnick et al., *supra* note 13, at 4. Resnick, Zeckhauser, Friedman, and Kuwabara go on to describe reputation systems' difficulties, not only in eliciting reputation information, but also in distributing and aggregating it. They argue that the distribution of reputation information is complicated by the ability to trade online under a pseudonym, since traders generally are not precluded from re-registering under a new pseudonym. *Id.* at 4-5. The ability to re-register under a new pseudonym permits a trader to shed an undesirable reputation and re-enter the marketplace. In the end, they view the distributional complications arising from an ability to change pseudonyms to be limited since newcomers, having no feedback, face the prospect of re-building their reputations. *Id.* Resnick and his co-authors also argue that distribution of reputation information is also complicated by an inability to move reputation information from one reputation system on the Internet to another, and they point to a spat between eBay and Amazon concerning the latter's rating-import service. *Id.* Finally, they contend that reputation systems face difficulties in aggregating reputation information so that users can utilize the cumulated data meaningfully. *Id.* They note that eBay calculates its feedback scores differently than other reputation intermediaries. *Id.* [“eBay displays the net feedback (positives minus negatives)]. Other sites such as Amazon display an average.”). See also Kollack, *supra* note 5. They also argue that simple numerical reputation ratings treat all transactions as comparable, but as a result of obscure important differences among distinct transactions, potential buyers would have a difficult time sorting the reputations out. Resnick, et al., *supra* note 13, at 5.

27. Resnick, et al., *supra* note 13, at 4 (stating that “people may not bother to provide feedback at all” and noting, as an example, that “when a trade is completed successfully at eBay, there is little incentive to spend another few minutes filling out a form”).

28. Gillette, *supra* note 8, at 1181.

sellers post feedback far more frequently than one would have thought. Resnick and Zeckhauser examined a large set of eBay transactions from February 1 to June 30, 1999,<sup>29</sup> and found that buyers commented on sellers for 52.1% of the items and sellers on buyers 60.6% of the time.<sup>30</sup> Thus, surprisingly, a higher percentage of users post feedback on eBay than voted in the last Presidential election.<sup>31</sup>

Resnick, Zeckhauser, Friedman, and Kurawara also note that it is difficult for a reputation system to ensure that it is eliciting honest commentary, and particularly difficult to obtain traders' negative feedback.<sup>32</sup> Gillette concurs, and goes on to argue that the "information that eBay provides appears to be heavily skewed in a manner that renders its utility suspect."<sup>33</sup> He notes that traders overwhelmingly post positive commentary, rather than negative or neutral remarks, and refers to Resnick and Zeckhauser's empirical study of eBay transactions.<sup>34</sup> In this study, Resnick and Zeckhauser found that, of feedback provided by buyers, only 0.6% of the comments were negative, 0.3% were neutral, and 99.1% were positive;<sup>35</sup> they also found that sellers were only slightly more likely to post problematic comments than buyers (1.0% of sellers' feedback

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29. Resnick & Zeckhauser, *supra* note 13, at 8-9 (describing data sets).

30. *Id.* at 11. Resnick and Zeckhauser suspect that users provide feedback for three inter-related reasons:

[M]any people do it as part of some quasi-civic duty. It is an encouraged activity, and does not cost much. Others do it as a courtesy. They have had a successful transaction and want to say thanks. Some expect reciprocity. Indeed, numerous sellers communicate with buyers that they always provide feedback for a successful transaction, and they hope the buyer will do so as well.

*Id.* at 5. Resnick and Zeckhauser empirically support their hunches about reciprocity. They looked for and found considerable correlation both in the propensity to provide feedback (sellers and buyers are more likely to provide feedback if the other did so) and the direction of the feedback provided (for example, sellers are positive 99.8% of the time when the buyer is positive, but positive only 39.3% of the time when the buyer's comments were either neutral or negative).

*Id.* at 18-21.

31. The Federal Election Commission reports that 51.2% of the voting age population cast votes for one Presidential candidate or another in the 2000 election. FEC, 2000 Presidential Popular Vote Summary For All Candidates Listed on at Least One State Ballot (2001), available at [www.fec.gov/pubrec.fe2000/prespop.htm](http://www.fec.gov/pubrec.fe2000/prespop.htm).

32. Resnick, et al., *supra* note 13, at 4.

33. *Id.* See also *id.* at 5 (arguing that "the potential utility of reputational mechanisms in electronic commerce is likely to be hampered by the limited capacity of users to confirm the data on which a reputation is formed").

34. Gillette, *supra* note 8, at 1181.

35. Gillette, *supra* note 8, at 1181; Resnick & Zeckhauser, *supra* note 13, at 11.



was negative; 0.2% was neutral).<sup>36</sup> But the fact that eBay participants are far more likely to post positive than either neutral or negative remarks does not necessarily show that feedback scores are biased or otherwise unreliable.

To support his concern that "comments suffer from a selection bias that causes them to deviate from the actual experience of users,"<sup>37</sup> Gillette argues that participants face incentives both to skew their commentary toward the positive and to under-report their negative experiences on eBay. Overall, his arguments present convincing explanations for the high rate of participation on feedback forums; they are less convincing on the topic of bias. For example, Gillette contends that both participants and eBay face incentives to encourage positive commentary—participants because their online reputation depends upon building a reliably strong feedback score;<sup>38</sup> eBay because online profits depend upon expanding their base of fee-paying users and revenue-producing auctions.<sup>39</sup> Participants' incentives to build up feedback scores and eBay's incentives to explain to users how best to accomplish this goal both help to explain why participants post commentary more frequently than is expected in theory, as noted above.<sup>40</sup> I am unconvinced, however, that an incentive to build up a feedback score would persuade a buyer to post positive commentary notwithstanding her seller's material breach (or vice versa).

More than simply encourage positive commentary, Gillette also sees disincentives to register a complaint. Resnick and Zeckhauser attribute some positive commentary to a "high courtesy equilibrium," by which they mean eBay participants follow my mother's advice to avoid commentary altogether in the absence of "something nice to say."<sup>41</sup> Gillette sees something "more invidious" in this norm of courtesy,<sup>42</sup> and puts his concern in the following way:

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36. Resnick & Zeckhauser, *supra* note 13, at 11. Resnick and Zeckhauser describe the combination of (i) high rate of feedback and (ii) rarity of neutral or negative feedback as a "High Courtesy Equilibrium." Resnick & Zeckhauser, *supra* note 13, at 18.

37. Gillette, *supra* note 8, at 1180.

38. Gillette, *supra* note 8, at 1185 ("Repeat players would like to have positive reputations to induce others to deal with them, and may be willing to say good things about others in order to elicit a similar response.").

39. Gillette, *supra* note 8, at 1187 (noting that eBay's instructions "invite positive comments, but discourage negative ones").

40. Gillette, *supra* note 8, at 1184 ("That is, conceivably participation in the creation of feedback constitutes a benefit to the poster rather than a cost.").

41. Resnick & Zeckhauser, *supra* note 13, at 18-21.

42. Gillette, *supra* note 8, at 1191 ("My claim, then, is that there is something more dubious operating than Resnick and Zeckhauser's norm of courtesy. Both participants and eBay have incentives to skew reporting of the online auction experience in favor of the positive. The true experiences of participants, therefore,

The very incentives that invite reciprocity of compliments in order to enhance Feedback Forum ratings simultaneously discourage negative comments that might invite retaliatory comments that reduce one's own rating.<sup>43</sup>

But why view feedback as a zero sum game? Absent incentives to post positive commentary, isn't it just as likely that participants would do nothing and fail to register any remark at all with the forum? Gillette does not explain why he presumes that a norm of courtesy encourages users not only to participate in the feedback forum, but also to rephrase their negative experiences in positive terms. A buyer may be willing to hold her tongue on minor transgressions in the hopes of exchanging positive remarks and enhancing her feedback score, but I would be surprised if buyers would withhold complaints of fraud or nonperformance in an effort to build their online reputations.

If I am right, then feedback forums work best when they are most needed. Participants forgive minor deviations in performance obligations; they exchange platitudes and compliments as a way of mutually building feedback scores. But when a counterparty fails to perform altogether or, worse yet, commits fraud, I suspect that interests in building feedback ratings and remaining polite fall to the wayside. Here, data provide some support. Resnick and Zeckhauser analyzed the text comments accompanying buyers' problematic comments, and found that negative and neutral comments were used for different sorts of complaints:

Surprisingly, items that did not match their description were somewhat more likely to receive neutral than negative feedback, perhaps reflecting that buyers may have thought discrepancies were honest mistakes on the part of sellers. Similarly, slow shipment was more likely to lead to a neutral than negative feedback. Not following through on a sale, or worse, not sending the item after receiving payment, tended to yield negative rather than neutral feedback.<sup>44</sup>

That participants reserve negative commentary for major transgressions in the eBay community provides limited support for

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are not reflected.”).

43. Gillette, *supra* note 8, at 1185 (arguing that the “high courtesy equilibrium” suggested by Resnick and Zeckhauser “do[es] not support the more important requirement that feedback provide credible information about buyers and sellers” and claiming that it instead suggests “that feedback will be skewed in favor of a disproportionate percentage of positive reviews”).

44. Resnick & Zeckhauser, *supra* note 13, at 11.

the claim that users would not refrain from posting negative commentary relating to a participants' outright failure to perform. Additional support is found in an emerging body of scholarship that empirically tests an actor's willingness to punish norm violators. In this scholarship, economists report on public goods experiments demonstrating a widespread willingness to punish shirking, "even if punishment is costly and does not provide any material benefits for the punisher."<sup>45</sup>

Gillette also argues that eBay participants are chilled from posting negative experiences out of a fear that they will find themselves the subject of retaliatory feedback. He presents a convincing case for the notion that the potential for retaliatory commentary chills users from registering complaints on the feedback forum, although in the end I am skeptical that retaliation undermines the credibility of the reputation information available on feedback forums. Both Gillette and Resnick attribute a portion of negative commentary to retaliation for earlier negative feedback.<sup>46</sup> Focusing on the ex ante incentives created in a retaliatory system, Gillette contends that retaliation may chill participants from posting anything other than positive remarks.<sup>47</sup> When viewed from an ex post perspective, however, retaliation would seem to inflate rather than diminish the number of negative remarks posted. According to this view, some of the fact-based negative and neutral comments are coupled with retaliatory remarks that only feign dissatisfaction. The worst we can say is that retaliation creates incentives for participants both to overstate and understate their dissatisfaction.<sup>48</sup>

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45. Ernst Fehr & Simon Gächter, *Cooperation and Punishment in Public Goods Experiments*, 90 *Amer. Econ. Rev.* 980, 980 (2000) (in addition, finding "that free-riders are punished the [sic] more heavily the more they deviate from the cooperation levels of the cooperators"). See also Alexander Field, *Altruistically Inclined?* (2000).

46. Resnick et al., *supra* note 13, at 4 ("One party could blackmail another—that is, threaten to post negative feedback unrelated to actual performance."); Gillette, *supra* note 8, at 1186 ("The very incentives that invite reciprocity of compliments in order to enhance feedback forum ratings simultaneously discourage negative comments that might invite retaliatory comments that reduce one's own rating.").

47. Gillette, *supra* note 8, at 1186 (noting participants' incentives to retaliate on the feedback forum and concluding that "[t]he potential possessor of negative information, therefore, is unlikely to post the information").

48. False commentary posted in retaliation would not inflate the amount of negative remarks posted in the long run if the intermediary were obliged to investigate and correct allegations of error. For example, credit reporting agencies are required to investigate and correct errors in credit reports under the Fair Credit Reporting Act. 15 U.S.C. §§ 1681 et seq. (2001). eBay has no such commitment, however. In describing the workings of the feedback forum, eBay substantially limits the circumstances under which they will consider removing errant feedback

Gillette is most convincing when he argues that the commentary posted on the feedback forum is not so much skewed as it is noisy.<sup>49</sup> He is right to note that retaliatory comments muddy up the reputation information provided to future traders who cannot “adjudicate between the anonymous disputants in online altercations.”<sup>50</sup> Ambiguity in reports of nonperformance or fraud create concerns that users will not be able to sort out a buyer’s and seller’s mutual recriminations, and determine whether it was the buyer or seller who behaved disreputably in the transaction.

This sort of noise should not, however, undermine the ability of the feedback forum to self-regulate commercially disreputable conduct, such as fraud. Faced with a noisy report in which negative comments are exchanged, tit for tat, future users will simply try to avoid doing business with either party, at least for a while. One of the two may be shunned from the marketplace unjustly, but the reputation system will have succeeded in deterring fraud and nonperformance in the marketplace. Admittedly, noisy reputation systems impose only rough justice, but in the wild, wild Internet, rough justice may be sufficient to deter commercial misconduct, especially where numerous identical items are simultaneously available for purchase.

Although Gillette is undoubtedly correct to note that the feedback forum does not provide participants with a perfect substitute for judicial enforcement,<sup>51</sup> in making this criticism, he may ask the

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from the forum. See <http://pages.egay.com/help/community/fbremove.html>. Nowhere does it commit to removing inaccurate feedback. It does commit to investigate “inappropriate trading behavior,” but disciplinary action “may range from a formal warning, up to indefinite suspension of a user’s account.” See <http://pages.egay.com/help/community/investigates.html>. The list of “feedback offenses” does not list “false or retaliatory feedback” as justifying investigation or disciplinary action, although “transaction non-performance” counts are included among the list of buyers’ and sellers’ offenses. *Id.*

49. Moreover, even where commentary is positive in tone, Gillette argues that it lacks substantive content and may even repeat the same uninformative remark over and over again. Gillette, *supra* note 8, at 1182 (noting that eBay commentary “often appear[s] to be highly routinized in ways that suggest that the poster of the comment is making few distinctions among trading partners;” providing example of 546 feedback comments left by Crixus saying only “A pleasure to deal with. Thanks again”).

50. Gillette, *supra* note 8, at 1187 (“The effect of the retaliatory threat is not only to reduce the amount of negative information posted, but also to increase the amount of noise in the system.”).

51. Gillette, *supra* note 8, at 1179 (“High ratings may serve as the functional equivalent of brand names, allowing potential traders to sort reliable from unreliable trading partners. Nevertheless, I want to raise some questions about its efficacy and offer some explanations for why it might not provide a full alternative to the threat of contract enforcement as a means of reducing distrust.”).

feedback forum to do too much.<sup>52</sup> Resnick and Zeckhauser concede that eBay's feedback forum, like any reputation system, does not work perfectly. Nonetheless, they remain convinced that it works well enough to deter fraud and engender trust in the online auction.<sup>53</sup> A discussion of their justification for this position follows in the next sections.

## II.

Although Gillette questions the reliability and utility of reputation mechanisms in electronic commerce, he stops short of condemnation, and for good reason. It is difficult to contend that eBay's feedback forum does not work given the volume of transactions intermediated on eBay and given the substantial statistical research correlating sellers' feedback scores with the success of their eBay auction transactions.

The volume of business transacted on eBay is astounding. As of December 2001, eBay had 42.2 million registered users.<sup>54</sup> At any one time, eBay.com has more than 5 million items for sale in over 18,000 specific categories.<sup>55</sup> It controls more than 70% of the consumer-to-consumer online auction market.<sup>56</sup> As a practical matter, the volume of online auction business conducted on eBay signifies users' trust in both eBay and their feedback forum.

Empirical research also provides evidence that feedback scores affect bidding activity in eBay's online auctions. Gillette refers to one such study when he remarks that, after examining 451 eBay auctions for collector quality Harley-Davidson Barbie dolls, Cynthia G. McDonald and V. Carlos Slawson found a positive relation between price and eBay's quantified reputation measure.<sup>57</sup> Other studies corroborate the correlation between auction price and eBay's reputation score noted by McDonald and Slawson. For example,

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52. With some reputation systems, an intermediary assumes an evaluative role in order to minimize participants' confusion regarding conflicting or otherwise complex information. See text associated with *infra* notes 90-91. The question is whether eBay should be viewed as an evaluative reputation intermediary. See text associated with *infra* notes 91-93.

53. Resnick & Zeckhauser, *supra* note 13, at 3; Resnick, et al., *supra* note 13, at 5.

54. I found these figures on the Business Week online company profile service, available at [http://research.businessweek.com/business\\_summary.asp?Symbol=EBAY](http://research.businessweek.com/business_summary.asp?Symbol=EBAY).

55. *Id.*

56. Houser & Wooders, *supra* note 13, at 15.

57. Gillette, *supra* note 8, at 1189 ("There is some reason to doubt the existence of a serious selection bias, notwithstanding the theoretical issues that I have raised."), citing McDonald & Slawson, *supra* note 13.

Peter Kollock conducted a similar study of eBay and found that “[a]t least for some high value goods, the seller’s reputation had a positive and statistically significant effect on the price buyers paid for identical goods of equivalent quality.”<sup>58</sup> David Lucking-Reiley and his co-authors studied 461 eBay auctions for mint-condition Indian-head pennies.<sup>59</sup> They found that sellers’ feedback ratings have a measurable effect on auction price. More specifically, they found that negative feedback scores have a much greater effect than positive feedback ratings.<sup>60</sup> Similarly, Daniel Houser and John Wooders found “buyers pay a statistically and economically significant premium to sellers with better reputations.”<sup>61</sup>

Price is not the only indicator that reputation scores affect online auctions, moreover. Feedback scores may also affect the probability of sale.<sup>62</sup> As Gillette notes, Resnick and Zeckhauser examined both price and probability of sale in their study of 456 listings of Rio MP3 digital audio players and 180 listings of Britannia Beanie Babies.<sup>63</sup> They found that the relationship between sellers with higher reputation scores and price was indeterminate, but did find a statistically significant relationship between feedback scores and probability of sale—“more positives and fewer negatives and neutrals did appear to affect the probability of sale, and in similar ways for the two groups.”<sup>64</sup>

Gillette raises two reasons for questioning whether these empirical studies demonstrate that the feedback forum enables buyers to distinguish between reputable and disreputable sellers. First, he argues that the studies show only that the prevailing bidders in eBay auctions view high feedback scores as indicative of seller quality, but

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58. Kollock, *supra* note 5, at 13; Peter Kollock, *The Value of Reputation*, (1998 UCLA working paper).

59. Lucking-Reiley, et al., *supra* note 13.

60. Lucking-Reiley, *supra* note 13, at 9 (“A 1% increase in the seller’s positive feedback ratings yields a 0.03% increase in the auction price, on average. The effect of negative feedback ratings is much larger, and in the opposite direction: a 1% increase causes a 0.11% decrease in auction price, on average. The effect of negative feedback is statistically significant at the 5% level, while the effect of positive feedback is not.”).

61. Houser & Wooders, *supra* note 13, at 3 (also examining effect of buyer reputation on price and finding buyer reputation to be “statistically insignificant,” consistent with their theory for high-bid auctions).

62. Resnick & Zeckhauser, *supra* note 13, at 15 (noting potential for reaching a misleading result if price is studied, but not probability of sale, or vice versa).

63. Resnick & Zeckhauser, *supra* note 13.

64. *Id.* at 16 (“Doubling the number of negatives and neutrals seems to more than cancel the effect of doubling the number of positives, which suggests that sellers with a constant ratio of problematic feedback will be treated worse of [sic] over time.”).

not that feedback scores are “widely accepted as accurate.”<sup>65</sup> His logic follows from what economists refer to as the “winner’s curse”—the notion that the bidders in an auction face incentives to overestimate the value of the object for sale in order to win the bid, incentives she may later regret.<sup>66</sup> But not every auction suffers from a winner’s curse. In his book entitled “Winner’s Curse,” Richard Thaler notes that it “is an empirical question whether bidders in various contexts get it right or are cursed.”<sup>67</sup> Patrick Bajari and Ali Hortaçsu conducted an extensive empirical study of eBay auctions for United States mint/proof coin sets to quantify the extent of the winner’s curse on eBay,<sup>68</sup> and found “that coins sold on eBay auctions fetch prices that are close to their book values.”<sup>69</sup> After structuring a model of bidding activity, they estimated that the winner’s curse “causes bidders to lower their bids by 3.2% per additional competitor”—assuming auctions with three bidders in them, “this corresponds roughly to a 10% ‘eBay discount.’”<sup>70</sup> Bajari and Hortaçsu concluded that their “empirical results go against a large ‘winner’s curse’ effect” on eBay.<sup>71</sup>

Second, Gillette argues that “even if all Feedback Forum users believe that the ratings convey useful information,” they may not convey “an ideal amount of information.”<sup>72</sup> With this remark, Gillette goes well beyond the initial premise of his project and trips on a nirvana fallacy along the way. The question is not so much whether the feedback forum constitutes an efficient market for used and collectible goods. Instead, I understood the questions posed by his paper to be much narrower: Do feedback forums encourage participants to trust the Internet enough to engage in small transactions between strangers? Do feedback forums effectively sanction and, thus, deter online fraud? Can feedback forums provide an informal substitute for contractual enforcement? A feedback forum can perform these functions although it does not disseminate “optimal information about seller reputations.”<sup>73</sup>

Resnick & Zeckhauser do not search for nirvana in the feedback forum. They instead argue that a reputation system will be effective,

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65. Gillette, *supra* note 8, at 1190.

66. Richard H. Thaler, *The Winner’s Curse* 50-62 (1992).

67. *Id.* at 51.

68. Bajari & Hortaçsu, *supra* note 13, at 1.

69. *Id.* at 2.

70. *Id.*

71. *Id.* at 1.

72. Gillette, *supra* note 8, at 1190 (“McDonald and Slawson indicate that there is a positive correlation between reputation and price. They do not purport to claim that the prices that eBay auctions command is identical to the prices that would be obtained if buyers had optimal information about seller reputations.”).

73. *Id.*

even if the system does not “work well in the statistical tabulation sense,” so long as it fulfills two, inter-related functions: (i) the imposition of an “initiation fee” on inexperienced sellers; and (ii) the ability to “stone” sellers whose performance deviates from accepted commercial norms.

Resnick and Zeckhauser first argue that a functioning reputation system should permit users to impose an initiation fee on sellers in the form of reduced prices and reduced frequency of sale/item listed.<sup>74</sup> By “initiation fee,” Resnick and Zeckhauser refer metaphorically to the notion that eBay users should be willing to post negative commentary more frequently as to inexperienced than experienced participants; the lower prices that inexperienced sellers suffer count as their initiation into eBay.

Their data support the notion that buyers place incoming sellers on probation while they build a reputable feedback score. Resnick and Zeckhauser report that experienced sellers are less likely to receive negative feedback than inexperienced ones.<sup>75</sup> Specifically, sellers with fewer than 10 positive feedbacks received negative or neutral feedback 2.83% of the time, while .95% sellers with between 50-199 positive feedbacks received negative or neutral comments and .79% of the sellers with between 200-999 positive feedbacks.<sup>76</sup> Curiously, Resnick and Zeckhauser report that the most experienced sellers, those with more than 1000 positive feedback units, received more negative commentary than those with scores between 50 and 999; nearly 1.2% of the 1000 sellers received negative or neutral commentary.<sup>77</sup>

Gillette makes much of this “hook-shaped curve” in Resnick and Zeckhauser’s data, and argues that the data indicate that “some actors who perform in a manner that generates a relatively significant number of negative ratings continue to survive in the marketplace.”<sup>78</sup> While the claim that buyers put inexperienced sellers on probation would be cleaner if the data did not turn in the way that they do, the data are not as devastating as Gillette suggests. Presumably, the jump in the percentage of problematic commentary lodged against

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74. Resnick & Zeckhauser, *supra* note 13, at 4 (“If unreliable sellers know that they will have to pay their dues at the outset, and if they believe that the feedback system is likely to give them poor ratings, they will be deterred from participating. They will not make the investment of entering in the first place.”).

75. Resnick & Zeckhauser, *supra* note 13, at 12-15. Moreover, Resnick and Zeckhauser report that sellers are far more experienced than buyers on the average. *Id.* at 5.

76. *Id.* at 12.

77. *Id.* at 12-13. Moreover, they report that this figure still exceeds 1% when an outlier is removed from the database.

78. Gillette, *supra* note 8, at 1181.



participants with an excess of 1,000 positive feedback remarks derives more from the substantially smaller sample size of this most experienced group than from anything else. For example, only 122 sellers and 15 buyers fell into the 1000 category as compared to 3,728 sellers and 3,678 buyers falling into the 50-199 positive category.<sup>79</sup>

The presence of initiation fees is alone insufficient to ensure a working reputation system according to Resnick and Zeckhauser. They argue the system also should permit users to “stone” bad behavior, by which they mean that eBay users should be more willing to post negative commentary as to participants who have already received negative commentary than participants who have not.<sup>80</sup> Faced with the prospect of stoning, disreputable sellers cannot expect to exploit the market for very long before getting drummed out of the auction.<sup>81</sup> Resnick and Zeckhauser do not provide empirical support for the theory that stoning occurs on eBay’s feedback forum, stating only that “[f]uture empirical work will examine the frequency of negative feedback after a range of feedback profiles, and the likelihood of being driven quickly from the market.”<sup>82</sup> Nonetheless, they argue that stoning should be reserved for intentional and material infractions,<sup>83</sup> and, as noted above, their data demonstrate that negative feedback generally is reserved for serious infractions, such as failing to follow through on a sale or, worse yet, failing to deliver an item although payment was received.<sup>84</sup>

Gillette doubts the accuracy and efficacy of stoning and argues that it is just as likely that some of the buyers who post negative remarks about their seller are engaging in herd behavior.<sup>85</sup> Following the herd, buyers would mimic earlier negative commentary rather than accurately report misbehavior, according to Gillette.<sup>86</sup> With this

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79. Resnick & Zeckhauser, *supra* note 13, at 13, Table 3.

80. *Id.* at 22 (“Once one has a black mark by one’s name, others may be much more willing, indeed, eager, to cast stones.”).

81. *Id.*

82. *Id.*

83. *Id.* (“If the goal is to deter bad apples from playing in this market, it would be desirable if stoning were reserved for behaviors that are deliberate rather than merely careless, and where the perpetrator benefits significantly from the action that led to an unsatisfactory transaction.”).

84. See text associated with *supra* note 43. See also Resnick & Zeckhauser, *supra* note 13, at 11.

85. Gillette, *supra* note 8, at 1191 (“But it is also possible that they are engaging in behavior that allows them to perceive slight nonconformities in the transactions as indications of the kind of bad faith that would lead the poster to overcome the resistance to posting, but that does not convey any additional information about the expected level of performance by the target of the feedback.”).

86. *Id.*

argument, Gillette focuses on the precision of the reputation information in stones cast upon commercial pariahs. But in doing so, he misses the deterrence of stoning which is enhanced by precisely the sort of herd behavior that he criticizes. If some participants blindly stone the recipients of negative commentary, *ex ante*, sellers should do all they can to avoid even a single episode of negative feedback. Stoning may be unjust, but its deterrent effect is undeniably powerful.

### III.

Gillette questions the reliability of feedback forums on a more basic level when he contends that the relationship between feedback scores and price may rest on faith alone: “successful bidders might have *believed* that Feedback Forum ratings conveyed valuable information, even though that was not the case. . . .”<sup>87</sup> Resnick and Zeckhauser agree that correlations between eBay reputation scores and online auction activity may only reflect users’ perceptions about the reliability of the information posted on a feedback forum.<sup>88</sup> They argue, however, that the perception that reputation sanctions will be imposed is all that is required for the system to deter disreputable conduct.<sup>89</sup>

When first considered, it is easy to dismiss the notion that, for a reputation system, perception is as important as reality. Surely, Resnick and Zeckhauser are only right about the importance of users’ perceptions in the short term. In the long term, we would expect sellers to “learn” that their prospects of being “stoned” are relatively minor and, thus, alter their perceptions of the reputation system offered by eBay. Resnick and Zeckhauser seem to agree that users’ perceptions could change over time, but “suspect that few participants have conducted even cursory versions of the types of analyses conducted” in their paper.<sup>90</sup> With this remark, they underestimate the power of the Internet, where they posted their paper. If I can find their research by inputting the terms “eBay” and “trust” into [www.Google.com](http://www.Google.com), so can anyone else.

The concern, implicit in Gillette’s complaint, is that overly trusting eBay participants, lured by the novelty of electronic

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87. Gillette, *supra* note 8, at 1189 (emphasis added).

88. Resnick & Zeckhauser, *supra* note 13, at 3.

89. *Id.* at 23 (“Thus, if sellers believe poor behavior will elicit negative feedback, and that buyers depend strongly on reputations, then sellers will behave well and bad sellers will be deterred. It is the perception of how the system operates, not the facts, that matters.”).

90. *Id.*

commerce and the overwhelmingly positive commentary posted on the feedback forum, engage in electronic commerce that they later regret (or should regret). Should participants trust a reputation system despite their inability to verify the accuracy of the information it disseminates? What role should participants' perceptions play in assessing the effectiveness of a reputation system?

The answer to these questions depends on the goals of the reputation system and the nature of the information available through that system. Users' perceptions of a system take on a different significance when it seeks to deter fraud and nonperformance, to communicate traders' satisfaction or dissatisfaction with earlier commercial conduct, or, more broadly, to encourage trade. Here, I distinguish among reputation systems that report, evaluate, and develop reputation information.

Reporting intermediaries disseminate information regarding violations of commercial trust (such as a bounced check, insufficient funds in a bank account, or the failure to honor a letter of credit). For example, debit, credit, and check cashing cards report a holder's financial reputation to retailers with the aid of information technology. The accuracy or inaccuracy of this objective information is, by its nature, fairly easy to verify. The simplicity and objectivity of the reputation information reported on reduces the sanction costs, thus, enhancing the deterrent effect of the report and the likelihood that the disreputable conduct will be punished.<sup>91</sup> Where a reputation system looks to deter nonperformance, fraudulent or otherwise, it is often sufficiently effective for the intermediary to report on traders' good or bad conduct without providing additional analysis of the information.

Reporting intermediaries build commercial trust if they can reliably enable traders to sanction and, therefore, deter flagrantly opportunistic conduct. Deterrence does not require sanctions to be imposed upon every infraction in order to succeed; commercial trust can be built although intermediaries sanction only a fraction of those who "cross the line." Traders will be deterred from engaging in disreputable commercial conduct so long as there is a probability that they will be sanctioned and the magnitude of the sanction outweighs the expected value of the sanctionable conduct. In this way, it should not matter that eBay's feedback forum does not sanction every participant who engages in commercially disreputable conduct in their auction. As long as a fraction of them are sanctioned, the system should deter shirking. Informal mechanisms for self-regulation, such as the imposition of initiation fees and the practice

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91. Mann, *Information Technology*, *supra* note 2, at 1636.

of stoning, also impact upon participants' perceptions of the effectiveness of the reputation system. These informal mechanisms affect both the probability that sanctions will be imposed, and the severity of those sanctions. Where the reputation system looks to deter fraud, nonperformance and the like, Resnick and Zeckhauser are correct when they claim that participants' perceptions of the system are as important as its actual success rate. The mere perception that disreputable conduct will be sanctioned has a deterrent effect on participants' online misconduct.

Evaluative intermediaries function differently. More than simply reporting on traders' nonperformance, they disseminate information regarding traders' satisfactory performance in the marketplace. Examples of evaluating intermediaries abound: Zagat's evaluates restaurants; Consumer Reports assess the quality of thousands of different household products and services; Car & Driver ranks automotive performance; U.S. News & World Report ranks colleges and graduate schools, including law schools; Dunn & Bradstreet, TransUnion and Fair Isaac & Co. provide credit rating, credit reporting, and credit scoring evaluations. Analysis and evaluation are essential if the goal of the reputation system is to convey detailed information regarding satisfaction with past practices.

Questions of satisfaction concern issues of quality, value, and condition; thus, by its nature, information regarding customer satisfaction is subjective and hard to verify. In some instances, evaluative criteria constitute proprietary information, and this further complicates the task of confirming the reliability of a reputation intermediary's evaluation. But verification may be less important to an evaluative system. When reputation intermediaries evaluate commercial quality, they offer their judgment as experts in the field. Trust in evaluative reputation information does not depend on users' abilities to confirm the accuracy of the data on which the evaluation was based. Issues of quality and the like involve subjective questions on which reasonable minds can differ. Instead, trust in the evaluative intermediary turns on a perception that the intermediary's judgment is honest, objective, consistent, and based on reasonable criteria. Evaluative reputation systems build commercial trust, even though the accuracy of the information they provide to the marketplace cannot easily be confirmed and even though dissatisfied users cannot directly impose reputation sanctions. The primary sanction against evaluative intermediaries with whom users disagree is to fail to follow their advice in future transactions.

Reputation systems may also attempt to develop commercial reputation and trust. Here, intermediaries are less important because traders often signal reputation information about themselves. For

example, branding can provide useful information to potential trading partners about quality, taste, value, and customer satisfaction. Advertising and other marketing techniques also look to convey subjective assessments regarding commercial reputation. As with an evaluative system, the information conveyed through these sorts of marketing techniques is subjective and impossible to verify. Perception is everything; substance is nearly irrelevant.

Is eBay a reporting or evaluative intermediary? Or is it a marketing tool for encouraging trust in their online auction?

When negative feedback comments on a participant's nonperformance or fraud, the feedback forum performs a reporting function. Reputation information regarding nonperformance is simple, objective and fairly easily verified. For all the reasons spelled out by Resnick and Zeckhauser, the feedback forum works well enough to deter this sort of commercial misconduct, although it undoubtedly does not report every instance in which a seller fails to ship the good to a buyer who has paid.

Does eBay do no more than report reputation information? Does it perform no evaluative function with its feedback forum? Careful to protect its passive role as an interactive computer service provider, eBay would be loathe to characterize itself as the source of evaluative reputation information.<sup>92</sup> It describes itself as providing a forum for users to share opinions and information about their eBay experiences, but, in its online tutorial for its feedback forum, is careful to note that it "will not censor these opinions, or investigate the remarks for accuracy."<sup>93</sup> Nonetheless, eBay encourages its users to post feedback about all aspects of their online auction experiences, suggesting that users report on whether their trading partner has performed satisfactorily, not simply to report on whether their partner has failed to perform. In this way, the feedback forum might also be understood to perform an evaluative function. Large feedback scores, cumulating neutral or even qualified positive commentary, connote objective and subjective information regarding a trader. The comments supporting these scores provide participants with additional subjective information. Gillette criticizes the feedback forum for providing insufficiently detailed information about online trading experiences, but eBay has little incentive to encourage "mildly dissatisfied" buyers to post more subjective information.<sup>94</sup>

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92. See The Communications Decency Act, 47 U.S.C. § 230(c)(1995). See also, e.g., *Zeran v. American Online, Inc.*, 129 F.3d 327 (1997); *Blumenthal v. Drudge*, 992 F.Supp. 44 (D.D.C. 1998).

93. See <http://pages.ebay.com/help/community/fbremove.html>.

94. Resnick & Zeckhauser, *supra* note 13, at 23-24 ("It would help buyers to differentiate among sellers, perhaps creating greater faith in the effectiveness of the feedback system. On the other hand, making dissatisfaction more visible might

More information might muddy up the feedback forum without increasing users' participation in eBay.

Even if the feedback forum fails as an evaluative reporting institution, it may still succeed as a marketing tool. eBay, and not a third party intermediary, provides the feedback forum for its users. It also provides users with an online dispute resolution mechanism, an escrow service, and privacy protections. Together this suite of online services is intended to build confidence and trust in its online auction house. eBay has carefully marketed itself as trustworthy, whereas other websites build their reputations on those of third-party reputation intermediaries such as [www.squaretrade.com](http://www.squaretrade.com), [www.BBBonline.com](http://www.BBBonline.com), and [www.ombuds.org](http://www.ombuds.org).

### CONCLUSION

The eBay feedback forum provides a useful and important opportunity to study a reputation system and assess its success in building trust in electronic commerce. Questioning other commentators' optimism about the effectiveness of this reputation system, Gillette fears that the feedback posted by eBay users may be skewed against negative and neutral commentary and, therefore, is unreliable. If the feedback forum under-reports traders' dissatisfaction, as Gillette claims, then he is right to question whether it can substitute for contractual enforcement of electronic commerce. Nonetheless, even an imperfect feedback forum may succeed in deterring fraud in online auctions. Deterrence is aided where the reputation system imposes an initiation fee on newcomers and facilitates the stoning of traders who have failed to perform in the past. An imperfect feedback forum may also succeed in encouraging users to engage in commerce over the Internet by permitting eBay to develop its reputation as a trustworthy intermediary.

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destroy people's overall faith in eBay as a generally safe marketplace.").

