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Reputation and Intermediaries in Electronic Commerce

Clayton P. Gillette*

I. INTRODUCTION: SUBSTITUTES FOR CONTRACT ENFORCEMENT

It is a privilege to participate in a symposium dedicated to Chancellor William Hawkland, in large part because of the depth and breadth of his understanding of the role of commercial law in creating robust markets for trade. Obviously, the most important manifestation of that understanding is reflected in his work on the Uniform Commercial Code ("U.C.C."). I hope that I will not be considered to have deviated too far from the focal point of his contributions by making more explicit a point that I believe implicitly underlies the development of the U.C.C. and the current critiques of its evolution. The point is that commercial law is necessary to overcome problems of distrust that would otherwise frustrate exchange. Successful systems of commercial transactions are typically assumed to require a background set of legal rules that clearly assign entitlements to traders, and a legal system that enforces those assignments.¹ The former reduces transactions costs that may derail otherwise efficient exchanges. The latter reassures parties to non-simultaneous exchanges that they will be able to obtain redress in the event of postcontractual breakdowns. By supplying both law and a means of enforcing it, the state encourages market activity without more invasive governmental intervention such as setting prices or allocating rights to the goods themselves. It is on this basis that some find correlations between national economic growth and the development of robust systems of contract law.²

While this story of exchange explains much of the commercial market, it fails to account for transactions in which contractual parties would predict that state-sponsored enforcement will be underutilized in the event of contractual breakdowns. Even those actors who have available both clear legal entitlements and state enforcement mechanisms will forgo legal recourse when enforcement costs exceed

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1. See, e.g., Douglass C. North, Institutions, Institutional Change and Economic Performance 54-60 (1990).

2. See, e.g., Mancur Olson, Power and Prosperity (2000); Paul G. Mahoney, *The Common Law and Economic Growth: Hayek Might Be Right*, 30 J. Legal Stud. 503 (2001).

expected recovery.³ This calculus is likely to occur in a variety of circumstances. The amount at stake may be very small, so that even moderate litigation costs deter enforcement; the aggrieved party may have to litigate in a distant jurisdiction, so that the cost of recovery is high; the forum's judicial system may be considered untrustworthy, so that the probability of recovery is low; or resolution of the underlying dispute may depend on conditions that are difficult to verify, so that recovery costs are high and expected recovery is low.

In each of these cases, law will be of little importance to the parties. In response, potential traders may eschew otherwise beneficial contracts; alter the prices at which they sell or buy to obtain ex ante compensation for the risk of unredressable breach; seek lower-cost sources of redress (arbitration or dispute resolution within industry tribunals⁴); or seek lower-cost alternatives to redress. This last device includes monitoring the quality of the goods under the contract, either directly by the buyer or through intermediaries.⁵ Ex ante monitoring, however, is unlikely to be cost-effective for low-value transactions or for those involving distant buyers and sellers. Even if it is possible to find a third-party monitor at a distant location, the lower likelihood that a distant trading partner will be a repeat player indicates that agency costs between the monitor and its principal are likely to be high. Even private enforcement mechanisms such as gossip are unlikely to be suitable for geographically distant transactions if the parties are not members of the same enforcement regime, such as a local trade association.

These issues constrain the development of long-distance trade, especially retail trade, that was initially promised when Internet commerce was initially introduced.⁶ Notwithstanding expectations that the Internet would vaporize boundaries, the need for buyers and sellers to trust each other where compliance with contractual terms cannot readily be verified ex ante or enforced ex post diminishes the likelihood of trade. Thus, even while electronic commerce reduces search costs and transactions costs of putting together willing buyers

3. One should not infer that enforcement would never occur unless expected recovery exceeds enforcement costs. A rational commercial actor may precommit to enforcing all contracts, regardless of costs, in order to signal that it is unwilling to accept chiseling, and thus deter trading partners from engaging in minor breach in the belief that they will not face litigation. See, e.g., Robert E. Scott, *Rethinking the Regulation of Coercive Creditor Remedies*, 89 Colum. L. Rev. 730, 749 (1989).

4. 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).

5. See, e.g., Bartlett & Co., *Grain v. Merchants Co.*, 323 F.2d 501 (5th Cir. 1963).

6. See Yannis Bakos, *The Emerging Landscape for Retail E-Commerce*, 15 J. Econ. Persp. 69 (Winter 2001).

and sellers, its full potential cannot be realized if parties fear that trading partners will perform opportunistically because remedies for breach or chiseling are unavailable.

One plausible solution is to reduce the risk that one is dealing with a potential breacher by monitoring the reputation of one's trading partner. On the assumption that reputation from prior experience is a valid predictor of future performance, reputation can be particularly useful in the very transactions—those that involve low values and those that involve parties who are geographically distant—in which legal rights to enforce the contract are less likely to be asserted and in which monitoring performance is infeasible.⁷ These are also the transactions that are most susceptible to expansion through electronic commerce because the number of buyers and sellers is likely to expand dramatically as search costs and transactions costs are reduced in the ways made available by the Internet. Moreover, the ease of communications with geographically disparate buyers and sellers makes it easier to register satisfaction or dissatisfaction about one trader with a larger number of potential traders, thus enhancing the likelihood of discovering both positive and negative reputational information.

At the same time, the vast number of traders on the Internet raises the probability that any potential trader searching for a partner will be confronted with an amount and quality of information that frustrates efforts to discern a meaningful reputation. If reputation is to serve as a sorting mechanism that allows potential traders to assess each other's credibility, the information on which reputation is based must itself be trustworthy, and the ease with which Internet users can post information about a trader may reduce reliability.⁸ "Cheap talk" raises the specter that information that is provided will be of little practical use unless potential users can distinguish credible information.⁹ The costs of overcoming this problem of informational

7. Reputation will also be important in transactions that occur over a very narrow geographical area. If much of a seller's business is done in a small area, and if the seller faces competition within that area, a bad reputation will cause that seller significant harm since reputation can spread easily among the seller's customers. But litigation, arbitration, and monitoring are also more plausible in narrow area transactions, as the costs of asserting legal rights will decline. Reputation may increase in importance in long-distance transactions because there are few ex post enforcement or ex ante monitoring alternatives.

8. There exist, for instance, multiple websites dedicated to making negative comments about commercial traders. See, e.g., <http://www.chasebanksucks.com/> and <http://www.thecomplaintstation.com/>. Users, however, cannot determine from these websites the likelihood of a negative interaction with a particular trader. They can only discover the existence of such an interaction.

9. Jason Scott Johnston, *Communication and Courtship: Cheap Talk Economics and the Law of Contract Formation*, 85 Va. L. Rev. 385 (1999).

overload may reduce the feasibility of small value transactions among distant potential traders and thus reduce the promise of electronic commerce.

The legal literature has long understood that reputation can assure quality of contractual performance and substitute for legal enforcement.¹⁰ But the traditional literature implies that the situations in which reputation will matter have significant limits. Most of the literature focuses on situations in which parties have repeated interactions with each other and thus invest in reputations to induce cooperation from their immediate trading partners. The salient features of relational contract do largely depend on vulnerability to retaliatory threats in a subsequent interaction to restrain each party from acting opportunistically in a current interaction.¹¹ Thus, reputation has been assumed to have its most significant effects where parties are engaged in repeat play, rather than where one trader's reputation with a second trader affects subsequent dealings with third parties. Reputation is particularly effective in relational situations because long-term contracts tend to be incompletely contingent; as a consequence, the specific obligations of the parties, and hence the existence of breach, are highly uncertain. Ex post enforcement costs will therefore be high, and ex ante constraints such as reputation can therefore compensate for the risk of underenforcement.

In theory, reputation can have similar effects in transactions among strangers, *if* there is a sufficiently low-cost mechanism for communicating reliable reputational information to the affected parties. In this paper, however, I suggest 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. My concern is consistent with, but separate from, the concern that the voluntary nature of reputational systems discourages participation. That critique suggests that participation will be too low to create a representative set of reputational data. As a result, the information that exists will be unreliable. In this paper, I suggest that even where participation rates

10. On the role of reputation as a substitute for contract remedies, see Lewis A. Kornhauser, *Reliance, Reputation, and Breach of Contract*, 26 J. L. & Econ. 691 (1983).

11. See Robert E. Scott, *Conflict and Cooperation in Long-Term Contracts*, 75 Calif. L. Rev. 2005, 2026-27 (1987); Clayton P. Gillette, *Commercial Rationality and the Duty to Adjust Long-Term Contracts*, 69 Minn. L. Rev. 521, 559-60 (1985); Paul R. Milgrom, et. al., *The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs*, 2 Econ. & Pol. 1, 3 (Mar. 1990) ("It is well known . . . that in long-term, frequent bilateral exchange, the value of the relationship itself may serve as an adequate bond to ensure honest behavior and promote trust between the parties.").

are high, the quality of information may be of limited utility to potential users of the system.

II. REPUTATIONAL INTERMEDIARIES

Even in transactions among strangers, reputational information theoretically can indicate the likelihood of satisfactory performance. In order to achieve that result, however, traders must have both the opportunity and the incentive to communicate information concerning their transactions to potential subsequent traders, and the latter must have reason to trust the information they receive.¹² In order for reputation to be reliable, it must be capable of assimilating both positive and negative information. While traders may self-report about positive experiences others have had with them, negative information will likely depend on one party's reporting the defalcations of another in a manner that is discoverable by subsequent traders. In sum, a trader's reputation can reduce distrust about dealing with a stranger if (a) credible positive and negative information about the trader is available;¹³ (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.

Initially, one might believe that markets for information will ensure satisfaction of these conditions. Potential traders who are ignorant about prospective trading partners face a traditional "lemons" problem.¹⁴ Some traders will only want to deal with high-quality actors, but will have difficulty *ex ante* distinguishing high-from low-quality. At best, potential purchasers will be willing to offer prices that reflect average quality, a price that may be insufficient to justify the transaction for a high-quality seller. As a consequence, high-quality traders will be driven out of the market, and low-quality traders will come to dominate.

12. See, e.g., Daniel B. Klein, *Trust for Hire: Voluntary Remedies for Quality and Safety*, in Daniel B. Klein, *Reputation* 97, 104-06 (1997) [hereinafter "Klein"].

13. It is not necessary that positive and negative information be reported. If a trader is aware that there are means by which negative information can be reported, the absence of negative information may actually reflect favorably on the subject of the report. But if the report is positive, and there is no credible outlet for conveying negative information, a potential trader will not know whether the absence of negative reports reflects a paucity of unsatisfactory experiences with the subject of the report, or the lack of opportunity to convey negative information to others.

14. See George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. Econ. 448 (1970).

This result can be avoided if high-quality traders are able to signal their status at a cost that makes the resulting trade worthwhile. There exist multiple ways to accomplish this objective. Under some circumstances, a trader may itself transmit credible signals. By engaging in activities that would be costly for low-quality firms to mimic, such as offering guarantees, high-quality firms may signal their status and thereby reduce search costs to potential customers.¹⁵ Alternatively, a firm with a reputation for high-quality with respect to one good or service may expand into additional goods or services in the expectation that its reputation will spill over. For instance, brand names constitute reputational signals that allow users of one of a firm's products to predict the performance level of another product sold by the same firm.¹⁶

In other instances, however, traders will not be able credibly to signal their own quality. Signaling theory requires that effective signals of high quality be immune from imitation by low-quality firms. This may be difficult to achieve. Low-quality firms may attempt to solve short-term difficulties or establish a reputation by mimicking high-quality signals, secure in the knowledge that they may not have to bear the long-term costs of their efforts. Long warranty periods, for instance, may signal product quality, but they may also be a viable endgame strategy for firms that are unlikely to survive to fulfill the warranty if their strategy fails.¹⁷

Where signals of quality sent by the traders themselves would be opaque, because the signal is subject to imitation by low-quality traders, third parties may intervene to clarify the situation. In order to satisfy the demand for reputational accuracy, credible evaluators of the reputations of others should arise to certify or vouch for the reputational quality of a trader. Firms within an industry may be able to signal their quality through an industry-wide self-regulatory body. For instance, high-quality firms may form an association and impose requirements for membership that potential customers will perceive as capable of being satisfied only by high-quality traders.¹⁸ Firms can then advertise their membership in the association as a surrogate for demonstrating that they possess particular qualifications.¹⁹

15. See A. Michael Spence, *Market Signaling: Informational Transfer in Hiring and Related Screening Processes*, 88-91 (1974).

16. *Id.* at 122-23. See also Benjamin Klein & Keith B. Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. Pol. Econ. 615 (1981).

17. At the time of its bankruptcy, Daewoo offered a standard 3-year, 36,000 mile warranty with a 5-year, 60,000 mile power train warranty. See <http://www.post-gazette.com/businessnews/20010119wheels8.asp> (last visited Aug. 28, 2002).

18. See John McMillan & Christopher Woodruff, *Private Order Under Dysfunctional Public Order*, 98 Mich. L. Rev. 2421, 2441-42 (2000).

19. Klein, *supra* note 12, at 124-25.

Alternatively, unrelated third parties might find a market opportunity in investigating reputational information and communicating it to potential users. These intermediaries may be able to capture the benefit they confer on traders either by charging for the use of the information (think of Dun and Bradstreet reports) or by charging the firms under investigation (think here of bond rating agencies). A company in a particular industry that desires to issue stock in an initial public offering may prefer to use an underwriter and attorneys that are known for taking public similarly situated firms that have subsequently proven successful. Potential investors may view the commitment by credible experts of their own reputations as a signal of the quality of the firm and thus rely on the participation of these experts to solve the informational asymmetry that causes lemons problems. Or the intermediary may provide the service as a by-product in order to increase the value of another of its products. Think of the Good Housekeeping seal as a means of increasing the value of its primary good, a magazine. In each of these cases, the fact that users of the information or the firms being evaluated are willing to pay to obtain reputational information or to have their reputations publicized indicates their belief that reputational intermediaries add value.

Alternatively, intermediaries may provide signals of quality even without performing evaluations of the party whose reputation is at stake. Although Standard & Poor's and Moody's serve as independent assessors of debt quality, and thus may be seen as performing a monitoring function, their primary function might rest not in investigating issuers, but simply in attesting to the fact that the issuer was willing to undergo the rating process (at least where issuers request ratings). Potential creditors might not trust information transmitted directly by debtors and rarely will have the opportunity or expertise to evaluate even credible information. They may, however, attribute high reputational quality to firms that are willing to present the information to third parties (the rating agencies) that presumably have the expertise to evaluate debt and that have the capacity to transmit the information to a broader population, some members of which will be able to evaluate quality.²⁰

These features, however, reveal two limitations on the use of intermediaries to solve the problem of reputation. First, signaling will not always be feasible. The new trader who seeks to signal quality may, by virtue of being relatively unknown, be less susceptible

20. Conversely, the reputations of experts may suffer when they fail to discover or report activities that indicate low-quality. Consider the current situation of Arthur Andersen, which lost longstanding clients such as Delta Air Lines after it allegedly was involved in accounting defalcations at Enron.

to evaluation even by a "professional" arbiter until it has entered multiple transactions. Unlike a producer, whose quality of goods can be evaluated by experts even before it begins selling, or a purported bond or stock issuer whose financial condition can be assessed and certified, a retailer who desires to enter long-distance transactions faces difficulty generating a reputation for trust that can be appraised until it has actually performed such contracts successfully.

Second, signaling through intermediaries is itself costly. Thus, it may have limited application in the very environment of low-value transactions in which it could otherwise serve as a solution to the problem of legal unenforceability. Consider, for example, the market for sports cards, which exhibits characteristics of both small value and geographic distance. Until recently, transactions in such cards were relatively localized and occurred between friends, at "bricks and mortar" stores that specialized in such goods, or at shows that attracted local buyers and sellers. These transactions were face-to-face and allowed inspection of merchandise prior to sale. One would expect localized transactions to be the norm in this market, since the small value of the transaction makes the efforts that attract distant traders, such as advertising or transportation to a new market, not worth incurring. With the advent of the Internet, however, sports card sales among strangers have the potential to become commonplace.²¹ Obviously, however, so does the opportunity for post-contractual dissatisfaction. A purchaser of a card advertised as being in "near-mint" condition would be disappointed to discover on arrival of the card that it was printed off-center or had a frayed corner. Nevertheless, the purchaser might have little recourse if payment had already been made. A buyer of a card that cost \$10, or even \$100, would not likely institute legal action against a distant seller, as the costs of obtaining recovery would be prohibitive, even if the probability of recovery were high.

The desire to take advantage of potential markets for trading sports cards has generated the development of intermediaries who grade the quality and condition of a card offered for sale.²² These intermediaries, however, are unlikely to be used to evaluate low-value cards, as the appraisal cost may be a significant percentage of the value of the card. One provider charges from \$6.00 to \$50.00 per card, depending on the speed with which the grading is required and the number of cards submitted.²³

21. See, e.g., the Sports Card Depot website at <http://www.carddepot.com>.

22. Multiple third-party grading services have arisen. See, e.g., <http://www.beckett.com/help/ListQuestions.asp?SubjectID=6#55>; <http://www.sgccard.com/main.html>; <http://www.certifiedsports.com/> and <http://psagradecards.com/index.html> (last visited Aug. 28, 2002).

23. See <http://www.sgccard.com/new/fees.html> (last visited Aug. 28, 2002).

Even where the costs of sending reputational signals are low, the cost of receiving them may not be. Where markets are thick, those who wish to contract will have substantial choice among known traders, so that the intended recipient of reputational signals will have little incentive to inquire about prospective partners who are currently unknown. That is, traders looking for partners are likely to adopt satisficing strategies rather than make a comprehensive search of all possible partners. Where repeat play is unlikely, it will not be worth one's while to invest much in discovering information about a potential trading partner because the search costs will not be amortized over a large number of subsequent transactions. The result is that even where reputation may in theory be able to compensate for the inability of potential traders to enforce contracts, the costs of intermediation may be too great to take advantage of that option.

III. REPUTATIONAL INTERMEDIARIES IN ELECTRONIC COMMERCE

These issues have become more important as the theoretical possibility of trade among distant sellers and buyers has increasingly been transformed into reality. Again, this development is due to technological developments that promise to permit potential buyers to deal with a broader range of sellers. What has become known as business-to-business, or B2B, and business-to-consumer, or B2C, electronic commerce potentially offers significant savings in procurement by allowing firms to create on-line networks of suppliers and to engage in on-line direct sales to consumers. This process permits prompt price and quality comparisons and drives prices towards marginal cost. These arrangements promise greater efficiency because purchasers can better manage inventories and compare prices among suppliers.²⁴

The potential for these arrangements, however, is much more robust. To understand the reasons for this, some digression into the basis for expanding markets is required. Internet commerce ostensibly permits buyers and sellers throughout the world seamlessly to identify and transact with each other. On-line shopping with a seller in Seattle is as plausible for a buyer in Bangkok as it is for a buyer in Walla Walla. Notwithstanding this image of globally open markets, the geographic range for any given merchant is constrained by a number of factors. The cost of transportation between buyer and seller may render an otherwise appropriate sale infeasible. Language differences may raise negotiation costs. Cultural differences may increase the probability of misunderstandings and thus reduce the

24. See, e.g., *Internet Economics: A Thinker's Guide*, *The Economist* 64-66 (Apr. 1, 2000); *The Container Case*, *The Economist* 76-77 (Oct. 21, 2000).

desirability of transacting.²⁵ While the advent of international delivery networks can reduce transportation costs, language and cultural differences have remained. New computer languages, however, promise to reduce, if not eliminate, these obstacles to trade by expanding the capacity of distant buyers and sellers effectively to find each other and to contract in common terms through Internet commerce. The advent of Extensible Markup Language, or XML, is expected to permit the computers of buyers and sellers to exchange "structured" information, that is, information that contains both content and some indication of what role that content plays (for example, whether the content refers to text, headings, database tables).²⁶ The attraction of XML is twofold. First, it allows exchange of much more information over the Internet. Whereas earlier computer languages were written to describe how data on the page was to look (e.g., in a column or boldfaced), XML is written to allow the programmer to say what the information is (e.g., price, shipping option, color). In this way, programs can recognize documents as customer orders or invoices and tell the computer what to do with the document.²⁷ Second, XML accommodates Unicode, a character-encoding standard that supports the display of different alphabets required for display of texts in multiple languages, so that, for instance, information written in Japanese can be read in French. The result is the easy exchange of information across jurisdictional and cultural boundaries.²⁸

While these technological developments certainly help to overcome previous barriers to trade among distant parties, that very possibility increases other obstacles. The possibility of expanding markets, especially where low-value transactions are concerned, increases the ability of each party to act opportunistically in the transaction. The enforcement costs of these long-distance transactions are high and the expanded range of markets to buyers and sellers diminishes the necessity for repeat play with the same trader. Thus, it should not be surprising that claims of Internet fraud predominantly involve Internet auction sales and low-value transactions. According to the Internet Fraud Complaint Center, a partnership between the Federal Bureau of Investigation and the National White Collar Crime Center, 64.1% of all claims of Internet

25. See Clayton P. Gillette, *Interpretation and Standardization in Electronic Contracts*, 53 SMU L. Rev. 1431 (2000).

26. See Norman Walsh, *What is XML?* (Oct. 3, 1998) available at <http://www.xml.com/pub/98/10/guide1.html> (last visited Aug. 28, 2002).

27. See, e.g., Jon Bosak & Tim Bray, *XML and the Second-Generation WEB*, Scientific American 89-90 (May 1999).

28. *Id.* at 91.

fraud in a six-month period involved online auctions, and 83 percent of the cases involved amounts less than \$1000.²⁹

Even where transactions are completed smoothly, the increased competition permitted by expanded markets hinders the development of long-term relationships in which reputation between specific parties can be generated and trust developed. A buyer who can easily compare prices and quality with multiple sellers may be less reluctant to make purchases from a stranger than a buyer who must incur significant costs in identifying and communicating with replacement sellers.

While the diminution of long-term relationships may be seen as a cost of electronic commerce, there are offsetting benefits (and for those to whom the costs are excessive, of course, there is no requirement to avoid ongoing relationships). Most obviously, increased numbers of buyers and sellers should generate additional competition and thus reduce the costs of procurement. The very characteristics of easy exit and high enforcement costs in expanded markets, however, make transactions more vulnerable to strategic behavior by traders. Perhaps that is one reason why B2B auctions have proven less popular than predicted, as firms continue to do business through long-term contracts that promise steady sources of supply with partners who have developed longstanding relationships.³⁰ While spot market purchases may allow traders to take advantage of market price shifts, potential traders may be wary of utilizing available technology in the absence of mechanisms that engender trust with distant partners. The costs of traditional substitutes for enforcement, e.g., documentary transactions, may be too high if prices of goods are already competitively driven to equal marginal cost. The development of trust, therefore, may depend on the availability of a low-cost substitute for enforcement. Again, reputation comes to mind. The issue that remains is whether reputation can be communicated either by traders or intermediaries in a manner that makes technologically feasible contracts commercially feasible as well.

One plausible mechanism for communicating reputation at low cost would be to use the same technological intermediary that permits communication between distant buyers and sellers also to provide a forum for information about the trading partners. In short, the Internet service that facilitates transactions between prospective

29. See National White Collar Crime Center & Federal Bureau of Investigation, Internet Fraud Complaint Center, Six-Month Data Trends Report: May-November 2000, available at <http://www1.ifccfbi.gov/strategy/6monthreport.PDF> (last visited Aug. 28, 2002).

30. See *The Container Case*, *The Economist* 76 (Oct. 21, 2000).

buyers and sellers could also allow postings of parties' prior experiences with trading partners who sought to take advantage of that service. In this manner, buyers and sellers who were seeking to transact with each other through that entity could simultaneously use the forum to determine the reputation of a potential trading partner. Given the diffuse nature of the buyers and sellers in these markets, having the same party offer both services could significantly reduce the costs that would otherwise serve as obstacles to trade. Of course, true cost reduction occurs only if the information that the intermediary seeks to provide is credible.

Notwithstanding the novel setting, these are not new problems in commercial transactions. When commerce first went international, potential traders faced similar issues. Commercial parties who sought to enter new markets were unknown by potential partners, enforcement costs were high, exit was easy, and repeat play was unlikely. Historians of commerce indicate that medieval trade nevertheless developed broadly. Champagne fairs featured parties from distant jurisdictions against whom redress through legal intervention was difficult. Bruce Benson describes the conditions that had to be overcome in order to allow cross-boundary trade to flourish:

One consequence of (and simultaneously, one impetus for) the increased productivity in agriculture and the urbanization which followed was the emergence of a class of professional merchants. There were significant barriers to overcome before substantial interregional and international trade could develop, however. Merchants spoke different languages and had different cultural backgrounds. Beyond that, geographic distances frequently prevented direct communication, let alone the building of strong interpersonal bonds that would facilitate trust. Numerous middlemen were often required to bring about an exchange, including buyer, seller and shipping agents. All of this, in the face of localized, often contradictory laws and business practices, produced hostility towards foreign commercial customs and led to mercantile confrontations.³¹

These barriers could be overcome by the development of a mechanism for policing reputation and making information available to prospective traders. The common solution was for the buyer and seller involved in a trade to employ the intermediaries who matched them also to serve as the forum for information about the

31. Bruce Benson, *The Spontaneous Evolution of Commercial Law*, 55 So. Econ. J. 644 (1989), reprinted in Klein, *supra* note 12, at 168-69.

performance of their trading partners. The best-known example involves creation of the private Law Merchant, replete with specialized judges and informal procedures that facilitated expeditious resolution of commercial disputes without the intervention of the state. Because the state was not involved, some other centralized mechanism was necessary to transmit reputational signals to the relevant merchant community. Once reputational signals were received, members of the community could respond by ostracizing those found to have violated industry norms. The effectiveness of those sanctions meant that aggrieved parties were encouraged to make claims and the "judges" who heard the claims had the ability to broadcast outcomes to the relevant merchant community.³² This was accomplished through a participatory process in which merchant court judges were members of the trade within which the dispute arose.

Early international traders could also self-police through professional organizations, membership in which was crucial to participation in the trade. Avner Greif, for instance, reports that eleventh-century Mediterranean traders overcame information asymmetries about trading partners by using agents who were members of a coalition that could police constituents and who implicitly contracted not to deal with any constituent found to have acted dishonestly while operating for another coalition member.³³ Just as merchant fairs in centralized locations permitted exchange of information as well as goods, these agents could serve as a clearinghouse about the reputation of actors as well as for the transactions that sellers and buyers would be willing to enter once the veil of distrust dissipated.

IV. FEEDBACK MECHANISMS IN ELECTRONIC COMMERCE

Several centuries later, similar informational gaps among geographically distant traders have generated similar solutions. Perhaps the best-known example is the feedback mechanism employed by eBay, the on-line auction website. This mechanism permits both bidders and sellers to post information about their recent transactions, and thus purports to give potential subsequent traders a basis for determining whether they wish to enter into a contract with a particular party. Other websites use similar systems for registering levels of customer satisfaction. For instance, eopinions.com³⁴ allows

32. Klein, *supra* note 12, at 172.

33. Avner Greif, *Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi Traders*, 49 J. Econ. Hist. 857 (1989), reprinted in Klein, *supra* note 12, at 137.

34. See <http://www.eopinions.com> (last visited Aug. 28, 2002).

users of a variety of goods and services to post reviews of their experiences. Categories include autos, colleges and universities, home and garden, restaurants, and electronics. Users can create a "Web of Trust" in which they indicate whose reviews they find useful. As a result, the website allows users to customize a cohort of credible informational intermediaries. Amazon.com similarly allows website users to write reviews and then allows other users to indicate whether the review was helpful. As a result, a reviewer may develop a reputation measured by the comments of other users. Listen.com allows users to download music, but also to write reviews of and to comment on individual artists and works.³⁵

eBay, however, provides what is probably the most elaborate and interactive system. It works as follows. One who enters the eBay website³⁶ is given a choice of categories in which to buy or sell an item. Assume, for instance, that a potential buyer clicks on "Books" and then on "First Editions" in the search for a rare book. A click on a particular book that may be of interest generates information about that book, and includes the "user ID" of the seller and a seller rating. Seller ratings consist of "stars" of different colors assigned to repeat sellers on eBay's website. These stars reflect the "Feedback Profile," or rating, that the seller has earned by accumulating points based on comments from other eBay users about the seller's contractual performance. One point is assigned for a positive comment, no points are awarded for a neutral comment, and one point is deducted for a negative comment. For instance, in a search I performed while researching this article, the seller with the user ID "Flatsigned" was selling a first edition of "To Kill A Mockingbird." Flatsigned had earned a Feedback score of 371. With an additional click, one could view the comments that generated this score. The comments consisted of 374 positives, 2 neutrals, and 3 negatives.³⁷ If a complaint about another user is registered, its presence in the list of comments is highlighted by the addition of the term "Complaint" in red letters. Positive comments are accompanied by the highlighted term, "Praise," in green letters.

Sellers, in turn, can comment on their buyers, who are similarly rated through points and colored stars. An eBay user who acts as both buyer and seller in different transactions will have a total rating that reflects all comments. For instance, one of the commentators on Flatsigned was 1eaglelady. 1eaglelady was obviously someone who spent significant time dealing with other users of eBay. She had a

35. See <http://www.listen.com> (last visited Aug. 28, 2002).

36. See <http://www.eBay.com> (last visited Aug. 28, 2002).

37. There were actually 419 positives. eBay counts only those comments that are identified as coming from "unique users."

turquoise star rating (Feedback Profile of 100 to 499) consisting of 156 positives and no negatives. Comments revealed satisfaction with her as both a buyer and a seller, indicating that she played both roles in her participation on eBay.

An eBay user has an opportunity to respond to a comment made by another user. Thus, if one party made a negative comment about a second, the latter would be able to reply. For instance, a book purchaser complained that the seller had charged for shipping and handling. The seller responded, "ITEM SAYS SH charges = SHIPPING AND HANDLING CHARGES SO WHAT IS THE COMPLAINT!!"³⁸

Given the anonymity of the Feedback Forum, prospective eBay users may be skeptical of a comment made about a buyer or seller, because they do not know whether the commentator is idiosyncratic. If I find that a prior buyer has made a negative comment about a seller from whom I am contemplating buying, I may want to determine whether the prior buyer likely suffered what I would also consider to be a transactional breakdown or was just a chronic complainer or a spiteful participant. A system that precluded distinctions between bona fide claims of misfeasance and spite or idiosyncratic expectations would generate too much noise to be of great value. eBay helps to clarify the signal by allowing users to view all comments made by a particular commentator. For instance, Crixus left a negative comment about a seller of a painting. But Crixus, who obviously does lots of business through eBay, left a total of 539 comments, almost all of which were positive. There is little reason to think that this user's occasional negative reaction was a result of some idiosyncratic quibbling.

Many of these features suggest that eBay's feedback system, which the firm assiduously updates and improves, has overcome significant costs in generating reputational information that facilitates trade. It serves as a forum in which others can exchange reputational information at low cost. It is, in short, the twenty-first century equivalent to agents who served as reputational intermediaries at Champagne fairs. High ratings may serve as the functional equivalent of brand names, allowing potential traders to sort reliable from unreliable trading partners.³⁹ Nevertheless, I want

38. Complaint posted by purchaser abchehe (91) on Aug. 2, 1999 and response by seller booker17, available at <http://cgi2.eBay.com/aw-cgi/eBayISAPI.dll?ViewFeedback&userid=booker17&page=34&items=25> (last visited Oct. 3, 2002).

39. See Peter Kollock, *The Production of Trust in Online Markets*, available at http://www.sscnet.ucla.edu/soc/faculty/kollock/papers/online_trust.htm (last visited Aug. 28, 2002).

to raise some questions about its efficacy and offer some explanations for why it might not provide a complete alternative to the threat of contract enforcement as a means of reducing distrust.

The information that eBay provides appears to be heavily skewed in a manner that limits its utility. This possibility is evident from the ratio of negative to positive comments. The ratio of negative comments in Flatsigned's case, less than 1 percent, is by no means unusual. Indeed, negative ratings are rare.⁴⁰ Business Week recently reported that more than 99 percent of registered comments are positive.⁴¹ In perhaps the most thorough analysis to date of eBay's Feedback Forum, Paul Resnick and Richard Zeckhauser report that feedback provided by buyers is 99.1 % positive, 0.6 % negative, and 0.3 % neutral. Feedback provided by sellers was 98.1 % positive, 1.6 % negative, and 0.3 % neutral.⁴² These numbers at least raise the possibility that comments suffer from a selection bias that causes them to deviate from the actual experience of users.

It is not clear, however, that the Feedback Forum fails accurately to reflect the experiences of those who use eBay. One would anticipate that most online transactions, like those that take place face-to-face or through more traditional long-distance channels, are concluded without complaint. Thus, we would expect there to be few opportunities for anyone to create a legitimate negative comment. Moreover, the very existence of the Feedback Forum may have implications for the people who participate as buyers and sellers. One would imagine that untrustworthy buyers and sellers would quickly develop idiosyncratically negative reputations that would drive them off the eBay site, as others would refuse to deal with them. Thus, one might actually believe that, on balance, eBay participants are *more* trustworthy than buyers and sellers generally, since they can more readily be ostracized than sellers and buyers about whom reputational information can less readily be transmitted. Business Week appears to accept that proposition, as they report that the fraud rate on eBay

40. There are exceptions. One book seller earned a rating of 16, consisting of 21 positive comments, 1 neutral, and 5 negatives. See <http://cgi2.eBay.com/aw-cgi/eBayISAPI.dll?ViewFeedback&userid=tjbooks0813> (last visited Aug. 28, 2002).

41. See *The People's Company*, Business Week (Dec. 3, 2001) available at http://www.businessweek.com/magazine/content/01_49/b3760601.html [hereinafter "*The People's Company*"].

42. Paul Resnick & Richard Zeckhauser, *Trust Among Strangers in Internet Transactions: Empirical Analysis of eBay's Reputation System*, at 11 (Feb. 5, 2001) (working paper for NEBR workshop) [hereinafter "Resnick & Zeckhauser"], available at <http://www.si.umich.edu/~presnick/papers/ebayNBER/index.html> (last visited Aug. 28, 2002).

is one-ninth that of credit cards,⁴³ though it is by no means clear why fraud should be the standard of dissatisfaction or why credit card fraud in general is the proper baseline for comparison.

Resnick and Zeckhauser provide some, but relatively weak, support for the proposition that eBay works, invisible hand-like, to eliminate untrustworthy actors. They note that buyers and sellers with relatively little experience suffer a higher rate of neutral and negative comments. For instance, sellers who received 0 to 9 positive comments received an average of 2.83% neutral or negative comments. The percentage of negatives declines to 1.25% for sellers with 10 to 49 positives, 0.95% for sellers with 50 to 199 positives, and 0.79% for sellers with 200 to 999 positives. A similar decrease exists with respect to buyers.⁴⁴ Initially, this reduction of negatives with experience seems consistent with an optimistic story about a working market that drives out bad competitors. But the story becomes more complicated because the most experienced actors (both buyers and sellers), those with more than 1000 positives, suffer a sudden jump in the percentage of neutral and negative comments. In the case of both sellers and buyers the most experienced actors have a higher percentage of negatives than any group with more than 50 positives.⁴⁵ This hook-shaped curve suggests that some actors who perform in a manner that generates a relatively significant number of negative ratings continue to survive in the marketplace.

The result of these findings is a somewhat noisier reputational signal than the rosy story of a self-correcting market suggests. Some of the reasons for this conclusion are simply intuitive. Reputation is relevant only for repeat players. An eBay user who wished to exploit the system might sell or buy on an isolated occasion and thus avoid creating a significant reputation, whether positive or negative.⁴⁶ The non-repeat player is not driven out of the marketplace by reputational sanction; he or she simply has no interest in continuing to participate and thus is at the endgame point when reputation is irrelevant. While the absence of a substantial reputation may decrease the market for an occasional seller's goods, or make a seller reluctant to deal with an occasional buyer, remaining participants may be sufficient to make it worthwhile for the occasional trader to participate. For instance, an untrustworthy but occasional buyer may win auctions through bids so

43. *The People's Company*, *supra* note 41.

44. Resnick & Zeckhauser, *supra* note 42, at 13.

45. *Id.*

46. In theory, sellers could also overcome negative reputations by trading under multiple pseudonyms. eBay has addressed this issue by requiring new sellers to provide identification (in the form of a credit card) which increases the costs of changing identities without detection. If a user changes his or her UserID, eBay reveals the prior names that the party has used.

high as to overcome the seller's distrust, and be indifferent about reputational effects from nonpayment or late payment if he or she does not intend to participate in subsequent auctions.

Moreover, the informational content of the participants' comments seems low, potentially too low to assure that actors who fail to meet contractual expectations are ostracized. Comments may be roughly classified as positive or negative, but the specific remarks left by participants rarely provide more precise distinctions. Indeed, they often appear to be highly routinized in ways that suggest that the poster of the comment is making few distinctions among trading partners. For instance, of the 546 Feedback Comments left by Crixus as of January 24, 2002, the vast majority said the same thing: "A pleasure to deal with. Thanks again." This type of comment creates a binary evaluation (good/bad, positive/negative, pass/fail) rather than a highly tailored system that allows distinctions among actors. It also suggests that Crixus, likely a commercial repeat player on eBay, is not primarily interested in conveying useful information to subsequent traders with his or her trading partners.

If Crixus is not trying to convey useful information, the motivation for his postings may be more self-interested. One hypothesis is that Crixus is employing "cheap talk" favorable to those with whom he has dealt in order to induce his trading partners to return the compliment, thereby increasing his own Feedback Forum rating. This observation about user strategies raises additional questions about the potential selection bias on the Feedback Forum. Other self-interested strategies similarly support the proposition that the high percentage of positive comments reflects such a bias. Consider, first, a crucial distinction between the use of a forum such as eBay and its medieval precursors. In both cases, registering a complaint creates a public good insofar as other potential traders will benefit from the report of exemplary conduct or egregious misconduct. As with any public good, production of reputational information is unlikely to occur at a socially optimal level. Production is costly to the producer and benefits others. Yet the public nature of the production means that the producer cannot capture the value of the benefits from the other beneficiaries. Hence, the producer will be likely to underproduce (where, as in the case of information, personal costs exceed social benefits) or overproduce (where personal benefits of production exceed social costs). In the case of a closely-knit group of identifiable traders, however, these tendencies may be countered by expectations of reciprocity within the group (I should report misconduct because I will benefit from reports of others), familiarity with other group members (I would not want others whom I know to suffer the same fate that I have suffered), and the capacity of the group to motivate the disclosure of private

information about others' reputations by creating sanctions for silence (I will disclose information even though only others benefit because if those others subsequently discover that I did not disclose, they will be more reluctant to deal with me). These characteristics all depend on repeat play and common membership, features indicative of medieval traders, but not of traders in a relatively broad-based, anonymous marketplace such as eBay.

Indeed, the public goods characteristics of reputational information in a broad-based, anonymous marketplace raise the question of why we would ever expect posting of credible information. The personal costs associated with creating a comment, either positive or negative, seem to outweigh their personal benefits insofar as those who write comments are simply conveying information, gratis, to strangers. Public goods are frequently produced as byproducts of private goods, such as when a defense contractor manufactures a military aircraft for profit and thereby contributes to the national defense. But analogues are difficult to find in the context of posting reviews of a buyer or seller. eBay does not provide any payment for the reviewer, although at least one other website provides small payments based on the number of times a user's review is read. These payments, however, are unlikely to reach a sufficiently significant amount to constitute a major motivation for writing reviews.⁴⁷

In light of the diffuse and impersonal nature of Internet sales, the personal benefit that one might obtain from reciprocity or membership in a group with an ethos for reporting seems unlikely to apply to the writing of reviews. Thus, one must ask, why do eBay participants leave comments, and what, if anything, do those motivations tell us about the quality of comments that they post?

Given that posting comments imposes costs on the poster and confer benefits on subsequent, anonymous users of the system, one might initially think that comments will be left only by users with idiosyncratic experiences or preferences. For instance, one initially plausible explanation is that posting only occurs in bipolar situations, i.e., when the participant has had an extremely positive or negative

47. Eopinions.com pays from one to three cents per qualified page view. "Royalties," however, are only redeemable once they reach \$10.00. Eopinions.com also offers additional incentives for reviews. Additional payments can be made based on the number of times a review is read and relied on by other users. See <http://www.epinions.com/help/index.html?show=earning> (last visited Aug. 28, 2002). The home page provides information about a "Featured Reviewer," complete with picture. It also permits creation of a "Web of Trust" through which users indicate other users whose opinions they read and trust. See http://www.epinions.com/help/index.html?show=web_of_trust (last visited Aug. 28, 2002).

experience. In these cases, the poster might find it worthwhile to provide a reward (in the case of a positive experience) or a penalty (in the case of a negative experience) that she believed was appropriate. But if feedback reflects only cases of extraordinarily good or bad service, then it is by no means clear that the information is reliable for the average trader. Of course, a trader who consistently provided service above or below expectations might be relied on for better or worse service on average than competitors. So nonrepresentativeness may not be as much of a problem as the "bipolar" explanation suggests. The high percentage of positive comments, however, seems somewhat inconsistent with this explanation. Recall that the commercial markets comprising diffuse, impersonal actors with opportunities to avoid repeat play have typically been seen as so vulnerable to commercial misconduct as to require the development of institutions of trust. That vulnerability is traditionally considered the basis for the development of the Law Merchant and of earlier forms of reputational intermediaries.⁴⁸ It would be quite exceptional if contemporary markets with those same characteristics were immune from similar episodes of strategic behavior. At the very least, one might want to explore whether some alternative explanation accounted for the systematic tendency in the direction of positive comments.

But there is a different reason for rejecting an explanation that depends on "extraordinary" service. The intuition that feedback will be an undersupplied public good appears inconsistent with the high volume of feedback on eBay. Indeed, the amount of feedback that users post seems nothing less than astonishing. Resnick and Zeckhauser find that buyers comment on sellers for 52.1 % of the items sold, and sellers comment on buyers 60.6% of the time.⁴⁹ What motivation accounts for such high participation levels in the production of public goods?

Perhaps the calculus underlying the "public goods" explanation is simply erroneous. That is, conceivably participation in the creation of feedback constitutes a benefit to the poster rather than a cost. Through participation, one obtains membership in a community, consistent with consumption benefits explanations of voting.⁵⁰ Indeed, it appears that eBay works hard to construct a community among its members.⁵¹ Full membership may entail participation in

48. See text accompanying *supra* notes 31-33.

49. Resnick & Zeckhauser, *supra* note 42, at 11.

50. See, e.g., Albert O. Hirschman, *Shifting Involvements* 86 (1982); Clayton P. Gillette, *Plebiscites, Participation, and Collective Action in Local Government Law*, 86 Mich. L. Rev. 930, 951 (1988).

51. eBay, for instance, fosters a sense of 'community' by urging participants to give to charities through eBay, promulgating 'community values,' and forums in

the norm of generating information that is useful to other members, just as medieval traders were encouraged to report reputational defalcations.

Resnick and Zeckhauser similarly suspect a “quasi-civic duty” to comment on a trader with whom one has dealt.⁵² But this explanation seems dubious, in part because it is difficult to reconcile a desire to be a good citizen with the kind of brief, routinized comments that characterize the Feedback Forum. Few would think that a civic duty of voting is satisfied by casting a vote without forethought and analysis of the issues, or that a civic duty of not littering is satisfied by throwing trash inaccurately in the direction of a garbage can. Brief, binary comments are arguably more like the latter examples than the former. To the extent they are not, as I suggest below, they do not necessarily translate into making reliable comments.

Resnick and Zeckhauser alternatively postulate a “high courtesy equilibrium” in which individuals undertake small-cost efforts to be courteous, even in non-repeat play situations. We are raised to avoid saying bad things about each other, and this norm may have infiltrated electronic commerce. This explanation is consistent with fairness explanations for what initially appears to be inefficient behavior. For instance, an actor may provide forms of compensation to others whose activity appears to have conferred a benefit on the actor, even though there was no explicit understanding that compensation would be forthcoming.⁵³ The donating actor simply perceives the compensation as a part of the “fair” price to pay for the good or service received. Perhaps of greater explanatory force, as illustrated by the case of Crixus, repeat-play participants may wish to create a norm of reciprocity that will enhance their own reputations. 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.⁵⁴ Brief but favorable comments on a trading partner induces that trading partner to provide a similar comment in return, a process that enhances the rating of both actors.

which members can chat and give or receive advice. See <http://pages.ebay.com/community/index.html> (last visited Aug. 28, 2002).

52. Resnick & Zeckhauser, *supra* note 42, at 5.

53. See, e.g., Elizabeth Hoffman & Matthew L. Spitzer, *Entitlements, Rights and Fairness: An Experimental Examination of Subjects' Concepts of Distributive Justice*, 14 J. Legal Stud. 259 (1985).

54. In some cases, buyers and sellers seem to be repeat players with each other and to provide reciprocal favorable comments. This process obviously does not help newcomers who do not expect to be repeat players, since traders are likely to treat repeat players more favorably than one-time traders. Indeed, to the extent that this behavior simply exhibits tit-for-tat strategies for the parties, it may be misleading to others.

While each of these explanations provides some basis for high participation rates in providing feedback, none of them supports the more important requirement that feedback provide credible information about buyers and sellers. Instead, these explanations entail that feedback will be skewed in favor of a disproportionate percentage of positive reviews. 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. The potential possessor of negative information, therefore, is unlikely to post the information. Retaliation explains at least some of the negative posting on eBay. Consider, for instance, the case of golfpoorly, a somewhat infamous user of eBay. Golfpoorly was featured in the popular press for the sale, subsequently cancelled, of an abstract painting that bore initials indicating that it might have been painted by an important artist.⁵⁵ Golfpoorly had previously sold multiple items on eBay under at least two names. When I checked, he had a rating of 11 consisting of 11 positives from unique users and no negatives.⁵⁶ Trading under the name of "advice," he had a rating of 141 consisting of 142 positives and one negative.⁵⁷ The one negative was registered by an individual with the user ID dbest90210@aol.com. That comment was registered on January 17, 2000 and stated, "BEWARE: This guy sells 'AS IS' FAILS to offer disclaimer & REFUSES TO REFUND FFFF." "Advice" replied by stating "LIE! Item was EXACTLY as described, and I OFFERED refund minus costs-HE REFUSED."⁵⁸ "Advice," however, did not stop there. On January 18, 2000, "advice" posted the following comment on the Feedback Forum page relating to dbest90210@aol.com: "SELLERS BEWARE!! Buys on speculation, DEMANDS refund if can't resell at profit." dbest90210@aol.com responded: "FACT: We only buy. This TWIT lies, refuses to refund & claims to be an ATTORNEY."⁵⁹

55. See, e.g., Saul Hansell & Judith H. Dobrzynski, *ebay Cancels Art Sale and Suspends Seller*, N.Y. Times, May 11, 2000 at A1.

56. See <http://cgi2.ebay.com/aw-cgi/eBayISAPI.dll?ViewFeedback&userid=golfpoorly> (last visited May 12, 2000).

57. See <http://cgi2.ebay.com/aw-cgi/eBayISAPI.dll?ViewFeedback&userid=advice> (last visited May 12, 2000).

58. See <http://cgi2.ebay.com/aw-cgi/eBayISAPI.dll?ViewFeedback&userid=advice&page=2&items=25> (last visited May 12, 2000).

59. See <http://cgi2.ebay.com/aw-cgi/eBayISAPI.dll?ViewFeedback&userid=dbest90210@aol.com&page=2&items=25> (last visited May 12, 2000). Resnick & Zeckhauser similarly find a high likelihood of retaliation. They conclude that there is a strong correlation between negative feedback left by the buyer and seller in a troubled transaction. Resnick & Zeckhauser, *supra* note 42, at 19.

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. Third party users cannot easily adjudicate between the anonymous disputants in online altercations. Posters whose negative comments are met with accusatorial responses are as likely to be considered wrongdoers as not. As a result, even those with credible information have less incentive to post it, since the information on which they base their claims cannot readily be observed or verified. Users of the system will not know where the truth lies and thus will not be able to rely on either set of claims. Short of claims of fraud, which eBay will investigate, there is no equivalent to a merchant court to determine the bona fides of the disputants, to punish those who make inappropriate accusations, or to publicize the true identities of those who misbehave. The result is a skew in favor of positive feedback, which arguably reduces the reliability of the signal transmitted by the Feedback Forum.

A final concern about the high level of noise in eBay's signal emanates from eBay's own instructions about making comments. These instructions invite positive comments, but discourage negative ones. The site contains a series of Frequently Asked Questions relating to use of the feedback mechanism. The answers to questions concerning the type of feedback that should be left subtly distinguish between positive and negative feedback.⁶⁰ Positive experiences are to be rewarded. Negative experiences, on the other hand, are to be worked out initially with the other party. Only after that process fails does eBay suggest the disappointed party "may" register a negative comment.

Discouragement continues when a user actually decides to leave comments. At least in earlier iterations, eBay actively warned users of potential adverse consequences of posting negative information. Assume that I wanted to register a comment about a seller after concluding a transaction as the successful bidder for a book she was selling.⁶¹ If I decided to leave feedback, I would use a form that allows me to make a comment of up to 80 words. On that same form,

60. See <http://pages.ebay.com/help/basics/f-feedback.html#2> (last visited May 5, 2000). The answer reads:

If you were treated well by a buyer or seller, reward him or her with a positive comment. If you were treated poorly, try to resolve the problem first by contacting the other person. Most problems can be corrected by improving communication between buyer and seller. If things are still not resolved, you may leave a negative comment.

61. Under the current system, sellers and buyers can only post comments about each other with respect to a transaction they have completed with each other. Previously, any user could leave comments about another user at any time.

against a prominently colored background, appears the following message from eBay:

You are responsible for your own words. Your comments will be attributed with your name and the date. eBay cannot take responsibility for the comments you post here and you should be careful about making comments that could be libelous or slanderous. To be safe, make only factual, emotionless comments. Contact your attorney if you have any doubts. You will not be able to retract or edit Feedback you left. eBay does not remove Feedback unless there is an exceptional circumstance. Think before you leave Feedback. Please try to resolve any disputes with the other party before publicly declaring a complaint.⁶²

The warning is stated in broad strokes that seem to overstate the circumstances in which liability would attach. There is, for instance, no indication that truthful comments are not actionable nor that statements of opinion are not defamatory. At least in an earlier iteration of the Feedback Forum, the language concerning "exceptional circumstance" was highlighted to provide a link to eBay's Feedback Removal Policy.⁶³ That statement informed the user that, under the federal Communications Decency Act, eBay is immune from liability for remarks made by users on its website,⁶⁴ but that the users themselves can be held legally responsible for damages to another party's reputation if a court were to find the comments defamatory. That page, in turn, permits the user to review a mini-treatise on the law of defamation by clicking on the appropriate link.⁶⁵

The threat of actions for defamation may serve as a powerful disincentive to the posting of negative information about other users of the system. As noted above, those who post information will likely obtain little value from the information they post. They may altruistically or out of a limited sense of duty or fairness provide a public good for subsequent users of the system. Alternatively, they may, collusively or in hopes of reciprocity, offer positive comments

62. The relevant page is unique for each user about whom feedback is to be entered. The generic website address is <http://cgi2.eBay.com/aw-cgi/eBayISAPI.dll?LeaveFeedbackShow&useridto=<USERNAME>>.

63. See <http://pages.eBay.com/help/community/fbremove.html> (last visited Aug. 28, 2002).

64. 47 U.S.C. § 230 (2000). While portions of the Communications Decency Act were invalidated in *Reno v. American Civil Liberties Union*, 521 U.S. 844, 117 S.Ct. 2329 (1997), the portions regarding the liability of those who publish information provided by others were not affected.

65. See <http://www.abbottlaw.com/defamation.html> (last visited Aug. 28, 2002).

about other traders. Each of these explanations, however, would be undermined by posting negative information. Some of these reasons depend on the low costs of posting feedback. Others rely explicitly on a tit-for-tat exchange in which each participant can improve its own rating by inviting reciprocal feedback. Thus, these reasons for posting disappear when posting entails threats of legal action or vengeful retaliation that raises the costs for the poster. The detailed eBay warnings about defamation indicate that negative comments are not cheap. The result is that negative comments are likely to be registered with a lower frequency than positive comments, relative to the actual experiences of buyers and sellers.

There is some reason to doubt the existence of a serious selection bias, notwithstanding the theoretical issues that I have raised. Given the popularity of eBay, one might imagine that feedback ratings would be ignored if they were unreliable. Yet there is some evidence that users of eBay believe that Feedback Forum ratings accurately predict the probability that contracts will be concluded successfully. Resnick and Zeckhauser find that the effects of the Feedback Forum rating on price was indeterminate. But they concluded that more positives and fewer negatives and neutrals did affect the probability of a sale.⁶⁶ In a study of 451 auctions on eBay, Cynthia McDonald and V. Carlos Slawson found a basis for a stronger conclusion. They discovered a positive correlation between prices and the quantified measure assigned to the seller's reputation on eBay.⁶⁷ Sellers with higher reputations for fungibly described items (collector quality Harley-Davidson Barbie dolls) received more bids and higher prices than sellers with lower reputations.⁶⁸

One might conclude that participants in such auctions are sufficiently well-informed about the market that they would not distinguish among sellers unless the basis of their distinctions—Feedback Forum ratings—accurately reflected seller quality. There are, however, at least two reasons to question this conclusion. First, successful bidders might have believed 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. As I have suggested above, eBay invests significantly in persuading its users of the reliability of Feedback Forum ratings. It would be surprising if

66. Resnick & Zeckhauser, *supra* note 42, at 16.

67. Cynthia G. McDonald & V. Carlos Slawson, Jr., *Reputation in an Internet Auction Market* (Jan. 25, 2000) (working paper) available at http://finance.lsu.edu/academics/finance/faculty/slawson/Slawson_publications.html (accepted subject to minor revisions at *Economic Inquiry*) (last visited Aug. 28, 2002).

68. The mean winning bid was \$263.55, with a range of \$150 to \$380.

some people did not believe that the ratings included useful information. And the logic of the Winner's Curse suggests that those who are most likely to overvalue the information will win the auction, as they will be most willing to bid an amount that reflects the higher value they place on the information.⁶⁹ Thus, the fact that auction winners accept the reliability of high Feedback Forum ratings does not mean that those ratings are widely accepted as accurate.

Second, even if all Feedback Forum users systematically believe that the ratings convey useful information, that does not mean that the ratings convey an ideal amount of information. McDonald and Slawson indicate that there is a positive correlation between reputation and price. They do not 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.⁷⁰

Finally, the combination of incentives and warnings created by eBay suggests that it has potentially conflicting interests in the accuracy of its feedback mechanism. eBay should desire that the mechanism provide critical information about participants in its auctions, as critical comments may convey credibility. At the same time, eBay may be concerned that there not be too many negative comments. An abundance of negative comments about any trader might have spillover effects and imply that eBay traders generally have suspicious reputations. Thus, eBay may wish to encourage a sufficient percentage of negative comments to give the feedback mechanism some legitimacy, without encouraging so many negative comments to raise suspicions about the veracity of those who trade.⁷¹ Alternatively, eBay may have other incentives that do not reveal a desire to skew comments, but that inevitably have that effect. For instance, eBay may be concerned that it could lose its exemption from liability as the provider of an interactive computer service⁷² if it is too closely aligned with commentators, and thus want to publicize its independence.

69. See Richard H. Thaler, *The Winner's Curse: Paradoxes and Anomalies of Economic Life* (1994).

70. I am grateful to Alan Schwartz for this point.

71. eBay does monitor and remove from auction items that appear to be frivolous or fraudulent. See Thomas E. Weber, *Not Enough Elian? Get His Hair on eBay!*, Wall St. Journal, May 2, 2000 at B1 (recounting offer and removal of several items purporting to be related to Elian Gonzalez). On the possibility that informational intermediaries will frequently have incentives to skew the information that they provide, and that these incentives dilute their value as providers of objective information, see Mark R. Patterson, *On the Impossibility of Information Intermediaries*, available at <http://papers.ssrn.com/abstract=276968> (last visited Aug. 28, 2002).

72. See 47 U.S.C. § 230(d), (f) (1995).

My claim, then, is that there is something more dubious operating than Resnick and Zeckhauser's norm of courtesy.⁷³ 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, are not reflected.

Two caveats must be added to this conclusion. First, it may be that the absence of negatives means that those participants with high positives really do not deserve their ratings. But those with a substantial number of negatives possibly do. After all, if a significant number of participants are willing to overcome the obstacles to posting negative comments, the target of those comments is likely a true bad actor. Resnick and Zeckhauser rely on this phenomenon to suggest that participants may be willing to engage in "stoning."⁷⁴ Once one person has registered a negative comment about a trader, others may be more willing to "cast stones" as well. But this explanation relies on an assumption that subsequent stoners act on reliable information. That is possible, of course. 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. As Resnick and Zeckhauser conclude, "it would be desirable if stoning were reserved for behaviors that are deliberate rather than merely careless."⁷⁵ But if they are correct in observing a phenomenon of stoning, then there is no reason to believe that those who cast subsequent stones properly distinguish between the deliberate and the careless. It may simply be that participants who observe that their buyer or seller has previously received negative ratings are more willing to attribute bad behavior to that trader if anything goes amiss in their own transaction. Willingness to post a negative reaction, on Resnick and Zeckhauser's explanation, may result from herd behavior rather than from accurate perception of misbehavior. In short, the mere presence of multiple negatives may overstate a trader's low quality, just as the presence of multiple positives may overstate a trader's high quality.

An additional caveat emerges from the work of Chrysanthos Dellarocas. In a recent paper, he suggests that even a binary reputation mechanism, such as eBay's, may induce efficient market outcomes if parties act appropriately in response to imperfect

73. Resnick & Zeckhauser, *supra* note 42, at 18-19.

74. Resnick & Zeckhauser, *supra* note 42, at 22-23.

75. *Id.* at 22.

information.⁷⁶ Dellarocas creates a model in which sellers will be induced to advertise truthfully if buyers are lenient when they rate sellers (as I have suggested they will be), but buyers also strictly interpret reported results about sellers. That is, perfect information, and perfect reporting are not necessary to realize the efficiencies that could be obtained if those conditions existed. But even Dellarocas concludes that, while his results are plausible in theory, they depend on a set of assumptions that are fragile in the real world.

V. LEGAL REFORM AND REPUTATIONAL INTERMEDIARIES

What the Internet currently provides, therefore, is a technologically sophisticated system for generating trust among strangers that can expand trade, reduce transactions costs, and increase competition. To the extent that expansion of markets simultaneously raises opportunities for misconduct and creates concerns about performance quality, however, potential traders, wary of lemons problems, are likely to underutilize this technology. eBay and similar websites demonstrate the potential for curing the informational asymmetries by serving as reputational intermediaries. This, in itself, is no mean feat, and the efforts made by eBay to refine its Feedback Forum reveal its attention to the potential for further expanding the opportunities to solve reputational difficulties. Additional advances promise greater utility for long-distance transactions currently inhibited by fear of underenforcement. For instance, while eBay appeals largely to both consumers and merchants, other websites seek only to bring together distant commercial actors. FreeMarkets.com, conducts business-to-business online auctions for buyers of industrial parts, raw materials, commodities and services. FreeMarkets.com contends that they facilitate auctions by working with traders to select bidders to participate in each auction on the theory that "when it comes to industrial goods and services, not all suppliers are created equal."⁷⁷ FreeMarkets.com currently employs no feedback mechanism such as the one used by eBay. Arguably, use of such a mechanism would increase the willingness of traders to participate in online auctions, paying a premium or discount depending on the reputation of the seller or bidder, as indicated by comments provided by other market participants. Indeed, commercial actors might be even more willing

76. Chrysanthos Dellarocas, *Analyzing the Economic Efficiency of eBay-Like Online Reputation Reporting Mechanisms*, (Oct. 2001) MIT-Sloan School of Management Working Paper No. 4181-01, *available at* <http://papers.ssrn.com/abstract=289968> (last visited Aug. 28, 2002).

77. See <http://www.freemarkets.com/what-we-do.asp> (last visited Aug. 28, 2002).

than consumers to make appropriate comments, since those within the same industry might develop the ethos of reciprocity and obligation that facilitates comments.⁷⁸

Can legal doctrine facilitate this process? If the threat of defamation deters useful negative comment about online traders, then it is possible that changes in defamation law would have a salutary effect. After all, defamation privileges have long existed with respect to comments concerning public officials and public figures in order to generate more robust discussion that would increase public welfare. Since *New York Times Co. v. Sullivan*,⁷⁹ the Supreme Court has subordinated personal interests in reputation to competing social interests. Where defamatory statements are made with respect to public officials or public figures, a speaker is liable only for defamatory statements made with knowledge of their falsity or with reckless disregard of the truth.⁸⁰ These alternatives are gathered under what has become known as the “actual malice” standard. The justification for this contraction of liability may be justified in many ways, perhaps most tellingly in Justice Brennan’s invocation of the need for “robust political debate” as implicating “the central meaning of the First Amendment.” But that justification obviously has less to do with subsequent extensions of the higher fault standard to cases of non-political public figures.⁸¹ Instead, the contraction of liability for defamation appears implicitly to recognize the public goods nature of valuable information and the subsequent risk that it will be underproduced if production is susceptible to penalties. The traditional concerns about “chilling effects” essentially recognize that, given inherent ambiguity in the scope of actionable defamation, individuals will forebear from providing negative information where there is a risk that its provision may generate liability and potential providers cannot easily capture the benefits that the information confers on others.⁸² Hence, the broad privileges that have been applied in areas involving public officials and public figures essentially recognize that net social benefits may be obtained by subordinating an individual’s interest in reputation, even though that requires tolerating certain falsehoods about the individual. Indeed, that calculus applies even though the very

78. See Milgrom, et al., *supra* note 11. These actors may be considered to be less in need of formal feedback mechanisms since they already have trade associations through which they can exchange information. As electronic commerce expands the market for suppliers, however, localized trade associations are unlikely to have the capacity to generate sufficient information about a significant percentage of market participants.

79. 376 U.S. 254, 84 S.Ct. 710 (1964).

80. Restatement (Second) of Torts § 580A.

81. See, e.g., *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 94 S.Ct. 2997 (1974).

82. See, e.g., J. Hoult Verkerke, *Legal Regulation of Employment Reference Practices*, 65 U. Chi. L. Rev. 115 (1998).

existence of the privilege may increase the amount of false information that enters the market (political or otherwise), because increased immunity will induce speakers to be less wary of spreading falsehoods.

The question that remains is whether this same calculus can be made in the context of business reputation so that defamation of traders should also be subject to the "actual malice" standard. To date, the "actual malice" standard has not been extended to the commercial context. Indeed, the reputation of traders has been protected more jealously than the reputation of consumers.⁸³ But at least in those areas such as electronic commerce where reputational information can compensate for the difficulty of contract enforcement and create more efficient markets, the risk of falsehood may be outweighed just as much as in political contexts.

Indeed, it may be more appropriate to override protection for personal reputation in the commercial context than in the areas where broad privileges have already been accepted. The concern that overrides personal reputation in areas such as comment on public officials involves robust political debate; in the case of public figures, the concern appears to be the public's right to know and the ability of such figures otherwise to correct misimpressions.⁸⁴ These offsetting concerns require balancing one social objective against another. The diversity of interests in these situations (e.g., reputational accuracy v. political debate), however, may render the objectives incommensurable, or at least subject to different weightings that make comparisons contestable.

In the case of business reputation, however, the objectives being compared are more similar. Current defamation law can be justified as a mechanism that allows a firm to engage in market competition without fear that it will be penalized by negative misinformation that does not reflect the true nature of the business. In the absence of a broad defamation standard, one business might seek competitive advantage by falsely disparaging another. Business defamation law, therefore, serves the social function of ensuring robust economic

83. Many courts distinguish traders or merchants from "nontraders," or persons who are not traders or merchants and who are not engaged in vocations that require credit to conduct their business. See 99 A.L.R. 2d 700 (1965). In many jurisdictions, listing a nontrader as a debtor in a publication circulated among merchants is not per se libelous, though it would be if the target of the comment were a merchant. See, e.g., *Ragland v. Household Finance Corp.*, 119 N.W.2d 788 (1963) (if person alleging liable was not engaged in profession or employment where credit is essential a statement citing unpaid debt does not on its face render complainant unworthy of public trust); *Reese v. Haywood*, 360 S.W.2d 488 (1962) (no showing of actual damages at trial proving publication had damaged credit); *Harrison v. Burger*, 103 So. 842 (1925).

84. See *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 94 S.Ct. 2997 (1974).

markets through competition based on price and quality rather than on denigration of a trader's conduct. The objective of business defamation law, on this understanding, is to create incentives for the creation of accurate reputation, not simply to protect the business from negative comment.

This interest might be properly served by broad defamation liability, notwithstanding that it deters truthful derogatory comment, where traders operate within relatively narrow geographical ranges and trading is largely face-to-face. In this environment, the risk of false charges of misconduct could be severe, as they would be circulated within the trader's limited market. At the same time, it would be less necessary to tolerate falsehoods in order to generate reputational information, since trade within a confined area is more susceptible to traditional legal enforcement for which reputation is a substitute. The current (and forthcoming) commercial environment of electronic commerce, however, varies in two ways that may require a different balance. First, as I have argued, it depends more on reputational information as a substitute for costly enforcement. Second, it requires more incentives for the provision of information if a trader's reputation is to reflect accurately its dealings in the market. Each of these factors points to a need for greater toleration for negligent falsehoods. But that toleration is required to achieve in this context the same objective that heretofore was advanced by constraints on defamatory comment, i.e., the generation of reputational information that *accurately* reflects a trader's status.

None of this is to say that there are no serious competing considerations in favor of the current law of business defamation. Put aside the powerful interest in favor of personal reputation and consider only whether constraints on defamation will in fact serve reputational accuracy. Constraining liability does not necessarily encourage more truthful disclosure. At best it reduces disincentives to avoid negative disclosure and thus induces more comment. If the additional information is likely to be truthful, then that reduction may be appropriate. If, on the other hand, there is reason to believe that additional disclosure would tend to be false, because traders are less likely to be careful with their statements or can speak with greater immunity out of a desire for vengeance rather than for veracity, then the objective of reputational accuracy would not be served. Instead, we would simply be left with more noise in the system, as the mix of truthful and untruthful negative statements produces ambiguity. In that case, information would be less credible and less useful to potential subsequent traders. One might expect that ambiguity on the negative side would only counterbalance ambiguity on the positive side that currently exists as a result of skews against negative comments and the capacity of traders to "puff" their reputations

through reciprocal postings with repeat players.⁸⁵ That is an empirical question to which I have no response, other than to wonder whether we believe that 35 years of experience with constrained standards of defamation in areas concerning public officials and public figures has increased the percentage of falsehoods with respect to those parties. At best we can speculate as to whether the incentives that traders would have to make comments in the first instance would systematically induce them to make truthful or false comments.

Nevertheless, I am highly dubious that reform of defamation laws will have much effect in generating more accurate information in electronic commerce. The disincentives to convey negative information that emerge from potential defamation liability likely are swamped by disincentives from other sources that are less readily addressable through law. Recall that reputational intermediaries are necessary because the contracts at issue are not readily susceptible to legal enforcement. The parties are too distant and the value of the transaction too small to warrant incurring enforcement costs. But if that is the case, then it is also unlikely that the parties will litigate about defamation. Reputational harm done by defamation may exceed the value of the individual contract, but given that we are dealing with low-value contracts, it is plausible that even a trader who could demonstrate that she had lost multiple subsequent contracts as a result of a defamatory statement would still not prove sufficient losses to warrant the costs of litigation at all, much less of litigation in a distant jurisdiction.

Moreover, the threat of defamation liability likely does less to retard negative comments than informal sanctions such as retaliation, norms against making negative statements, and the discouragement of intermediaries such as eBay. And the incentives for positive comments, e.g., inducing reciprocity that enhances the reputations of both traders, or adhering to the norm that eBay creates of making positive comments as a form of reward, will likely introduce a selection bias in favor of positive comments regardless of the level of negative comments.

CONCLUSION

Commercial markets can achieve the efficiencies made possible by new technologies only if participants can solve the problems of distrust that are endemic among distant traders who have low exit costs or who engage in the low-value transactions that technology increasingly makes possible. Reputation can be a powerful means of assuring contractual performance, and may be particularly useful in

85. See *supra* note 50.

these environments where the threat of state-supported enforcement is weak. Technology can assist here as well, by offering a forum for reputational intermediaries. But technology cannot of itself provide the information necessary for credible reputation. That information can best be provided by the participants themselves. Yet those with the relevant information may have the least reason to convey it to others. If users are to play the role of reputational intermediaries, they must be willing to convey credible negative information as well as positive information. If there exists a systemic bias in favor of positive comments, then signals of reputation are likely to be so noisy or misleading as to undermine their credibility and utility as substitutes for contract enforcement.

The extent to which legal reform can address this issue is itself questionable. Legal reform can marginally reduce disincentives that emerge from fear of liability, by creating immunities against that liability. But if the potential reputational intermediaries and those who possess information have other self-interested reasons for skewing the information that they convey, legal rules may be less effective in ensuring the accuracy of the reputational signal.

