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SYMPOSIUM: TRUST RELATIONSHIPS PART 1 OF 2: TRUSTING AND NON-TRUSTING ON THE INTERNET

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SUMMARY:

... The Puzzle: The Internet is a wonderful innovation, allowing people around the world to communicate, trade, and obtain services. ... As compared to verification cost in real space, verification cost on the Internet is higher. ... Internet, and perhaps also real space, activities are policed by private sector institutions and professional gatekeepers. ... Not surprisingly, they are mostly the same mechanisms used in real space, which are adjusted to the new Internet environment. ... Benefits to shoppers on the Internet are also higher than in real space in terms of savings of time. ... Thus, both costs and risks for buyers (and some for sellers) on the Internet are higher than in real space. ... Internet businesses have followed the real space model, and formed societies whose main function is to gain the customers' trust. ... Both on the Internet and in real space, trustworthiness can evaporate on disappointing evidence. ... For a similar reason, the value of real space brand names has risen on the Internet. ... In some situations, enforcing the law against violations on the Internet may be as easy, or even easier, than enforcing the law in real space. ... In real space and on the Internet, trust and non-trust pose the same issues. ...

TEXT:

Introduction

The Puzzle: The Internet is a wonderful innovation, allowing people around the world to communicate, trade, and obtain services.

Convenient and rich in choices and opportunities, the Internet is tremendously attractive to buyers. Naturally, businesses are flocking to the Internet. The warning has been sounded that those who do not stake a claim in this incredible new communication medium will be left behind to perish. Yet, with all the enthusiasm, many buyers hesitate to take a serious plunge. Businesses are told repeatedly that they must obtain their customers' trust, yet find it more difficult to gain this trust in cyberspace than in real space. Trust has become a serious stumbling block to developing e-commerce (electronic commerce).

Why is trust so important? How does trust in cyberspace differ from trust in real space? And, if it is important, how can businesses become trusted? This article addresses these questions.

The discussion is framed in terms of the benefits, costs, and risks of trusting relationships, and the mechanisms that reduce the costs and risks of trusting. What is trusting? Trusting is a relationship n1 among individuals, entities and institutions, involving a (i) reasonable belief, supported by an acceptable level of verification n2 in (ii) another party's assertion of past facts, present facts, and future facts (promises). n3 Trust in persons, institutions, and society is not blind; it emerges with proof. n4 Gullibility, hope, and faith are relatives of trusting, n5 but reflect different degrees of the actors' requirements for verification. n6 Reasonable belief should depend on the context of the relationship. Reliability in love does not necessarily mean reliability in business relationships, and vice versa. The scope of deeper trust, such as trust in a doctor, lawyer, or priest, is usually limited to particular areas of knowledge or brands of honesty.

Further, reasonable belief can be established by verifying the trustworthiness of the other party or by resorting to other sources. The choice of sources often depends on their relative costs.

Cultural norms shape the parameters of reasonableness of the belief. Reasonableness may differ depending on whether the norm is lying, frankness, or vagueness. n7 The law both affects and is affected by these norms. Moreover, trusting is a reflexive and reciprocal relationship. n8 Trusting often creates pressure on trusted persons to meet the expectations of the trusting parties. Signals of mistrust breed mistrust. n9 Dirty tricks invite reciprocal dirty tricks. As compared to verification cost in real space, verification cost on the Internet is higher. Businesses must learn how to establish trust in the new communication medium. n10 Some believe that the Internet is a free space that should not, and cannot, be regulated, and that markets can resolve the trusting problem. I argue that without the bedrock of legitimizing law, trusting on the Internet will not develop. To be sure, market regulated actors on the Internet must occupy the first line of enforcement. Internet, and perhaps also real space, activities are policed by private sector institutions and professional gatekeepers. To be effective and legitimate, such police must be regulated - especially when their interests conflict with the interests of those whom they are required to protect. The law not only punishes breach of trust; it also provides trusted persons with a reputation, which they value personally and professionally. Further, the law can enhance the norm of trustworthiness and increase social trust.

Because building trusting relationships through the Internet is in the making, we can only speculate on how the process will ultimately mature. Mechanisms to establish trust, however, have been emerging. Not surprisingly, they are mostly the same mechanisms used in real space, which are adjusted to the new Internet environment. The role of the law in this adjustment is unclear. While we start from known rules and approaches, new law making and law enforcement techniques may develop. Further, domestic laws and norms may spill over to other countries, interacting with their laws and norms. A question regarding the role of the law has appeared in connection with parties' choices in designing the rules that govern their relationships. The process by which legal systems interact has also appeared in the context of regulating areas such as money laundering and insider trading.

The Internet may lead to different line drawing, in light of the different constraints, freedoms, and enforcement techniques that the Internet offers. However, I believe that with respect to trusting and verification the parties will continue to seek the least costly verification and the highest benefits from interaction. Therefore, the law will continue to provide and strengthen the norms for self-enforcement and legitimacy for verifiers. This law may not necessarily be domestic law supported by a political or international force. It may be enforced in other ways. Because people will feel constrained to follow it, it will be legitimate law. If law's support of norms and verifiers remains weak, the cost of trusting will dissipate its benefits and the hope that the Internet holds for a more productive and cohesive world is not likely to materialize.

I. TRUSTING AND NON-TRUSTING: RELATIVE COSTS, BENEFITS, AND RISKS

Trusting involves costs, benefits, and risks to both the trusted and the trusting parties. The division of these components among the parties is difficult to establish because the parties can transfer the costs and benefits between each other. Therefore, it is easier to speak of these costs, benefits, and risks in the aggregate. Viewed separately, however, if the risks and costs of reducing the risks to the trusting party are higher than the benefits, the party will not interact. If the costs to the trusted party of establishing its trustworthiness are higher than the benefits, it will not interact. The parties will enter into a relationship, however, if third parties, including the government through the law, reduces their costs, bridging the gap. As discussed later, these third parties are usually institutions and intermediaries whose trustworthiness is backed by law.

A trusting person can verify facts and promises from the trusted party or other alternative sources. The differences in verification costs are greatly affected by the number of the interactions among the parties. Establishing trustworthiness of another is costly. However, once the other party is proven trustworthy, there is no need to verify its statements of facts or its promises, even if some monitoring is required. n11 When negotiating with the Russians, during the Cold War, President Reagan used the phrase: "Trust, but verify." n12 This statement drew chuckles because if the other party is trusted, there is no need to verify its statements and promises. The need to prove truthfulness of facts and reliability of promises signifies absence of trust in the other party.

For example, if the cost of verifying a fact and a promise is \$ X, and the relationship (with one or more persons) involves Y facts and promises, a non-trusting party would have to spend \$ XY to verify. A trusting party would have to spend \$ 0. A greater number of transactions among parties render trusting increasingly cheaper than non-trusting. For the non-trusting party, the cost rises by the magnitude of XY with each transaction. For the trusting party, the cost

remains close to zero. The cost of establishing trusting - \$ E - should be now added. For the non-trusting party (that verifies from outside sources) the cost of establishing trusting is zero. Monitoring is our next item - \$ M. In each case, monitoring is a function of the risks from the relationship. The higher the risk, the higher the monitoring cost would be. I assume that in non-trusting relationships, the risk from the relationship is Z% and the cost of monitoring is \$ MZ. In trusting relationships, the risk from the relationship is W% and the costs of monitoring is \$ MW. In sum, to determine the relative costs of trusting and non-trusting we may use this crude formula: For trusting parties: E (cost of establishing the relationship) + MW (cost of monitoring determined by the level of risk). For non-trusting parties: XY (cost of verifying each fact and promise) + MZ (cost of monitoring determined by the level of risk). n13

In general, after the initial investment in establishing the relationship, personal trusting offers the parties the benefits of lower risks and information costs. n14 Further, trust can substitute for and reduce the costs of formal contracts. There is evidence that in trusting relationships people forego costly formal contracts. There are corporations that do business only on a handshake, although they are usually relatively small. n15 Also, in trusting relationships, the parties are unlikely to face the Prisoner's Dilemma. n16 This classic dilemma shows that reasoning from self-interest can be self-defeating. n17 Finally, trusting arguably benefits the economy. Even if we view the world as an association of individuals, their survival depends on each other. A measure of trusting must be forged among us, or we will die.

There are indications that social trusting is crucial to economic prosperity, and perhaps, the very existence of individuals and society. n18 Specialization is a necessary component of a prosperous economy. Specialization requires interdependence, which cannot exist without a measure of trusting. n19 In an entirely non-trusting relationship, interaction would be too expensive and too risky to maintain. n20 There is a correlation between the level of trusting relationships on which members of a society operate and the level of that society's trade and economic prosperity. n21

On the Internet, there are similar benefits, costs, and risks from trusting. The balance among the trusting and trusted, however, is different than the balance in real space. Sellers on the Internet can benefit from increased number of customers and revenues and decreased costs of real space storage and inventory. Moreover, the sellers' risks are no higher than their risks in real space and may even be lower (e.g., robbery). Hence, it pays to do business through the Internet and expend more resources to gain the customers' trust.

Benefits to shoppers on the Internet are also higher than in real space in terms of savings of time. Costs of verification, however, render their risks far higher. While it opens connections to the world, the Internet allows relatively few signals that support trustworthiness to pass through. In fact, it enables people to create virtual worlds, personalities, and products that do not materialize. Customers' cost-benefit analysis suggests that the convenience of Internet shopping is significantly reduced by its risks.

In general, it is costly to persuade others of one's trustworthiness. A new relationship may bloom over time into a trusting relationship. In both trust and non-trust, uncertainty and risk are reduced with experience. n22 Verification depends on past, and frequency of, experience. People are creatures of habit; habits are long-term and personality traits are life-long. In personal relationships, it is easier to discover whether the other party can perform her promises, has the necessary money or product, or possesses the requisite skill. n23 One detects signals attributed to general character traits, such as responsiveness, dependability, and honesty. n24 During the process, people offer reciprocal reassurance and accommodation, as well as joint monitoring which reduces the risk of disappointed expectations. n25 As nothing is certain, however, efforts to fully rely on another may fail. Notwithstanding the tendency to repeat patterns of behavior, a trusted party may change, for example, with age or illness, marriage, or great temptation. The trustworthiness of an institution may change with changing control and different key personnel.

To establish and maintain personal trusting is costly also in terms of lost opportunities. A person can interact with a limited number of people. There are even fewer persons with whom the interaction can be long-term. Usually people in poor societies limit their business interaction to family, which limits their ability to recruit talent for their businesses. n26 Families with many children may maintain thriving businesses for generations if some of the children continue to develop the family business. But limiting the leadership of a business to family members puts the business at a competitive disadvantage that, at some point, may lead to its demise. n27 Thus, establishment and maintenance of personal trust involves lost opportunities for individuals and businesses.

One effective mechanism that reduces the cost and risks of personal trusting is the utilization of trusted legitimate institutions and intermediaries, both private and public. Institutions reduce trusting costs regardless of consumers' culture and regardless of whether personal trust is mixed with skepticism. For example, Americans revere their Constitution and the rules of law. They trust their banks, mutual funds, and insurance companies and the legal controls under which these institutions are made trustworthy. Americans have a reasonable belief in these institutions. On the

personal side of the same coin, Americans have a significant degree of what some would call healthy skepticism in their politicians, lawyers, bankers, and mutual fund money managers. The argument that institutions have no identity because they are merely composed of individuals is flawed. Institutions have a personality apart from the people who compose them. This personality is comprised of their internal structures, rules, leadership, and their relationships among their staff as well as with the outside world. Institutions have a history and a reputation for competence and honesty (or the reverse) which they can build or destroy. n28 Institutions send, in their unique ways, their brand of signals that can evoke trust or mistrust. Distinguished from their members, truth-telling institutions, which honor their promises, will be trusted, as will the persons who act on their behalf. n29 Others will not. n30

The benefits of institutional or impersonal trusting are very great. People can trade with strangers through trusted intermediaries and institutions based on impersonal trust. n31 The relative costs of personal trusting described above involve sunken costs (long-term repeat relationships that may also prove to be disappointing), lost opportunities (limiting the range of human interaction both in number and geographically), and monitoring. In comparison, trust in institutions and intermediaries are cheaper to establish.

First, the number of institutions is smaller than the number of people with whom business can be conducted, a factor that reduces the investment in verifying the trustworthiness of the institutions. In addition, buyers, investors, borrowers, and depositors can move from one institution to another with little cost. n32

Second, institutions have relative longevity, and can build impressive reputations, both positive and negative. n33 Thus, there are little sunken costs in establishing trusting relationships with institutions such as banks or large retailers. Establishing impersonal trust in them is therefore less expensive.

Third, institutions reduce lost opportunities of interacting with strangers, n34 allowing people to deal with strangers and benefit from services of capable strangers who function under the umbrella of the institutions. n35 Thus, like all intermediaries, the costs of establishing the truthfulness and reliability of the strangers and employees are borne by the institutions at costs lower than the costs to the individual customers.

Fourth, and most importantly, risks from trusting commercial and financial institutions are reduced by law. The institutions are strictly regulated and surrounded by substantial guarantees against misfortune. All of these benefits are too costly for individuals to ensure through self-help. This role of the law in strengthening trusting relationships is described in section III below.

On the Internet, verification of trustworthy persons, on the one hand, and facts and promises, on the other hand, is more costly for the trusting person as compared to those in real space. The Internet exposes buyers to greater misinformation for it is technically easier to show on the Internet items that look real but are not. In real space, one can judge a store by its location, appearance, customers, and many other signals. On the Internet, one can show a beautiful store that does not exist, hide information about people, and disseminate more misinformation. There is neither body language nor voice signals to guide the viewer, for today the printed word is the main medium of Internet communication. n36

Thus, situations that do not require trusting and involve low or no verification costs involve higher costs on the Internet. In real space, the purchaser of a newspaper bears little or no cost in verifying the newspaper and its price, and no promise is involved because the exchange is simultaneous. Transactions on the Internet are not simultaneous. A newspaper purchase involves higher costs of verifying that the newspaper ordered, especially if paid for in advance, will be delivered on time. Thus, on the Internet, both the costs of verifying statements and promises in non-trusting relationships, and the cost of establishing personal relationships and verifying trustworthiness are likely to be higher than in real space. These high costs are evidenced by the new third parties that provide verification services regarding transactions and actors on the Internet, while none of such services are offered in real space. All these services come at a cost.

Risks from third parties undermines consumers' trust in the Internet. Consumers who provide sellers with credit card and other information are exposed to an additional risk that the information will be misappropriated and abused. Under United States law, if stolen credit cards are used for unauthorized purchases, banks or sellers must indemnify consumers for losses above \$ 50. But on the Internet, consumers may not know that their card numbers have been stolen because they still hold their cards. If the thieves change the account addresses and the consumers fail to notice that they did not receive bills, consumers may not notify the bank of the loss of the cards. They will be personally liable and their credit will be destroyed.

Third parties harm consumers by malicious hyper-links and "spamming" - an avalanche of advertising causing bottlenecks on consumers' computers. Technology provides some redress from these harms, at a cost, and only temporarily, until spammers have designed software to circumvent the protections. Congress, however, is acting on this issue. n37

Credit cards and debit cards are useful devices that expose customers to risks. The cards resemble letters of credit that were established through banks hundreds of years ago to facilitate trading among strangers in different countries. Sellers are not willing to take the risk of payment after sending the sold products. At the same time, buyers have the option of contesting the charges and that constitutes the banks as arbitrators of a dispute between the parties.

The value of the cards to both parties gives the banks enforcement powers, provided they follow fair and unbiased procedure. These procedures are subject to regulation, and banks have self-interest in following them to gain lucrative, trust-based business. This mechanism, however, exposes customers and sellers to risk from third parties. Personal and financial information may be stolen from sellers, exposing customers to loss of property, and sellers to extortion. If sellers refuse to pay, the thieves publish the customers' card numbers. Further, like customers, businesses suffer from spamming bottlenecks, called "denial of service." Businesses also suffer from the spread of lies and gossip about their products.

Finally, businesses that are expending funds and efforts to build reputation may be hurt from the misdeeds of a few "bad apples," especially newcomers to the industry, if seed capital is small. If some of these newcomers are dishonest, they can deplete the wealth of social trusting that society and most businesses have developed.

In addition, traditional policing and enforcement against illegal actions is weaker on the Internet, although the Internet does offer added enforcement tools, including publication and automated monitoring. Thus, both costs and risks for buyers (and some for sellers) on the Internet are higher than in real space. Sooner or later, consumers recognize the danger. n38

II. RISK REDUCTION

In general, common interests can reduce the risks associated with trusting, as similarity of character can. n39 Parties to a relationship with similar interests and few alternatives are likely to be trustworthy towards each other. The stronger their self-interest in the relationship, the more trustworthy they will be. A relationship, in which at least one party can terminate without serious adverse effects, will have weak interdependence and verification, increasing the likelihood that this party will renege on its promises as more attractive opportunities arise. n40

Similar incentives operate on the Internet. Information about persons on the other side of an e-mail message is costly to verify, making personal trust building on the Internet better achieved by sharing, as in real space. Groups sharing areas of interest, values, or ideas can build trust relationships among themselves, sometimes to the exclusion of, or even against, others. Anonymity can help shy people be frank. For example, people tend to share their secrets on an airplane ride, when they believe that they will probably never see each other again. Similarly, consumers will likely develop associations on the Internet to share information about products, services, and their own experiences, and such associations will help reduce the risk to buyers.

Proof of one party's trustworthiness, through consistent behavior, can reduce the risks associated with trusting. A similar approach works on the Internet. The Internet site and the brand name have replaced sales persons. The site has become the contact point with the customer; there is no other. The site, however, may be less convincing than a salesperson might be. Therefore, businesses focus on the services they give, by doing it right: they tell the truth and keep their word. Easy access to businesses is essential, but the best advertising for businesses is the actual services that they provide. The model for businesses on the Internet is similar to the model of establishing trusting relationships in real space, especially for professionals and fiduciaries. With time, customers' good experiences establish customers' trust. Because information about bad services can be easily spread, the punishment for being untrustworthy is faster customer withdrawal in even greater numbers than in real space.

Self-help can also reduce the risks associated with trusting. Self-help is very costly on the Internet, even when it is effective in the real world. Despite these costs, the current trend seems to be towards self-protection. Consumers trust other parties less than they would in real space and behave as non-trusting persons would; they require proof of facts and promises and other trust building evidence. Experts advise consumers to engage in costly self-protection. They advise consumers to educate themselves about the risks involving the Internet, to get information about the sellers, to

read carefully the small print regarding warranties, to check the security of credit cards and financial information; and to consider alternative options, such as ordering by telephone.

On the Internet, some of the verification costs and burdens have shifted from buyers to sellers. The shift is efficient. First, commercial and financial institutions can reap enormous benefits from Internet communications. Presumably, that gives them incentives to expend more efforts to gain customers' trust. New market entrants, or sellers of new products, recognize the need to capture customers' trust even in real space.

Second, as compared to real space, the level of customers' commitment is not as high. While buyers are exposed to more costs and risks in Internet transactions, buyers have alternatives to buy in real space, even though they lack the convenience and choices of Internet shopping. As their risks and costs have risen, many customers are inclined to expend little effort in reducing their risks. Thus, in relation to verification, the bargaining power between these two groups has changed and shifted from buyers to sellers.

Third, the cost of proof and risk reduction may be lower for the sellers than for the consumers. Although sellers can shift the added costs to consumers, competition limits such increases. Therefore, even if sellers transfer some of the costs, buyers' increased costs will still be lower than if the buyers had to verify the facts and promises themselves. Fourth, the more sellers succeed in convincing customers of their facts and promises, the lower their burden becomes as they build a trusting relationship with their customers.

Finally, many sellers have begun to recognize that they are better off uniting than competing on the issue of trustworthiness. A race to the bottom will bring Internet use to the bottom as well. Therefore, there should be, and hopefully there is, a growing tendency to monitor others, at least in the same industry, to maintain a minimal level of trustworthiness.

Market actors can reduce the risks associated with trusting. Sellers can offer self-binding obligations, such as warranties, and "no questions asked" return policies. Lower information and verification costs can reduce the risks associated with trusting. A reputation for being trustworthy is one such mechanism that businesses can also acquire in the market.ⁿ⁴¹ Hence, people rely on reputation, good or bad, as a form of verification, as an added comfort or as the least expensive alternative when direct sources of information are too costly. In commerce, it is reasonable to believe that a person's performance will be consistent with his past performance and representations, unless there are indications to the contrary. People are bound by inertia and the pace of change in their behavior is slower than other changes in the environment. Those who are fickle, depending on how closely they are watched, are unlikely to become steadfast. Those who are reliable, regardless of whether they are watched or not, are unlikely to become erratic. In terms of learning and prediction, too many drastic changes in behavior are costly to the actors and to those who deal with them. Thus, people develop habits, and believe that others will stick to theirs.

On the Internet, information tools can develop for individuals. For example, direct traders can create a personal business reputation on the Internet, as the eBayⁿ⁴² experience has shown. Traders on the Internet eBay site are likely to rely on their own experiences, and on those of others regarding other individuals' behavior, and choose their trading partners according to the reputation they developed for telling the truth and keeping their word. The low publication costs, and eBay's services, provide powerful information that helps make or break a reputation fairly quickly. The reputation of traders on eBay's site affects the prices traders can obtain or are willing to pay. A trader with a good reputation will attract more bidders who will bid the price up. A trader with a poor reputation will attract fewer bidders, who will not bid the price for the same item as high.

A reputation-forming device, such as membership in professional and other groups, can also reduce the risks associated with trusting. Membership signifies a high probability that members have passed the requirements of entry into that group, be they educational requirements (e.g., medical), character-based requirements (e.g., clergy), or simply acceptance by peers and conformity to the rules of the group (e.g., trade organizations). Thus, accountants, lawyers, physicians, and others command trusting in their competence and honesty. Many groups subscribe to norms that build trustworthiness, and impose on members a duty to enforce the norms, rendering the norms powerful and the members credible.ⁿ⁴³

Internet businesses have followed the real space model, and formed societies whose main function is to gain the customers' trust. Internet businesses recognize that their competitors, who may act unwisely, can adversely affect their own reputation. For example, Financial Services Technology Consortium is composed of competitors, who combine to create a "public good," that is, trustworthiness for all, and monitor their members to maintain this public good.ⁿ⁴⁴

Markets are populated by private sector professionals and organizations with significant reputations, which act as reliable verifiers of others' assertions of facts and promises. They can verify the information or actually lend their credit and name to back the sellers' obligations. That involvement offers parties both an additional trusted obligor and an indirect assurance of verified information, which the obligor will gather to protect its interests. Accountants and lawyers act as market verifiers of information. They command trust by membership in self-regulating organizations, and by strict government regulation. They verify information about the trustworthiness of strangers.

There are organizations that check businesses for trustworthiness in terms of expertise and proof. n45 Rating agencies perform a similar function. They evaluate bonds after gathering information about issuers including an evaluation of the creditworthiness (trustworthiness) of the issuers. The rating agency, Moody's Investor Service, n46 offers for a fee, "trust packages" to parties who wish to reduce their risk of business relationships with unknown parties abroad. It ascertains whether the unknown party abroad is trustworthy by verifying information, offering the same kind of fact-finding that people engage into develop a trusting relationship. Moody's has developed a list of factors that demonstrate trustworthiness, collects information about the unknown party's consistency in performing its promises, paying its debts, making true statements, and conducting long-term relationships. n47 In fact, Moody's has commodified, and is selling, trustworthiness. n48

Internet businesses have followed the same model. The Internet markets have additional third party fact verifiers, especially when information can be manipulated on the Internet. For example, pictures shown on the Internet can be digitally changed. Third parties can provide verification of products, such as the true color of women's clothes. This verification was adopted as a selling point to consumers who otherwise mistrust the on-line display. Unauthorized persons can alter and sign documents transferred through the Internet. Technology is developing to ensure the integrity of documents and signatures. Third party intermediaries offer trust services for Internet businesses, such as i-Escrow escrow services, to ensure that buyers pay money in advance but the money reaches the sellers only upon delivery.

Like reputation building in real space, businesses build their reputation through associations. The United States government offers verification, in the negative sense, about those who are not trustworthy. The Federal Trade Commission issues "Consumer Alerts!" on its on-line web site. n49 Other associations issue positive recommendations about businesses that act on the Internet, similar to the Better Business Bureau's, such as the Center for Democracy and Technology. n50

Both on the Internet and in real space, trustworthiness can evaporate on disappointing evidence. But it seems that on the Internet, it can disappear even faster. One organization, created on the Internet, offered to attach its mark "TRUSTe" to businesses as a sign of trustworthiness. n51 It is of questionable success because some businesses that carried the sign did not live up to the reasonable expectations of the consumers. Consumers reached the conclusion that TRUSTe did not sufficiently monitor, enforce, or inform about, the promises of its sign. n52

Internet businesses have piggy-backed on trusted real space businesses because customers seem to trust businesses in real space more than they do businesses in cyberspace. For example, community banks with a loyal customer-base can establish similar relationships on the Internet, and far larger financial institutions may desire to link their products to such banks. Sometimes brick and mortar enterprises that have the loyalty and trust of their customers become aligned with Internet enterprises to bestow on those Internet enterprises the trust of the retailers' customers.

This arrangement is similar to franchising, franchising not of expertise or quality of goods, but of trust. For a similar reason, the value of real space brand names has risen on the Internet. Perhaps this may be one reason why trademark owners are so concerned about their trademarks and well known brand names have acquired special protection by Congress.

III. THE ROLE OF LAW IN SUPPORT OF TRUSTING

Under certain circumstances, the reliability of trusted persons, institutions and other intermediaries cannot be fully supported by the trusted parties themselves. There comes a point when the parties will not interact because their costs of verification and proof of trustworthiness will exceed their joint benefits from the transaction. In these circumstances, legal backing is necessary. n53 Law offers benefits to both parties. It offers trusting people reduced risks by preventive regulation of institutions and intermediaries, before the fact, and compensation as well as punishing violators, after the fact. Law offers trusted persons a "brand name" guarantee of their trustworthiness, which may be too costly for trusted persons to create or buy in the markets. These supports for trusting are financed not by private sector interested persons, but by all taxpayers. Hence, the cost of maintaining a trusting system as a whole, in addition to the users of trust relationships, is subsidized and distributed among a large group through government intermediation. Further, law

strengthens norms of behavior, and reduces the cost of enforcement. People become trustworthy through habit, with a lower threat of punishment.

Trust verification, especially verification by third parties, is layered. The first layer is composed of direct trusting relationships. The second layer, in lieu of or in addition to personal trust, consists of market verifiers. The third layer is composed of verifying the verifiers - the law. Law regulates trusted persons and intermediaries as well as market verifiers, who establish the trustworthiness of others.

The law can regulate intermediaries more effectively than individuals. Intermediaries are often less mobile than individuals and their number is smaller. As the size of private sector actors and intermediaries increases, they are likely to be the first tier gatekeepers and enforcers of the law within their operational territories, including international enforcement. Mergers of banks and businesses are usually accompanied by stricter requirements for self-regulation, controls of illegal acts within the organizations, and trustworthiness towards customers. Professional private sector gatekeepers, such as accountants, are subject to increasingly strict regulation as they testify to the trustworthiness of businesses in real space and on the Internet. In contrast, individuals' costs of establishing the trustworthiness of institutions and other specialized intermediaries are very high. Even though their number is small, they are composed of many individuals and their internal activities are not open to individual customers. More importantly, individuals cannot adopt preventive measures to ensure the intermediaries' trustworthiness even though the risks that individuals take, in entrusting their property to institutions, may be very high.

As the importance of the role of intermediaries increases on the Internet, the importance of law in reducing the customers' risks and increasing the trustworthiness of the intermediaries increases. In reaction to consumers' concerns and Congressional prodding, industries began to establish best practices in respect to privacy issues. While customers may rely on some industries' best practices, for financial intermediaries, best practices were held insufficient. The danger of losing public trust is too great and the consequences too grave. Further, the law is most important when the public voices its concern on particular issues.

On the Internet, financial intermediaries need a higher degree of public trust, as they are eager to cut their costs by establishing Internet communications with customers. Hence, Congress directed regulators to impose rules of confidentiality on financial intermediaries. n54 On March 2, 2000, the Securities and Exchange Commission published a proposed rule that would restrict broker dealers', investment companies', and registered investment advisers' ability to utilize customers' personal nonpublic information. n55 Bank regulators are proposing similar rules. n56

The Internet has both increased and decreased the cost of law enforcement. It is unclear what the net costs are. The increased costs are caused by the global impact of the Internet beyond state boundaries. The decrease is based mainly on ease of communication, such as consumers' complaints, information from other agencies and other countries, and technical innovations, such as surfing the Internet for fraudulent advertising.

The Internet and the law affect each other. For example, the contract rule of caveat emptor is sufficient to create trusting among buyers and sellers in face-to-face relationships, but not in e-mail communications. Hence, contract doctrine may change and become more "fiduciary-like" and customer friendly. The requirement to tell the truth and be reliable will not be linked to the parties' explicit agreements, but to the default rules that underlie fiduciary law or to stronger fairness concepts in contract law. These may creep into, and create, the "contract law of the Internet." Not only will these rules reflect best practices of industries doing business on the Internet, but also they will be recognized as crucial to the development of e-business, and as such, acquire the power and weight sufficient to change legal doctrine.

IV. THE ROLE OF TECHNOLOGY IN SUPPORT OF TRUSTING

Technology has helped reduce customers' risks by eliminating the need to send card account information over the Internet. While the solution is not yet certain, it seems clear that the issue must be resolved if consumers are to consider the Internet as their main form of communication with businesses.

In some situations, enforcing the law against violations on the Internet may be as easy, or even easier, than enforcing the law in real space. In recognition that "code is law," as Professor Lawrence Lessig argues, government may regulate certain aspects of Internet operations through code - the means of Internet communication. n57 It is likely that the government will use this method to fight against serious crimes, which the Internet greatly facilitates. This method raises issues of government accountability, which are beyond the scope of this paper. But technology and protection can prompt distrust and eliminate some trusting behavior, as Professors Lessig and Helen Nissenbaum note. n58

The solutions devised to date are operational, technological, and organizational. On the operational and organizational side, experts suggest that consumers avoid some forms of payment on the Internet, such as debit cards. These cards resemble cash and are too risky. Processes, such as the process by which credit cards are settled, may have to change. Credit card transactions that follow real world processes, from merchant to a merchant processor and then to a credit card association, expose the parties to risks from thieves. Among others, a safer approach is to let the merchant directly query the credit card issuing bank for payment authorization. Non face-to-face merchants are required to take an additional step when they authorize a purchase. Businesses are using different payment systems for online shopping, such as digital certificates. There are digital identity services and technical forms of authentication that help reduce consumers' risk. Non-technical solutions are also recommended, such as the use of employees for internal controls, response to possible threats and risks, and the hiring of experts.

On the technological side, businesses are adopting protections against third party attacks on the Internet business by technical solutions. These include anti-spamming software and filters against "denial of service attacks." Most companies have installed secure sockets layer mechanisms to protect web transactions. Businesses injured by harmful misinformation that frightens customers away, use trusted sources to combat these harmful effects. The important point is that corrections come from a trusted source. And, of course, some businesses choose not to disclose the problems they have, but to simply correct them.

V. CONCLUSION

In real space and on the Internet, trust and non-trust pose the same issues. The ways people come to trust in real space and cyberspace differ, however. That is mainly because the benefits, costs, and risks in Internet interaction have changed and have been reallocated among sellers and buyers. The costs have shifted to sellers in order to achieve the same goal - establishing trusting relationships on which economic activity depends.

The model that emerges is that of "layered trusting supports." No one layer can create a culture of trust. Reputable institutions and intermediaries, verifiers, and providers of trust services, contribute to public trusting. But more of them are needed on the Internet, and the law must continue to provide the backbone of legitimacy for their trustworthiness. Perhaps stronger support is needed on certain issues. For example, the Internet offers grand scale opportunities to destroy software in which communications and ideas are stored. To prevent such destruction we may need a worldwide meta-norm. Today, destructive hackers are still considered the "smart kids" who playfully show off their genius. Against such damaging games, there is no strong norm that brings a general revulsion. If children were told, with their first computer, that computers are for creating, not for destroying; if children develop this attitude the way they develop the inhibition on playing with matches to avoid destruction, yet recognizing that fire is good, as the parents show by lighting candles and the fireplace, then over time a meta-norm can rise to be enforced not only by governments, but also by members of the public. As the meta-norm becomes stronger, law's interference can become weaker. But this is a goal for the future. We can begin by using the tools, based on the elements of benefits, costs, and risks, and adjusting them to the new Internet environment.

FOOTNOTES:

n1. See Rajeev Bhattacharya et al., A Formal Model of Trust Based on Outcomes, in 23 *The Academy of Management Review*, Special Forum on Trust in and Between Organizations, 460 (Sim B. Sitkin et al. eds., 1998) (showing that the main view of trusting is a relationship among individuals and groups and rejecting the view that trust is merely an individual trait). Trust is defined as expected behavior of the other party and readiness to risk disappointment. The issue of trusting can be raised only in the context of interaction with others. See id.

n2. Some authors add an emotional bond or moral internal drive as a bridge from evidence to belief. See Trudy Govier, *Social Trust and Human Communities* 24 (1997) ("Cognitively ... trust is based on a chosen "leap' from considered evidence to belief beyond what that evidence would warrant;" that leap is based on an emotional bond among the actors). These elements have merit, but I omit them to simplify the analysis. Further, scholars have defined the risk of trusting as asymmetrical information among the parties, though I decline to add this factor. No two parties have symmetrical information; therefore, risk exists in any human relationship. The

risk of trusting relates to the cost of obtaining the relevant information and the degree of assurance that the information is true.

n3. There are numerous definitions of trust. For a survey and proposed definition by outcome, see Bhattacharya, *supra* note 1, at 460 (listing dictionary definitions of trust and distinguishing among cognitive, emotional and behavioral components of trust). Webster's Dictionary defines trust as the "firm belief or confidence in the honesty, integrity, reliability, justice, etc. of another person or thing." Webster's New World Dictionary of American English 1436 (3d ed. 1994).

n4. See Govier, *supra* note 2, at 153 (discussing social trust as social capital, a resource which emerges with experience); see also Ann Marie Zak et al., Assessments of Trust in Intimate Relationships and Self-Perception Process, 138 (2) J. Soc. Psychol. 217, 225 (1998) (finding that the trusting behavior of the participants in the experiments are often self fulfilling and explaining that blind trust is usually a product of one's self perception). Trustworthy people are more likely to blindly trust others. See *id.*

n5. Trusting does not mean believing all unverified representations; rather it means believing unverified representations when it is not unreasonable to do so. "Believing when most people of the same social group would consider belief naive and foolish" qualifies as gullibility. See Julian B. Rotter, Interpersonal Trust, Trustworthiness, and Gullibility, 35 Am. Psychol. 1, 4 (1980).

n6. Gullibility is an unreasonable belief, as the famous story of the sale of the Brooklyn Bridge demonstrates. Hope involves a strong component of wishing for a future event. A wise person may observe that "a second marriage is a triumph of hope over experience." Notwithstanding experience, the second marriage reflects the parties' hope that, with different spouses and maturity, the second marriage will work. In faith, the quantum of direct evidence is not as relevant to the believer. But see Govier, *supra* note 2, at 14 (criticizing the distinction between faith as "an undoubting, unconditional belief in which data for proof and refutation is ignored" and trust as undoubting belief that does not ignore pertinent proof).

n7. See Govier, *supra* note 2, at 230 (citing Sissela Bok, *A Strategy for Peace* (1989)). "Do it yourself" verification may be less costly and more reliable than verification by others. But that is not always true. Cost depends on the "doer's" time value and lost opportunities, as compared to the compensation of experts and agency costs of delegation. For example, the decision would be made depending on which of the following costs exceed the others: the cost of "do it yourself" [X (acquiring expertise) + Y (lost opportunities)] or the cost of delegating verification to others [A (compensation to the delegate) + B (agency costs)]. Thus, one's own judgment may be decisive because one bears the consequences of the decision, but one's level of wisdom, knowledge and expertise, may be lower. Though people ask for the opinions of others, they ultimately make up their own minds.

n8. See Govier, *supra* note 2, at 27 (asserting that trust is a reflexive phenomenon; to be trusted requires having trust).

n9. See *id.* at 87-88 (attempt of teachers in a Canadian law school to control students through minutely detailed rules of examinations led to a culture of mistrust; the attitude of mistrust bred more mistrust).

n10. See John O. Whitney, *The Economics of Trust Liberating Profits and Restoring Corporate Vitality* (1996) (creating trusting within the organization and with outside parties is profitable as well as good); Roderick M. Kramer and Tom R. Tyler, *Trust in Organizations*, *Frontiers of Theory and Research* 232 (1996) (showing

the many ways in which trust is important to organizational life including business organizations; noting that trust is based in reciprocity and is tied to one's expectations).

n11. Some cultures focus on the identity of counter parties. They decline to do business with foreigners, members outside the family group, or another race, or strangers unless introduced by reliable friends. The quantum and sources of evidence form the measures of reasonableness of belief on which trusting is based. One can reasonably believe statements made by a trusted person, similar to indirect evidence. One can reasonably believe in the reliability of promises by trusting the promisor on the basis of the promisor's character, reputation, and past performance. Independent verification, such as proof by documents or independent parties, (e.g., accountants, lawyers, independent witnesses, or experts, or guarantors) may support the trustworthiness of the trusted party.

n12. Associated Press, *Historic Missile Treaty Signed; Leaders Pledge Further Efforts for Arms Control*, L.A. Times, Dec. 8, 1987, at A1.

n13. This analysis is similar to Coase's Theory of the Firm. A firm can be viewed as an organizational form that enhances trusting, thereby reducing costs of interaction. If contracts were adequate, the firm would not be necessary. This argument was suggested by Professor Michael Meurer.

n14. See Richard A. Posner, *Economic Analysis of Law* 284 (5th ed. 1998) ("Honesty, trustworthiness, and love reduce the costs of transactions."). There is also the psychological benefit of simplified complex information. Social trusting, that is trusting by a large group governed by similar trusting norms, can also enhance economic prosperity.

n15. See Juliet P. Kostritsky, *Bargaining With Uncertainty, Moral Hazard, and Sunk Costs: A Default Rule For Precontractual Negotiations*, 44 *Hastings L.J.* 621, 643 (1993) (noting that trust may substitute for legal formalities, such as contracts, in on-going relationships); Michael Meyer, *Here's a "Virtual" Model for America's Industrial Giants*, *Newsweek*, Aug. 1993, at 40 (describing Kingston Technology Corporation and its lack of formal dealing). "Trust cements the network. It is the essence of our relationships The deals were closed on a handshake, Kingston style." *Id.* (internal quotation marks omitted).

n16. See Robert Cooter & Thomas Ulen, *Law and Economics* 93 n.3 (2000) (describing the Prisoner's Dilemma as a non-cooperative game). In this game, two suspects are kept incommunicado in different prison cells, and offered the following: if one confesses and the other does not, the confessor received half a year in prison and the non-confessor ten years. If both confess, each receives 5 years. If neither confesses, each receives one year. Their best bet is not to confess, but that depends on whether the other will. See *id.* Most terms of the bargain remain implicit anyway, regardless of how detailed contracts are. It is often more efficient to deal with another party that tends to reach working solutions and shares a similar sense of fairness than with a party that "goes by the (contract) book." In a trust relationship, the parties know approximately what each can be expected to do in the case of misunderstanding, and are willing to take the risk that the result will not be satisfactory. That risk taking is not only reasonable but is likely to be cost-saving.

n17. See Govier, *supra* note 2, at 11 (The Prisoner's Dilemma "serves to indicate the self-defeating character of the single-minded and solitary pursuit of one's own self-interest."). Another benefit from trusting is demonstrated in the workplace. Recently, American businesses have worked hard to create trusting and cooperation among their employees, and between employees and management. Far more discretion has been vested in employees. A similar pattern of limited cooperation among competing business organizations is also developing. See Whitney, *supra* note 10, at 191 (arguing that creating a trusting environment within the

organization and outside is both profitable and good). See Special Forum on Trust in and Between Organizations, 23 *The Academy of Management Review* 459 (Sim B. Sitkin et al. eds., 1998) (containing papers on trusting building and its benefits in business organizations and defining trust using mathematical models); see also Bruce Chapman, Trust, Economic Rationality, and the Corporate Fiduciary Obligation, 43 *U. Toronto L.J.* 547 (1993) (arguing against the concept of a corporation as a contract and emphasizing the role of trust and loyalty in the corporate organization); Giancarlo Spangnolo, Social Relationships and Cooperation in Organizations, 38 *J. Economic Behavior & Organization* 1 (1999) (addressing "the effects of social relationships on cooperation (or collusion) in organizations (or communities)" and arguing that the employment of members of the same community facilitates cooperation in production and increases social capital because "the linkage generates transfers of "trust").

n18. See Govier, *supra* note 2, at 153 ("For politics, economics, and personal well-being, social trust is a valuable resource."). Social capital is defined as a moral resource and a public good that is self-perpetuating and lubricates the growth of trust in society. See *id.* Lack of trust is costly in psychological terms. The unknown is risky; it breeds fear and anxiety, which can be debilitating. See Niklas Luhmann, Trust and Power 4 (1980), quoted in Bernard Barber, The Logic and Limits of Trust, 10 (1983) ("But a complete absence of trust would prevent him even from getting up in the morning. He would be prey to a vague sense of dread, to paralyzing fears. He would not even be capable of formulating distrust and making that a basis for precautionary measures, since this would presuppose trust in other directions. Anything and everything would be possible. Such abrupt confrontation with the complexity of the world at its most extreme is beyond human endurance."); see also Lawrence E. Mitchell, Fairness and Trust in Corporate Law, 43 *Duke L.J.* 425, 432-33 (1993) (noting that the destruction of trust would be the "destruction of the possibility of social relations").

n19. See Govier, *supra* note 2, at 26 (noting the element of vulnerability required to trust in matters with which we are unfamiliar). In complex societies we need to trust many people, including experts on information that we do not understand, even if it were disclosed to us. See *id.*; Tamar Frankel, Fiduciary Law, 71 *Cal. L. Rev.* 795, 803-04 (1983) (discussing specialization and its relation to fiduciary law; specialization is the most efficient way to utilize knowledge).

n20. Nature's world is no different; sharks are one of the few exceptions. See Behavior (visited May 24, 1999) <<http://www.seaworld.org/sharks/behavior.html>> (noting that sharks are basically asocial).

n21. See Francis Fukuyama, Trust: The Social Virtues and the Creation of Prosperity 7 (1995) (noting that a nation's ability to compete is conditioned by the level of trust inherent in the society); Francis Fukuyama, Great Disruption: Human Nature and the Reconstitution of Social Order 256 (1999) (defining attributes such as honesty and fairness as social capital, produced by private markets to increase profits); Whitney, *supra* note 10 (asserting that trusting is profitable as well as good); Bruce Chapman, Trust, Economic Rationality, and the Corporate Fiduciary Obligation, 43 *U. Toronto L.J.* 547 (1993).

n22. See Govier, *supra* note 2, at 6 (noting that the degree of trust increases with positive interactions, and decreases with negative interactions).

n23. But see Rolf Ziegler, Trust and the Reliability of Expectations, Rationality and Society 427 (1998) ("In the short run, an actor may decide to raise his forecasting ability by increased but costly attention, but in the medium run it can only be improved by learning processes.").

n24. See John G. Holmes & John K. Rempel, Close Relationships 187, 192 (Clyde Hendrick ed. 1989) (citing Kelly & Stahelsk, 1970; Miller & Holmes, 1975).

n25. See *id.*

n26. See Fukuyama, *supra* note 21, at 78-79 (noting that Chinese, unlike American entrepreneurial families, are likely to remain small and internally managed due to distrust of outsiders).

n27. See *id.* (noting that distrust of non-family members usually prevents institutionalization of Chinese businesses and drawing on outside talent). When trusting relationships have evolved not within the family but within a large work place, the work place is sufficiently large to maintain and nurture talent.

n28. Note the following two examples: In the 1950s an aggressive and successful young underwriting firm, Otis & Co, reneged on its underwriting obligations on the ground that the issuer did not provide accurate information in its prospectus. The huge potential liability caused Otis to petition for bankruptcy protection. See *Bankruptcy Referee Asks Court Dismiss Reorganization Plan*, N.Y. Times, Dec. 9, 1992, at 53. The company was put up for sale even before the final decision. See *Otis to Consider Offers for its Retail Business*, N.Y. Times, July 28, 1951, at 17. Otis won the case. See *Kaiser-Frazer Corp. v. Otis & Co.*, 195 F.2d 838 (2d Cir. 1952) (defendants won because contract at issue was unenforceable and prospectus misrepresentation was illegal under securities laws). The management of Salomon Brothers turned its attention away from employees that violate the law but brought substantial profits. See John H. Gutfreund, *Exchange Act Release No. 31,554* (Dec. 3, 1992). Even though it settled the charges against it, it lost its independence five years thereafter to Travelers. See Thomas S. Mulligan, *Travelers to Buy Salomon Bros. for \$ 9 Billion*, L.A. Times, Sept. 25, 1997 at A1, A12. After the 1991 scandal, Salomon was "financially crippled" and sold to Warran Buffet. When the company was sold again in 1997, a commentator noted that it "never really regained [its] position" after the scandal. *Id.*

n29. See Govier, *supra* note 2, at 206 (noting that public perceptions of leaders of an organization reflect upon the individual members; this is exemplified by the widespread use of advertising).

n30. For centuries, intermediaries have served to reduce the cost of trusting relationships among strangers. Financial intermediaries earned their keep by creating trusting relationships with customers, and enforcing promises among strangers. For example, the Rothschilds have facilitated trusting relationships by inter-positioning themselves among unknown parties, and offering a competent family network backed by substantial capital. Likewise, banks have offered letters of credit to establish a trusting relationship among traders in different lands. Purchases by catalogs are made possible by the inter-positioning of banks and credit card banking associations. The securities markets would not exist without the inter-positioning of brokers and dealers, who ensure execution of transactions among strangers in volatile markets. While it is likely that one of the parties will renege on the trade, the intermediary has an interest in executing the transaction because that is when the intermediary receives his compensation. Very few trades are litigated for breach. Intermediaries perform similar functions in other markets.

n31. In comparing American impersonal trusting with Japanese personal trusting, one can see the weakness of the Japanese system. The focal point of this weakness is with regard to financial institutions, which Japan is now remodeling. In an international economy, impersonal trusting has become crucial to national economic prosperity.

n32. For example, many state laws prohibit banks from penalizing borrowers who wish to refinance mortgages (that is, pay off their mortgage loans and take loans at lower interest).

n33. See Govier, *supra* note 2, at 153. Social trust is based on the experience of individuals and groups. People involved in associations are not likely to let others down, for their personal reputations would suffer if they did. "For politics, economics, and personal well-being, social trust is a valuable resource." *Id.*

n34. See Govier, *supra* note 2, at 24-25 (contrasting modern trust in institutions with Swedish village life where consumers only transact with known merchants). A sociologist "ties modern trust more to people's sense of how institutions operate than to their attitudes towards unknown individuals." *Id.*

n35. See *id.* at 29 ("To live in a complex society without going mad, we must have trust in systems too.").

n36. Most business relationships on the Internet today do not involve the offer and receipt of personal services, such as medical and legal services, which must involve a higher level of trusting than purchasing goods. Through the Internet, trading transactions are more costly and riskier than in real space for the same reasons that medical and legal services are costlier in real space.

n37. See Unsolicited Commercial Electronic Mail Act of 2001, H.R. 95, 107th Cong. (2001).

n38. Consumers who are not familiar with communicating on the Internet seem to be more gullible than they would be in real space. They view experts in Internet communications as more trustworthy. Thus there is something like a reverse order: expertise produces dependency and dependency produces trust.

n39. Russell Hardin defines trust mostly in terms of encapsulated interest. See Russell Hardin, *Trust and Trustworthiness*, 81 B.U. L. Rev. (forthcoming June 2001). I argue that encapsulated interest is a risk-reducing situation that contributes to trusting but is not trusting *per se*.

n40. See Diego Gambetta, *The Sicilian Mafia: The Business of Private Protection* 28 (1993) ("Good behavior in business evolves from an economic interest in keeping promises and acquiring a reputation for honest dealing... . This may also explain why the opposite norm obtains and the ability to cheat is praised and encouraged."); see also Hardin, *supra* note 39 (explaining that our first reaction is to distrust those about whom we have little knowledge).

n41. Market reputation has a different weight than personal observation, yet can carry weight of the aggregate opinion of others. It is more like price, a "black box," unless others have similar concerns. Reputation is a marketing device, distinguishing competitors in the markets. Trustworthy people offer reduced information costs to other parties, and can therefore charge more for their services and products. When transactions are trust-dependent to the extent that most people would not engage in a business relationship without trusting, the assurance of trusting becomes crucial to the transaction. In such a case, the interference of the law as a guarantor of trustworthiness may be cost reducing and even necessary.

n42. See eBay (visited Mar. 12, 2001) <<http://pages.ebay.com/help/basics/n-is-ebay-safe.html>> (touting site's "built-in safeguards" to ensure buyers and sellers are "honest and reliable").

n43. See Robert Axelrod, *The Complexity of Cooperation: Agent-Based Models of Competition and Cooperation* 65-66 (1997) (describing metanorms).

n44. See Financial Services Technology Consortium (visited March 9, 2001) <<http://www.fstc.org>> (comprising 90 organizations working in collaboration to create new methods for "commercial transaction on the Internet").

n45. It is suggested that the value of board directorship for busy corporate leaders is in "networking" and current information, including information about other actors in their field.

n46. See Moody's Investor Service (visited March 9, 2001) <<http://www.moody.com>> (providing "independent credit ratings research and financial information" to help investors analyze credit risks and reduce transaction costs).

n47. Banks have offered a similar service in the form of letters of credit since the seventeenth century. The letters of credit, however, provide a guarantee to parties abroad, who do not know, and therefore, do not trust the domestic parties' promises. The bank undertakes, unconditionally, the obligation to pay upon presentation of the bills of lading, providing evidence that the goods have arrived.

n48. See Bernard S. Black & Ronald J. Gilson, *Venture Capital and The Structure of Capital Markets: Banks versus Stock Markets*, 47 *J. Fin. Econ.* 243, 253 (1998) (stating that venture capital funds have an incentive to "monitor entrepreneurs' performance"); see also Symposium, *The Internet and Small Business Capital Formation*, 2 *J. Small & Emerging Bus. L.* 1 (1998) (stating that venture capital companies also provide a similar, though more intrusive service); Stephen J. Choi, *Gatekeepers and the Internet: Rethinking the Regulations of Small Business Capital Formation*, 2 *J. Small & Emerging Bus. L.* 27, 45 (1998).

n49. See Federal Trade Commission (visited March 9, 2001) <<http://www.ftc.gov>> ("The FTC works for the consumer to prevent fraudulent, deceptive, and unfair business practices in the marketplace and to provide information to help consumers spot, stop, and avoid them.").

n50. See Center for Democracy and Technology (visited March 9, 2001) <<http://www.cdt.org>> (seeking "practical solutions to enhance free expression and privacy in global communication technologies").

n51. See TRUSTe (visited March 9, 2001) <<http://www.truste.org>> (committed to helping web users "protect themselves online").

n52. Groups with similar interests undertake to enforce the members' obligations to be trustworthy, thereby maintaining the trustworthiness of the group. See Tamar Frankel, *Should Funds and Investment Advisers Establish a Self-regulatory Organization?*, in *The Financial Services Revolution, Understanding the Changing Roles of Banks, Mutual Funds and Insurance Companies*, 447, 451 (Clifford E. Kirsch ed., 1997) (explaining that membership organizations protect the members' reputations while also establishing ethical standards).

n53. For example, assume that a person wishes to hand over his life's savings, \$ 100, to a manager, expecting \$ 7 in additional benefits in terms of performance and free time, and paying the manager \$ 1 for his work. Assume further that the probability of losing the \$ 100 through the manager's conversion or incompetence is 50%. The person will not engage in this transaction because he will not risk losing \$ 50 even if the probability of gaining \$ 6 is very high. He will, however, interact if the manager provides him with assurance as to the

integrity of the money. However, the manager cannot expend more than \$ 1 minus his living expenses to provide that assurance. If the cost to the manager of assuring his trustworthiness is higher, he will not offer it and the parties will not interact. Someone will have to bridge the gap. That someone may be market verifiers, who can offer verification at a reduced rate, or the law, through a requirement for insurance, examinations, and other preventive measures, can ensure either that the money will not be converted, or that the manager is competent. Trusted private sector qualifiers, however, must also prove their trustworthiness. The law regulates the most trusted private sector qualifiers, such as lawyers and accountants.

n54. See Gramm-Leach-Bliley Act 504, *15 U.S.C. 6804* (1999) (requiring specified federal agencies to adopt rules restricting the ability of certain financial institutions to "disclose nonpublic personal information about consumers").

n55. See Privacy of Consumer Financial Information (Regulation S-P), *65 Fed. Reg. 12,354* (2000) (to be codified at 17 C.F.R. pt. 248) (proposed Mar. 2, 2000).

n56. See Privacy of Consumer Financial Information, *65 Fed. Reg. 8770* (2000) (to be codified at 12 C.F.R. pt. 332) (proposed Feb. 22, 2000).

n57. See Lawrence Lessig, *Code and Other Laws of Cyberspace* (1999); Lawrence Lessig, Preface to Trust, *81 B.U. L. Rev* 329 (stating that the use of code or technology can obviate the need to trust).

n58. See *id.* (arguing that technological protection replaces the important social act of trusting); see also Helen Nissenbaum, *Securing Trust Online: Wisdom or Oxymoron?* *81 B.U. L. Rev.* (forthcoming 2001) (arguing that security measures on the internet actually lower trusting behaviors by creating safe environments under which the act of trusting, i.e. the act of being vulnerable to another's discretion, is unnecessary).