Reputational Bottlenecks

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The standard economic challenge to mandatory requirements in contracts is that if consumers are genuinely interested in these quality features, they would avoid sellers who are reputed to sell non-conforming goods. Reputation underlies markets and with it, many mandatory laws are superfluous at best.

But how is product reputation created, by whom, and why? Oddly, those advancing the economic challenge fail to provide an economically motivated account of why individuals would bother to create reputational information in the first place, given that it is a public-good par excellence. Self-interested individuals would produce reputational information when it serves their own private interests, not some abstract social goals. Through a close examination of the private incentives to create reputational information, ranging from spite and gratitude to social signaling, the Article concludes that reputation-based systems are likely to systematically distort information regarding the quality of goods and services.

At the object-level, this conclusion supports more regulation of consumer contracts. However, this Article outlines a meta-level program for legal reform; beyond the traditional market-or-regulation discourse, the law can bolster market processes by unblocking reputational bottlenecks. That is, the law can foster incentives to share content-neutral reputational information and remove some of the legal risks borne by reputation generators. Using the law to facilitate the free flow of reputational information enjoys several normative advantages over both laissez-faire policies and is especially germane given the growing disillusionment with mandatory disclosure regimes.

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INTRODUCTION

This Article is the first study in the formation of reputation and its effect on consumer contracts. Perhaps the most central problem in contract theory is the control of opportunistic behavior. In many consumer transactions, the consumer cannot easily verify the quality of the good before purchasing it. Thus, the goods or services may be opportunistically provided at sub-par quality, such as a defective toaster, a shoddy paint job, or a high hidden-fees credit card. Contract law, alongside other areas of private law, attempts to curb such behavior through a variety of formal doctrines and rules, such as mandatory price and quality requirements. Recently, there has been a resurgence in the popularity of an alternative of venerable pedigree: market discipline. The threat of loss of reputation is believed by many—especially in law and economics—to be a sufficient deterrent against opportunistic behavior, supplanting the need for the byzantine, inefficient, and coercive legal system.1 Although champions of this approach have not been frugal with ink or paper, they have left orphaned a basic set of questions that directly implicate the reliability of reputation: How does reputation come to be? Who chooses to produce reputational information and why? And, of ultimate importance, how reflective is reputation of the true qualities of the goods it seeks to describe?

“Reputation is a most false imposition,” contends the wily Iago, “oft got without merit, and lost without deserving.”2 The Article develops Iago’s critique by proposing the first systematic analysis of the ‘microfoundations’ of reputation and their effect on the reliability of reputation, i.e., explaining how the very bottoms-up process by which reputational information is created systematically distorts its reliability.3 For most products and services, reputation is created via

1 For an early exposition of this idea, see ADAM SMITH, LECTURES ON JURISPRUDENCE 327 (R.L. Meek et al. eds., 1978). (“When a person makes perhaps 20 contracts in a day, he cannot gain so much by endeavoring to impose on his neighbors, as the very appearance of a cheat would make him lose.”); see also Lior Jacob Strahilevitz, Less Regulation, More Reputation, in THE REPUTATION SOCIETY 71 (Hassan Massum & Mark Tovey eds., 2012) (arguing that in a world with strong reputational information “there would be a diminished need for regulatory oversight and legal remedies”). On these notions, see infra Section I.A.

2 WILLIAM SHAKESPEARE, OTHELLO act 2, sc. 3.

3 This is a grounds-up account of reputation, but reputation is also created through top-down processes, prominently litigation. See Kishanthi Parella, Reputational Regulation, 67 DUKE L. J. 62 (2018); Roy Shapira,
many disparate individual choices to share one’s experiences through gossip, offline word-of-mouth, written reviews, and online product ratings. In all of these decisions, individuals are motivated by the pursuit of their own private goals, rather than any abstract social goal. Self-interest means that consumers would share opinions when they feel extreme feelings, such as spite or gratitude, and that they may suppress opinions that are unpopular, jejune, bland, or require effort to articulate or disseminate. Worse, consumers may intentionally distort opinions for social or financial rewards offered by interested companies. As a result of these private incentives, reputation is slower to develop than generally appreciated—a problem I term ‘reputational congestion’—and, exhibits a bias towards extreme opinions—a problem I term ‘regression to the extreme.’

Reputational congestion and regression to the extreme create false impressions regarding the true quality of products and services. The evidence of such distortions is voluminous, including experiments where every statistical measure of consumer satisfaction—mean, mode, median, variance—regarding the same products differs significantly between voluntary consumer reviews and a survey of all consumers. Now, to be clear, reputational information is still information and despite the distortions, it is often possible to make coarse-grained distinctions among products. It is also helpful that at least the more sophisticated consumers are aware of some the distortions and employ various heuristics in an attempt to correct these distortions. However, the low signal-to-noise ratio of reputational information and the biased nature of the signal undermine reputation’s ambition to effectively supplant regulation.

To illustrate, suppose one wants to hire a plumber to replace the kitchen pipes. To ensure quality, a consumer may rely on contractual guarantees or, as is more commonly the case, choose among a few plumbers the one whose quality of services has the best reputation. To determine any plumber’s reputation, the consumer would seek the opinions of past consumers. If reputational information is sparse due to congestion, outlier experience may appear more common than they

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4 On the phenomenon and prevalence of ‘astroturfing’ or fake experience sharing, see infra Section II.A.3.
5 See infra Section II.B.2.
6 Section II.B.3 examines closely a variety of potential consumer responses to reputational distortions.
truly are. Moreover, if the only ones to report their experiences are those with an ax to grind, both the relative value of the plumbers and the expected value of any plumber would be distorted. A systematically good plumber might have less favorable expressed support and more content ‘silent majority’ than a hit-or-miss plumber that only on occasion provides excellent service. Or if—as is realistic—negative opinions are rare, two plumbers might have a similar degree of support, despite one being more prone to accidents. Or, if two plumbers have the same quality, but one served more customers than the other, there would be more reviews for the former than the latter which would convey a misleading sense of the difference in their average quality. Again, reputational information will not be useless; it will surely allow the consumer to effectively screen terrible plumbers and focus on others. But it will be unreliable at the relevant margin, which is the choice among several service providers or goods. This is not unlike an election polling booth on top of a small hill. Those who cast their vote probably have strong views, but they are unlikely to represent the public at large because of simple selection bias. Importantly, no degree of statistical wizardry could compensate for the bias in such a poll, and in the same way, even savvy consumers cannot fully compensate for the pernicious effects of reputational congestion and regression to the extreme. Two half-truths do not average to the truth.7

This critique of the reliability of reputation challenges a central vein in the scholarship, one that runs through law, economics, sociology, and even biology. Under the standard view, reputation is often posited as a “frictionless, uncomplicated process in which individuals somehow get access to information.”8 This reductive view uncritically assumes, with only a few exceptions,9 that reputation information is reliable. For

7 For reasons that are discussed below in depth, third-party trading platforms, such as Amazon or Yelp, are incapable of resolving these issues. See infra Section III.C.
8 Shapira, Litigation, supra note 3, at 1203. In one of the most cited papers in all of economics, the fathers of the modern economic theory of reputation lauded reputation for being “a private device which provide[s] incentive that assure[s] contract performance in the absence of any third-party enforcer.” Benjamin Klein & Keith B. Leffler, The Role of Market Forces in Assuring Contractual Performance, 89 J. POL. ECON. 615, 616 (1981). Likewise, a literature review in biology reveals lack of attention to the microfoundations of reputation. See Robert Kurzban, Biological Foundations of Reciprocity, in TRUST AND RECIPIROCITY 105 (Elinor Ostrom & James Walker eds., 2003). Sociologists of trade, while generally more attentive to these issues, have also left the topic under-theorized. See infra note 52.
9 On these views, see infra, Section I.C.
this reason, game theoretical models often critically depend on the assumption that consumers omnisciently observe all past transactions and transgressions.\(^\text{10}\) In contract scholarship, reputation is often held to be the default disciplinarian of sellers, to be replaced only in exceptional cases.\(^\text{11}\) This sentiment was well captured by contract law luminaries Scott and Schwartz who stated that “[s]tate enforcement of . . . agreements is unnecessary when the agreements . . . . can be enforced with reputational sanctions.”\(^\text{12}\) In torts, Professors Polinsky and Shavell questioned the necessity of product liability in the face of other disciplining forces, including reputation-based market forces: that “large firms tend to be especially concerned about their reputation for safety.”\(^\text{13}\) Professor Sugarman more radically argued against the entire edifice of tort law, by contending that reputational concerns drive most investments in safety generally and that, inasmuch as there is partnership between tort and reputation, tort is a “sleeping partner.”\(^\text{14}\) Other examples abound.\(^\text{15}\)

\(^{10}\) For a recent prominent example, see Simon Board & Moritz Meyer-Ter-Vehn, Reputation for Quality, 81 ECONOMETRICA 2381, 2386–87 (2013) (assuming that reputational signals are perfectly disseminated). More generally, in their literature review economists Bar-Issac and Tadelis note that most models assume that “potential future buyers observe whether the service [given to another] was a success or not, and beliefs are updated accordingly.” Heski Bar-Issac & Steven Tadelis, Seller Reputation, 4 FOUND. & TRENDS MICROECONOMICS 273, 282 (2008).


\(^{14}\) Stephen D. Sugarman, Doing Away with Tort Law, 73 CALIF. L. REV. 555, 564 (1985); see also Albert H. Choi & Kathryn E. Spier, Should Consumers be Permitted to Waive Products Liability? Product Safety, Private Contracts, and Adverse Selection, 30 J. L. ECON. ORG. 734, 755 (2014) (“In markets [that] involve repeat purchases and information revelation over time, firms would have strong private incentives to preserve their reputations for product safety even absent liability.”).

\(^{15}\) See, e.g., Bryan H. Druzin, Social Norms as Substitute for Law, 79 ALB. L. REV. 67, 89 (2016) (arguing that social norms can effectively replace large parts of the law such as contracts, employment, and many parts of commercial law); see also Walter Gellhorn, The Abuse of Occupational Licensing, 44 CHIC.
The second contribution of this Article is constructive. There is currently an urgent gap in accepted paradigms of how and when the law should intervene in consumer markets. Scholars have a deep disagreement concerning the justifications of direct, object-level interventions in contracts through, for example, price and quality controls. On the one hand, markets sometimes experience failures that stymie their operation and reduce social welfare; on the other hand, regulatory interventions are said to be afflicted with unintended consequences and to compromise consumer autonomy. To resolve this intractable tension, various compromises were tried. Up until recently, a leading favorite was the use of mandatory disclosures. By compelling sellers to reveal information, it was hoped that consumer could make better choices. Unfortunately, there is a recent disillusionment with this approach, as practice showed that it is very difficult for regulators to effectively choose what information to disclose in a way that would be both relevant to the consumer and will avoid flooding her with information. All of this leaves regulators and judges with very few tools to remedy market imperfections.

The Article argues for a new, high impact paradigm of consumer protection: unblocking reputational bottlenecks. Because distortions in reputational information are caused by misaligned incentives, the law can set up the rules of the game such that the private incentive to create reputation will be better aligned with the social value of such information. Unblocking reputational bottlenecks is an alternative to the tug of war between top-down regulatory measures and bottom-up market ordering. Unlike laissez-faire policies, this paradigm sees an active role for the law. But in contrast to direct regulatory measures, unblocking reputational bottlenecks is consumer-choice friendly approach that only focuses on information and its availability. Despite the focus on information, it is to be distinguished from the mandatory

L. Rev. 6 (1976) (arguing that reputation can substitute large parts of occupational licensing); Thomas Szasz, Our Right to Drugs (1992) (arguing for deregulation of access to drugs).

16 See infra Section, I.B.


18 See Florencia Marotta-Wurgler, Does Contract Disclosure Matter?, 168 J. Institutional & Theoretical Econ. 94, 95 (2012) (“Regulators have long preferred increased disclosure”).

disclosure approach on several grounds. Chiefly, unblocking of reputational bottlenecks does not demand much domain-specific expertise from the regulator. Under this approach, the regulator is not required to set a specific disclosure regime for, say, sale of cars or credit cards. Rather, the regulator is focused on setting the rules of the game and making sure that there are properly aligned incentives for consumers to share their experiences. For example, sharing opinions and writing reviews carries the risk of a lawsuit, which considerably chills participation incentives. The law also does not address aggressively enough the phenomenon of fake reviews and underutilizes “reputational platforms”—third-party trading sites, such as Amazon or eBay—which can facilitate the creation of reputational information. Through various methods explored in this paper, the law can create an interface between the formal system and the informal system of reputation. Of course, there are also limitations to this approach, so this approach cannot substitute all other types of regulation, but it can definitely substitute less effective means of regulation on various fronts.

This analysis is timely for several reasons, not least of which is the recent disillusionment with consumer protection through mandatory disclosure, the new Draft Restatement of Consumer Contracts, and the skeptical stance the current Administration has towards the Consumer Financial Protection Bureau. Recent legal measures, while confused and counter-productive, betray the interest

\[\begin{align*}
20 & \text{ All of the issues discussed in this Article are exacerbated by the ascendency of dubious ‘reputation management’ services, which work to eradicate negative written opinions. See Eugene Volokh & Paul A. Levy, Opinion, Dozens of Suspicious Court Cases, With Missing Defendants, Aim at Getting Web Pages Taken Down or Deindexed, WASH. POST (Oct. 10, 2016), http://www.washingtonpost.com/?utm_term=.19dbb81235e6 (Reviewing a practice of suing fake defendants to secure injunctions that would compel publishers to remove unflattering information).}
21 & \text{ See infra Section III.A.}
22 & \text{ Reputational platforms are systems that “aggregate and disseminate reputational information” concerning “an actor’s past performance that helps predict the actor’s future ability to perform.” Eric Goldman, Regulating Reputation, in THE NEXT DIGITAL DECADE: ESSAYS ON THE FUTURE OF THE INTERNET 293, 294 (Berin Szoka & Adam Marcus eds., 2010).}
23 & \text{ See infra Part III.}
\end{align*}\]
of policymakers in ensuring robust market mechanisms.25 Besides its contribution to contracts literature and the work on informal ordering, the Article also seeks to contribute to the new burgeoning literature on the sharing economy, which has been overly sanguine about the prospects of reputational platforms to transform regulatory efforts.26

The Article unfolds in three parts. Part I traces the development of the idea that reputation can be a satisfactory solution to the problem of opportunistic behavior in consumer contracts. It shows how central to this idea is the belief that reputation is dependable and reliable, and how much of this theory is built on a rudimentary understanding of reputation.

Part II offers the first systematic analysis of the ‘microfoundations’ of reputation and their effect on the reliability of reputation. The microfoundations are the individual cost-benefit calculations that determine whether any single individual would choose to produce reputational information. After considering a variety of potential motivations, drawing on a broad and mostly disparate literature in psychology, sociology, and marketing, the analysis

concludes that the structure of incentives creates two mutually-reinforcing phenomena: Reputational congestion and regression to the extreme. The combined result of these phenomena is that reputational information will be less reliable than generally appreciated. This Part considers in depth the possibility that consumers, technology, or third-party reputational platforms such as Amazon or Yelp would be able to overcome these phenomena. It concludes that for the same reasons that election pollsters, statistically sophisticated as they may be, cannot fully overcome selection bias in polling, consumers will not be able to overcome reputational congestion and regression to the extreme.\(^{27}\)

Although the analysis presented here can support object-level regulatory measures, Part III explores another avenue. The traditional tug of war in contracts between regulatory and laissez-faire policies seeks to trade-off consumer outcomes for consumer choice.\(^{28}\) Instead, by improving the power of reputation, the law can improve outcomes without jeopardizing choice. This Part outlines, as a proof of concept rather than a detailed investigation, some methods that the law can employ to improve reputational systems. Particular attention is given to the examination of consumer privileges for product reviews, the legality of providing financial incentives for opinion-sharing, and the accreditation of reputational platforms.

I. CONTROLLING OPPORTUNISTIC BEHAVIOR: REPUTATION & CONTRACTS

A central challenge—if not the central challenge—of contract law is the control of opportunistic behavior.\(^{29}\) Most commercial

\(^{27}\) Despite statistical prowess, an abundance of resources, rich historical data, and immense financial stakes, pollsters and statistical analysts were unable to overcome the participation bias in the polls leading to the 2016 elections, predicting with an extremely high degree of confidence that Hillary Clinton would win the national elections. Nate Silver, *The Real Story Of 2016, FIVETHIRTYEIGHT* (Jan. 19, 2017), http://fivethirtyeight.com/features/the-real-story-of-2016/.


\(^{29}\) Timothy J. Muris, *Opportunistic Behavior and the Law of Contracts*, 65 MINN. L. REV. 521 (1980) (discussing the role of opportunistic behavior in contract law). Muris seems to consider reputation as a better solution but suggests that it is unhelpful when sellers can conceal their past misbehavior.
transactions involve some temporal element, where the consumer purchases a good or service today—a fridge, a car, or a remodeling project—but will only learn of its quality later.\textsuperscript{30} The concern with such transactions, which in economic parlance are said to involve “experience attributes”, is that sellers will promise high and provide low.\textsuperscript{31} That is, sellers may take advantage of the temporal element, deceive consumers, and later refuse to honor their obligations. It is well-accepted that to combat opportunism, sellers must be made to internalize the costs of such behavior. This section discusses two such solutions to the problem of opportunistic behavior, one that relies on the legal system and another on informal, reputational process.

\textbf{A. Controlling Opportunistic Behavior through Law or Reputation}

Over the centuries, the legal system has developed antibodies to opportunistic behavior.\textsuperscript{32} The law sets ex-ante minimal quality
regulations, mandates price controls, requires licenses, training, and testing, enforces truth-in-advertising requirements, and imposes post tort and criminal liability for violations of any of these standards. In contract law, parties attempt to anticipate such behavior in their transactional design through express provisions and judges use their discretion to curb it through implied or implicit warranties, gap filling, mandatory disclosures, and implied duties of good faith and fair dealings. The nature of many of these doctrines is often mandatory, even when they are presented as defaults the parties can over-ride.

In recent decades, legal scholarship has rediscovered the idea that “law is only one of many social institutions and practices amid which markets function.” Successful case studies started saturating

33 See, e.g., 7 C.F.R. § 996.13 (2018) (requiring that peanuts that are considered “Segregation 1” shall not have more than 3.49% damaged kernels).

34 See, e.g., ALA. CODE § 8-8-1 (1975) (setting a cap of 8% on the price of credit).

35 See, e.g., MISS. CODE ANN. § 73-7-71 (1972) (LexisNexis) (requiring practicing hair braiders to hold a license, prove that they were trained for an estimated 2,000 hours, and that they had passed a relevant test); see also Mississippi Hairbraiding, INSTITUTE FOR JUSTICE, http://ij.org/case/armstrong-v-lunsford/ (last visited Jan. 5, 2018).

36 See, e.g., U.S FOOD & DRUG ADMIN., INGREDIENTS DECLARED AS EVAPORATED CANE JUICE: GUIDANCE FOR INDUSTRY (2016) (guiding advertisers not to use the term ‘evaporated cane juice’ to describe a sweetener because it may mislead consumers to believe that it is juice rather than sugar).

37 See, e.g., 815 ILL. COMP. STAT. ANN. 505/1 (West 2016) (imposing criminal and civil liability for consumer fraud).

38 See, e.g., Choi & Spier, supra note 14, at 735 (explaining that courts are “generally hostile toward[s]” attempts to opt-out of product liability).


40 RESTATEMENT (SECOND) OF CONTRACTS § 205 (AM. LAW INST. 1981); U.C.C. § 1-201(b)(20) (AM. LAW INST. & UNIF. LAW COMM’N AMENDED 2011).


the literature since the 60s, showing the effectiveness of industries that operate outside the law. These industries have formed a ‘spontaneous order’ in the Hayekian sense, involving an internal system of norms and enforcement.\footnote{See F.A. Hayek, Law, Legislation and Liberty: Rules and Order 46–48 (1973); Barak D. Richman, Firms, Courts, and Reputation Mechanisms: Towards a Positive Theory of Private Ordering, 104 COLUM. L. REV. 2328, 2333–34 (2004) (dating the literature on private ordering to the early 1990s).} The informal order often exhibits an amalgam of social norms and private adjudication, but its quintessential characteristic is its system of enforcement, which relies on voluntary reputational sanctions.\footnote{Richman, supra note 43.} An unscrupulous diamond trader would think twice before absconding with a bag of unpaid diamonds, for fear of losing his ability to trade diamonds in the future; a Wisconsin auto manufacturer in the 1980s is said to prefer keeping an unprofitable agreement to risking the scorn of his industry fellows; a Silk Road drug dealer—immune from contractual enforcement—would prefer sending expensive cocaine to using cheap fillers, for fear of loss of his good name.\footnote{Drug dealers trade under carefully maintained brand names, although they suffer from a short half-life. See Nick Janetos & Jan Tilly, Reputation Dynamics in a Market for Illicit Drugs, 1 (Working Paper, 2017); see also Lisa Bernstein, Extralegal Contractual Relations in the Diamond Industry, 21 J. LEG. STUD. 115 (1992) (analyzing the behavior of Jewish Orthodox diamond traders in New York); Stewart Macaulay, Non-Contractual Relations in Business: A Preliminary Study, 28 AM. SOC. REV. 55 (1963) (studying the behavior of managers in Wisconsin).} In fact, even the venerable institution of bankruptcy owes its name to such reputational enforcement. When an Italian merchant refused to honor his debts, his creditors would break her trading bench, alerting others of the merchant’s credit-unworthiness, making the bench an emblem of reputation.\footnote{William D. Griffith & Charles A. Holmes, The Law and Practice in Bankruptcy 1 (1867).} Adam Smith neatly captured this idea in his \textit{doux commerce} thesis, the idea that behaving honestly will be in the selfish self-interest of many market participants.\footnote{See Smith, supra note 1. The term \textit{doux commerce} was expounded by Albert Hirschman, The Passions and the Interests and in His Rival Views of Market Society 105–142 (1992).}

In choosing between formal and informal ordering, a large movement has been uncharacteristically sanguine about the latter.\footnote{Some contemporary examples of pro-reputation attitudes include Disrupter Series: How the Sharing Economy Creates Jobs, Benefits Consumers, and Raises Policy Questions: Hearing Before the Subcomm. on Commerce, Mfg.,}
From regulators to legislators, sociologists to economists, and lawyers to judges, unbridled excitement accompanies discussions of these ‘organic’ systems of order. In comparing the two, scholars point out the many deficiencies of the byzantine, slow, inaccurate, and coercive system of contract enforcement. Among the vices of litigation, they count the vagaries and uncertainties of both the legal process and legal standards, the divorce of various rules of interpretation from the wishes of the parties, the limits on remedies, the many different costs of the process itself, and, perhaps most importantly, the weakness of enforcement mechanisms.49

Reputation-backed private ordering, they argue, gets more bang for less buck, controlling opportunism efficiently, accurately,
organically, and effectively. This is because the loss of reputation is immediate, independent of lengthy and uncertain trials, and 'organically' stems from the parties themselves. Moreover, as Professor Barak Richman notes, informal ordering allows parties to tap into assets that the legal system cannot reach. For some, exclusion from the country club or being relegated to a back-row seat in the synagogue may be as deterring as a financial sanction. Moreover, when reputation is lost, there is nothing to repossess, thus avoiding the costs and uncertainties of the repossession process itself. In sum, these lawyers argue, what the formal order does slowly and inaccurately, informal ordering can do quickly and precisely. Indeed, they do not go so far as

50 See Barak D. Richman, Norms and Law: Putting the Horse Before the Cart, 62 DUKE L. J. 739, 740 (2012) [hereinafter Richman, Norms and Law] ("Among the most salient features of modern courts are that they are expensive, slow, and inaccurate."); Daniel B. Klein, Knowledge, Reputation, and Trust, by Voluntary Means, in REPUTATION: STUDIES IN THE VOLUNTARY ELICITATION OF GOOD CONDUCT 1, 2 (Daniel B. Klein ed., 1997) (explaining that what distinguishes informal ordering from formal ordering is that in the former “good conduct is encouraged by ‘voluntary’ means—that is, by means that do no violence or coercion to one’s property or person’); see also Scott Baker & Albert Choi, Reputation and Litigation: Why Costly Legal Sanctions Can Work Better than Reputational Sanctions, (Va. L. & Econ. Research Paper No. 2013-02, 2013) (supposing that litigation provides a noisy signal relative to reputation).

51 See Richman, supra note 43, at 2332 (explaining that enforcement efficiencies are more important than administrative efficiencies in explaining why merchant communities prefer private ordering to contractual enforcement).

52 See, e.g., Lisa Bernstein, Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions, 99 MICH. L. REV. 1724, 1725 (2001) (arguing that the informal order at the cotton industry “work[s] extraordinarily well,” that this system resolves disputes “expeditiously and inexpensively,” and that arbitration awards “are widely respected and complied with promptly”); Lawrence Lessig, The New Chicago School, 27 J. LEGAL STUD. 661, 665 (1998) (describing how the so-called Chicago School views law as crude, slow, clumsy, and self-defeating alternative to private ordering); Robert E. Scott, A Theory of Self-Enforcing Indefinite Agreements, 103 COLUM. L. REV. 1641, 1644 (2003) (“Scholars have long understood that reputation and the discipline of repeated interactions are efficient means of self-enforcement.” Moreover, “[w]here self-enforcement is effective, it is more efficient than legal enforcement.” Id. at 1692); Alex Geisinger, Are Norms Efficient? Pluralistic Ignorance, Heuristics, And the Use of Norms as Private Regulation, 57 ALA. L. REV. 1, 1–2, 29–30 (2005) (discussing, critically, the “current optimism regarding norm efficiency within...
to explicitly argue that reputation is consummate or that courts and regulation are completely superfluous; after all, even ardent minarchists agree that courts have some role. Yet, for many the overall calculus comes out in favor of reputation-based regulation.

Such pro-market and pro-reputation views also have deep ideological roots. Venerable traditions in political theory—liberal, neoliberal, libertarian, neoclassical, laissez-faire, and the list goes on—favor, as a matter of principle, market-based regulation. As the reputation economist Benjamin Klein observed, “If one puts small confidence in the efficacy and integrity of external authority—in particular, governmental institutions—then the hope for self-policing gains in relevance.” Whereas top-down systems of regulation create anxiety with the external imposition of authority, bottom-up pressures from ‘natural’ market interactions are perceived as either morally justified or morally neutral.

B. A Modern View of Consumer Contracts: The Force of Consumer Contracts


53 See ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA 16–17 (1974) (describing the inevitable evolution of courts from ‘protective associations’).

54 Klein, supra note 50, at 2.

55 On the problem of authority, see MIKE HUEMER, THE PROBLEM OF POLITICAL AUTHORITY, 100 (arguing that courts have a limited role and “may not go on to coercively impose paternalistic or moralistic laws”); see also Duncan Kennedy, The Role of Law in Economic Thought: Essays on the Fetishism of Commodities, 34 AM. U. L. REV. 939 (1984) (critiquing the tendency to see the market as natural and state interventions as artifice); Charny, supra note 48, at 1845–46 (highlighting the centralization inherent to informal systems of ordering).
The debate on markets and regulation naturally extends to contract law. For the most part, contract scholars think about the markets versus regulation mostly in terms of ‘paternalism’; to what extent should ex-ante regulation by legislatures and ex-post interventions by judges override the actual agreements of the parties? Paternalistic motives were traditionally limited, at least by classic liberals, to cases where there was a clear market failure. However, the recent acceptance of the idea of bounded rationality and limited self-control have considerably expanded the scope of such arguments. If consumers are not the best judges of their own well-being, it can theoretically be possible to increase their welfare by limiting their choice, e.g., making insurance mandatory and usury prohibitive.

What, then, are the proper limits of freedom of contracts? This question was at the heart of a recent debate between Professors Richard Epstein and Oren Bar-Gill (who also serves as a reporter for the new Restatement of Consumer Contracts). Parting with the strong view of the proverbial homo economicus, Epstein concedes the existence and importance of cognitive constraints on consumer decision-making. Epstein freely admits that such limits will sometimes lead consumers to commit “serious mistakes.” This concession notwithstanding, Epstein argues that paternalistic interventions are still unwarranted because consumers can avail themselves of methods involving “second-order rationality”: learning from past-experience, consulting with experts, and—importantly—learning about products’ reputation. In his view, rather than assuming sophistication and full rationality, “the


57 See Ian Ayres & Robert Gertner, Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules, 99 YALE L.J. 87, 88 (1989) (describing the existence of a “surprising consensus” that the two proper reasons to intervene in contracts boil down to paternalism and control of externalities). Since then, the consensus has likely expanded to also include the control of cognitive limitations and limiting contractual hold-ups. See Steven Shavell, Contractual Holdup and Legal Intervention, 36 J. LEGAL STUD. 325 (2007) (arguing that the control of hold-ups provides another meta-justification).

58 Epstein, Behavioral Economics, supra note 11, at 111.

59 Id.
neoclassical case for markets rests on the more qualified assumption that learning actually matters.” Consequently, Epstein sees little occasion for paternalistic limitations on contractual freedom.

Responding to this argument, Bar-Gill agrees that consumer learning is powerful and potent, capable of supplanting regulation; however, he questions the adequacy of reputational forces in those cases where goods are nonstandard:

“[Epstein] forcefully argues that mistakes with respect to the value of a standardized product are unlikely to persist in the marketplace. But not all products are standardized. . . . With a nonstandardized good, the information obtained by one consumer might not be relevant to another consumer who purchased a different version of the nonstandard good.”

The upshot of this debate is not the disagreement, but the deep agreement that underlies it: for some class of goods, standardized goods, reputation is sufficiently potent to curb opportunistic behavior. Hence, contract law need not worry about intervening in areas where product reputation is abundant. Similar attitudes were expressed by other leading figures in the field.

These debates highlight the centrality of reputation in contracts as a regulator and demonstrate how it is treated as a dependable, credible, and reliable alternative to top-down regulation. In the presence of sufficient reputational information, the general agreement in these debates seems to be that large domains of contract and consumer law can be effectively supplanted by market-based reputational systems.


62 Bar-Gill defines heterogeneity along several dimensions, and products may be different not just because they physically distinct, but also because they are used for different purposes. Id. Epstein argues that “by [Bar-Gill’s] account, no product is ever standardized, for if people choose to spend their cash in different ways, or to drive identical cars in different ways, then they pose insurmountable problems for regulator.” Epstein, *Neoclassical Economics*, supra note 60 at 819.

C. The Integrity of Reputation

The literature has generally avoided direct engagement with the nature of reputation, and instead mostly relied on an ‘emergentist’ view that abstracts from all questions of how reputation comes to be. A view is emergentist if it identifies a phenomenon only at the complex level. For example, the quality of ‘saltiness’ does not describe the taste of chlorine or sodium, yet their combination create salt which is salty; a grain of sand has no ‘pileness’ to it, but once enough grains are collected, a pile emerges; or, more contentiously, no neuron or synapse has the quality of intelligence or self-awareness, yet their collection seems to cause conscience. The reputation of goods and services is likewise understood as an emergent property of the market. A seller sells a widget and once enough consumers purchase and use it, the widget ‘automagically’ has a reputation for quality which directs the decisions of future consumers. The core of the emergentist position, then, is a view of reputation as a “frictionless, uncomplicated process in which individuals somehow get access to information.” There are many examples of such views that assume that “[t]he moment that a person cheats, it becomes common knowledge that the person lacks integrity, and hence there is no cooperation for the rest of the game.”


65 This omission is hardly unique to law, for examples in other fields see Wenqi Shen et al., Competing for Attention: An Empirical Study of Online Reviewers’ Strategic Behavior, 39 MIS Q. 683, 683 (2015) (“Most of the existing literature has overlooked the question of how online reviewers are incentivized to write reviews.”). Recently, scholars have emphasized the role of the legal system in producing reliable reputational information. See supra note 3.


67 See Richman, Norms and Law, supra note 50, at 750.

68 Shapira, Litigation, supra note 3, at 1203.

69 W. Bentley MacLeod, Reputations, Relationships, and the Enforcement of Incomplete Contracts, (Columbia University Working Paper 0506-23, 2006); see also Kornhauser, supra note 42, at 697 (depicting an ideal model of
In the foundational Klein-Leffler model of reputation, for a prominent example, consumers are explicitly “assumed to costlessly communicate quality information among one another.”\textsuperscript{70} This reputational information is then thought to propagate “throughout the community without institutional help.”

The emergentist view is problematic for various reasons, not the least of which is its lack of any theoretical underpinnings that explain when—and when not—reputation will come to be. But most concerning is the implication that reputation is generally reliable, that is, that it fairly describes the quality of the underlying good without systematic bias. Because if reputation simply emerges, there is no process by which it will be ‘tainted’. Despite these issues, only a few scholars have shaken the emergentist mold. Some have noted that reputational information may be costly to obtain, noisy,\textsuperscript{71} distorted by the incentives of intermediaries,\textsuperscript{72} or may be ineffectual (because, for example, sellers’ presence in the market is a short-lived one).\textsuperscript{73} As noted, Professor Bar-Gill emphasizes the possibility of thinness of reputational information in certain markets and with respect to certain products. Further, Professor Schwartz acutely notes the costs that may be involved in reputation, explaining that “the innocent party [to a failed transaction] will incur costs in informing others that it was not at fault; and third parties will incur costs learning about which of the contract parties is unreliable.”\textsuperscript{74} Still, even where the potential “noisiness” of reputation is admitted, none of that ever amounts to a claim that an inherent systematic distortion in the body of reputation exists. Rather, the noisiness is thought to disappear in the presence of more reputational information, which “increases the diagnosticity and persuasiveness of reputation where “buyers have perfect knowledge of the seller’s performance rate.”).\textsuperscript{70}

\textsuperscript{70} Klein & Leffler, \textit{supra} note 8. The authors note that if some consumers are ignorant of reputation or otherwise forget some past experiences, then this will deteriorate the deterrent effect of reputation.

\textsuperscript{71} See Alan Schwartz, \textit{The Enforcement of Contracts and the Role of the State, in LEGAL ORDERINGS AND ECONOMIC INSTITUTIONS} 105, 105 (Fabrizio Cafaggi, Antonio Nicita & Ugo Pagano eds., 2007) (“reputation is a noisy signal.”).

\textsuperscript{72} See Shapira, \textit{Litigation, supra} note 3.


\textsuperscript{74} See Schwartz, \textit{supra} note 71, at 105.
[reputation].”75 And so, these exceptions notwithstanding, the overall view in legal scholarship is highly emergentist and, most problematic, it assigns a high degree of reliability to reputation.

II. THE MICROFOUNDATIONS OF REPUTATION

Reputation is thought to be representative of the wisdom crowds, yet it will typically take 100 sales to generate five reviews.76 Nor is the selection of the ‘crowd’ random; study after study finds that online opinions tend to the extreme, with very few reviews on middling experiences.77 Moreover, fake reviews are prevalent and recently, consumers started using consumer ratings strategically to attain political ends, some of which are detestable.78 These questions invite a deeper look into the question of how reputation is created and how reliable it is.

When a neighbor complains over the fence to his next-door neighbor that his newly purchased lawn mower is no good, he is creating reputational information.79 When a person tells her friend that she got food poisoning from the new place that just opened up, she is generating reputational information. When user ‘daniel’ wrote on Amazon that a play tent has “the stability of a house of cards” and rated it with one star, they were creating reputational information.80 When


77 See infra note 131.

78 Chris Jancelewicz, Anti-’Black-Panther’ Facebook Group Campaign Targets Marvel Movie, GLOBAL NEWS (Feb. 2, 2018) (detailing the attempts of an online group to spread false review information regarding a movie, potentially motivated by racist agenda).

79 See Nick Emler, Gossip, Reputation, and Social Adaptation, in GOOD GOSSIP 171 (R. F. Goodman & A. Ben-Ze'ev eds., 1994) (“[r]eputations do not exist except in the conversations that people have about one another.”).

80 daniel, Product Review, available online at https://www.amazon.com/gp/customer-
musician Dave Caroll uploaded to YouTube his song ‘United Breaks Guitars’, satirizing his negative experience with the airline, he was creating reputational information—and a powerful one at that: a result, United’s stock price fell by 10 cents, representing a loss of $180 million.81

As these examples highlight, reputational information can be ultimately traced back to individuals. The microfoundations of reputation describe why, and under what circumstances, individuals would choose to engage in the production of reputational information. In trying to answer this question, a useful starting point is the question of the individual’s own, internal perspective. It is generally expected that individuals would seek to promote their own goals, rather than attempt to achieve abstract social goals. Consistent with human action in many other fields, individuals would produce reputational information only if they view the benefits of so doing as exceeding the costs and inconvenience involved in its production. Yet, reputation is a public good par-excellence; it is non-rivalrous and non-excludable, and the individual creating reputational information and the individual acting on it are often not the same person.82 In order to avoid the Tragedy of the Commons, where everyone likes to have a public resource but none tends to it, it must be individually advantageous to create sufficient and truthful reputational information.83

The next section builds the microfoundations of reputation by synthesizing a large body of mostly disparate literature in psychology, sociology, and marketing. The microfoundations lay out a typology of the different costs, benefits, and incentives associated with reputation creation. An understanding of these microfoundations allows one to model the creation of reputation and thus highlights some of its problems while offering a diagnosis of their causes. This diagnosis will become important for the prescriptive Part that follows. For now, it is important to note how this focus on the individuals creating reputation stands in stark contrast to the emergentist view implicit in the

81 See Chris Ayres, Revenge is Best Served Cold – on YouTube: How a Broken Guitar Became a Smash Hit. The Sunday Times. (July 22, 2009); Gulliver, Did Dave Carroll lose United Airlines $180m?, THE ECONOMIST (Jul, 24, 2009).


83 See Garrett Hardin, The Tragedy of the Commons, 162 SCIENCE 1243 (1968).
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literature.\textsuperscript{84} Reputation should scarcely be conceived as static property or as a right,\textsuperscript{85} but rather, it is a dynamic process motivated by considerations that are often orthogonal to the reputation bearer’s interests. Far from being a harmonious euphony of ‘collective social judgment’,\textsuperscript{86} reputation is a cacophony of discordant voices expressing individual judgments and experiences.

\section{Costs and Benefits of Reputation Creation}

The microfoundations of reputation are concerned with costs and benefits as they affect consumers qua creators of reputational information. Costs present a natural starting point because they are readily apparent. Creating and sharing reputational information often involves effort, time, and, in some cases, the risk of legal liability. Writing a 291-word review on his experiences with Kevlar gloves must have taken an anonymous Amazon user a few minutes,\textsuperscript{87} and adding six photos and edited screenshots to her 143-word review of a cleaning service must have taken “Bianca S.” the better part of her lunch break.\textsuperscript{88} Creating and editing a 7:15 minutes edited video review of the movie ‘It,’ would have taken YouTube user The Amazing Lucas a few hours.\textsuperscript{89} Legal liability is also a growing risk,\textsuperscript{90} as Las Vegas consumer Ms. Pamela Boling discovered.\textsuperscript{91} She sought the assistance of a tax professional who would help her demonstrate her economic hardships

\textsuperscript{84} See supra Part I.C. One notable exception is Goldman, supra note 22, at 300 (noting that there is a problem of “inadequate production incentives” for reputational information).
\textsuperscript{85} See Post, supra note 64.
\textsuperscript{86} See MCNARMA, supra note 64, at 21; see also Nicholas Emler, A Social Psychology of Reputation, 1 EUR. REV. SOC. PSYCHOL. 171, 171 (1990) (describing reputation as “a collective phenomenon and a product of social processes”).
\textsuperscript{89} The Amazing Lucas, it movie 2017 review WHY THIS MOVIE IS BAD, YOUTUBE (Sep 12, 2017), https://www.youtube.com/watch?v=PEKLB9j6-nY.
to the tax authorities. However, the service she received was below her expectations and so she turned to Yelp, wrote a review which concluded in her saying “this is MALPRACTICE!” Soon after, the business filed a lawsuit against her alleging defamation, claiming that her review harmed their business because it was presented as a determination of a fact. To ward off the lawsuit, she had to spend $40,852 in litigation costs. And while she won the case and recovered some costs, the process was long and risky. Importantly, the specter of litigation made her redact her original opinion, suppressing a view that the court deemed legitimate.

Although these costs may not all seem exceedingly high, they are far from trivial. Indeed, only a minority of consumers produce reputational information, and even fewer elect to write long verbal reviews. Importantly, it seems that even small costs will deter people from sharing their experiences with others. In one experiment, participants were given the opportunity to rate sellers based on the quality of goods they purchased from them. While one group was free to share its opinions, the other had to pay 25 cents for doing the same. The effect of making rating free was truly striking: “Removing a cost of only $0.25 . . . leads to a more than 50 percentage point increase in the frequency of rating.”

These broadly defined costs suggest that there must be countervailing motivations to produce reputational information, or else people—as distinct from sellers—will not produce reputational information. Citing the utility of reputation to the operation and efficiency of the market, as well as the welfare of future consumers, is insufficient, as these are public benefits. What needs to be seen, then, are the specific private benefits, and the analysis now turns to three large families of such benefits.

1. Internal Drives: On Spite and Gratitude

Why do consumers voluntarily engage in reputation-creating activity? This question first drew the interest of sociologists,
psychologists, and marketers, who, starting in the mid-sixties, attempted to map the various motivations that induce individuals to create and spread word of mouth. In an influential paper, the psychologist Ernest Dichter highlighted four internal motivations: quality of the product, self-centered perceptions, altruistic motivations, and message involvement. Future researchers concluded that positive and negative reputational behavior might be induced by very different motivations. For example, Sundaram et al., argued that positive word-of-mouth results from altruism, product-involvement, self-enhancement, and a desire to help the company but that negative word-of-mouth is due to anxiety reduction, vengeance, altruism, and advice seeking purposes.

Word-of-mouth activity is often dependent on the quality of the good in a way that perplexed researchers. For a long time, empirical studies seemed to conflict. One collection of studies found that consumers are more likely to engage in word-of-mouth activity when they are satisfied with their experiences, but another found that they are more likely when they are dissatisfied. These opposing findings were reconciled in 1998, by business professor Eugene Anderson, who explained that, in fact, these findings are entirely consistent. As Anderson explained, consumers are most likely to engage in word of


Ernest Dichter, How Word-of-Mouth Advertising Works, 44 HARV. BUS. REV., 147 (1966); see also Kyung Hyan Yoo & Ulrike Gretzel, What Motivates Consumers to Write Online Travel Reviews?, 10 INFO. TECH. & TOURISM 283 (2008) (finding, in a consumer survey in the travel industry, that concern for other travelers, interest in the improvement of the service, and the need for positive self-enhancement are the main drivers, but interestingly, venting negative feelings did not play an important role).

Altruistic motivations insufficiently explain phenomena such as the tendency of consumers to review products that were already extensively reviewed, making their opinion unlikely to affect any future consumer. See Fang Wu & Bernardo A. Huberman, Opinion Formation under Costly Expression, 1 ACM TRANSACTIONS ON INTELLIGENT SYST. TECH. 1 (2010); Lafky, supra note 94, at 567.


mouth when they had an extreme experience of any kind, positive or negative. It is only bland, middling experiences that result in lack of consumer activity.\footnote{See E. W. Anderson, 1 Customer Satisfaction and Word of Mouth, J. SERV. RES. 5, 11 (1998). It should be noted that it is hard to detect regularities in data using regression analysis if one expects a linear relationship where a non-linear one exists, as the case is here.}

To understand why quality plays such a significant role in consumer action, psychologists and others found that spite and gratitude are important drivers.\footnote{For a comprehensive review of the role of spite in legal theory, see Jeffrey L. Harrison, Spite: Legal and Social Implications (September 5, 2017) (unpublished manuscript) (available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3032677).} One of the leading theories is called the Expectation Disconfirmation Theory (EDT) and it holds that the motivation to engage in word-of-mouth activity is premised on a gap between expectations and reality; the greater the gap, the greater the propensity to engage in word-of-mouth activity.\footnote{See William O. Bearden & Jesse E. Teel, Selected Determinants of Consumer Satisfaction and Complaint Reports, 20 J. MARKETING RES. 21 (1983).} While originating in psychology, the EDT quickly spread to other disciplines.\footnote{See Richard L. Oliver, Effect of Expectation and Discontinuation on Postexposure Product Evaluations: An Alternative Interpretation, 62 J. APPLIED PSYCHOL. 480 (1977); Richard L. Oliver, A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions, 17 J. MARKETING RES. 1 (1980). See generally Yi-Chun (Chad) Ho, et al., Disconfirmation Effect on Online Rating Behavior: A Dynamic Analysis, 28 INFO. SYS. RES. 626 (2017).} Still, it is difficult to empirically evaluate the EDT, because it depends on prior consumer expectations. An empirically successful variant of the EDT that was recently developed is the much simpler ‘brag and moan’ model. This model stipulates that, independent of expectations, extreme experiences would motivate individuals to share their opinions with others.\footnote{Nan Hu, et al., Can Online Reviews Reveal a Product’s True Quality? Empirical Findings and Analytical Modeling of Online Word-of-Mouth Communication, PROC. 7TH ACM CONF. ELECTRONIC COM. - EC ’06 324 (2006) [Hereinafter Hu et al., True Quality]. An attempt to discern whether consumer spite (or gratitude) is premised on a desire to punish the seller or to warn future buyers failed to reach any clear conclusions. Lafky, supra note 94.} Conversely, bland experiences will be suppressed because they are more ‘boring’ and do not evoke any sense of spite or gratitude. Empirical research strongly bears out this prediction.\footnote{See infra Section II.A.2.}
In sum, spite and gratitude animate leading theories of consumer action and propensity to engage in word-of-mouth activity. Although word-of-mouth activity may be based on some innate altruistic drive to help others, other motivations are at least equally important. These motivations, notably, do not exist independent of the quality of the product; extremely good or extremely bad products would be more likely to invoke these emotions than standard goods.

2. Social Pressure: The Hidden Cost of Being Nice

Humans are social animals. We are, in some metaphorical sense, programmed to cooperate, reciprocate, and engage in social behavior. It is not an accident that reputation creating activities stand at the center of many social activities. Gossip, recounting personal stories, sharing opinions, and imparting experiences, are all social activities that create and transmit reputational information to other members of the social community. Such activities have a clear social function; when transgressors violate community norms, gossip and related activities allow members of the community to learn of the violation and take concerted social action against the transgressor, such as avoidance, disrespect, and in extreme cases, shunning and ex-

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107 The propensity to help others, as well as the idea that one must ‘retaliate’ against wrongs and ‘reward’ generosity has strong roots in evolutionary psychology and social norms. See Elinor Ostrom, Trust and Reciprocity: Interdisciplinary Lessons for Experimental Research, 41–44 (2003); Yonathan A. Arbel & Yotam Kaplan, Tort Reform through the Back Door: A Critique of Law and Apologies, 90 S. Cal. L. Rev. 1199 (2017).

108 See Harrison, supra note 102 (“[P]erhaps actions that appear spiteful are actually not self-regarding but have deontological significance in that the detractor acts out of sense of duty.”).

109 See, e.g., Ostrom, supra note 107, at 28 (summarizing experimental studies showing a human tendency to reciprocate in experiments, at the expense of self-interest).


111 See Jonah Berger, Word of Mouth and Interpersonal Communication: A Review and Directions for Future Research, 24 J. Consumer Psychol. 586 (2014) (arguing that word-of-mouth activities are means to a variety of social ends, such as self-enhancing one’s image, signal a positive identity, and fill conversational space).
communication. Fearing this, members of the community feel a strong pressure to conform, thus maintaining social norms.112

The standard view of social pressures and social cooperation fails to consider the many ways that social forces can also undermine cooperation. As individuals socialize, they learn to conform as a way of maintaining social standing and gaining social status. One manifestation of conformity pressures is the so-called Social Desirability Bias. Study after study, researchers find that participants try to anticipate what others are saying or what the researcher is hoping to hear and then distort their opinions in a way that they believe would present them in a favorable light.113 A hijab-wearing interviewer would hear more women report of themselves as being religious than an unveiled one.114 Similarly, this bias often lead people to misreport tax compliance, porn consumption, homosexual activities, recycling, and charity.115 By expressing socially desirable opinions—and suppressing or distorting unpopular ones—individuals attempt to present themselves in a socially desirable light. It is hard to overstate how powerful this tendency is.116

Social desirability bias undermines the development of reputational information because it leads individuals to ‘herd’ around popular opinions.117 Before people share their own experiences, they

113 See Lisa Blaydes & Rachel M. Gillum, Religiosity-of-Interviewer Effects: Assessing the Impact of Veiled Enumerators on Survey Response in Egypt, 6 Pol. & Religion 459, 462 (2013) (“Social conformity and desirability bias generally refer to the tendency of respondents to provide responses that they believe will be viewed favorably by others and avoid embarrassment or criticism.”).
114 Id. at 462.
116 See Maryon F. King & Gordon C. Bruner, Social Desirability Bias: A Neglected Aspect of Validity Testing, 17 Psychol. & Marketing 79, 82 (2000) (“Today, [Social Desirability Bias] is considered to be one of the most common and pervasive sources of bias affecting the validity of experimental and survey re- search findings in psychology.”).
often look to see what the opinion of others is and if there is a mismatch, they may suppress or misrepresent their own experiences.\textsuperscript{118} As noted by Professor Cass Sunstein: “A concern for [personal] reputation exerts a ubiquitous influence on behavior, including that of participants in democratic debate, who often shift their public statements in accordance with reputational incentives.”\textsuperscript{119} Such herding behavior affects reputation-generation.\textsuperscript{120} Experiments by University of Washington’s Professor Ann Schlosser found that exposing subjects to past negative review increases the likelihood that the subject would also voice a negative review.\textsuperscript{121} Schlosser explicitly attributes this behavior to “self-presentational concerns,” that is, the attempt to appear more intelligent and competent.\textsuperscript{122} Likewise, movie reviews show a strong tendency to lump around leading opinions. Although, interestingly, this tendency is reversed with respect to niche movies, where reviewers exhibit (a deliberately exaggerated?) degree of opinion independence.\textsuperscript{123}

Similarly, marketing professors Moe and Schwiedel find that consumers that infrequently share reviews tend to herd, whereas active reviewers tend to exhibit more of a ‘shepherding’ behavior: the evidence that respondents systematically overreport socially desirable behaviors and attitudes and systematically underreport socially undesirable ones.”). Of course, social motivations are complex, and their effects can go in many different directions, including anti-herding. There is evidence, for example, that reviewers try to distinguish themselves by posting reviews that go against the current. See Radu Jurca et al., Reporting Incentives and Biases in Online Review Forums, 4 ACM TRANSACTIONS ON THE WEB 1 (2010).

\textsuperscript{118} See, e.g., Sinan Aral, The Problem with Online Ratings, 55 MIT Sloan MGMT. REV. 112 (2014) (arguing that past opinions can shape the experiences of future consumers).


\textsuperscript{120} See Stemler, supra note 26, at 693–94 (discussing evidence of herding in online reviews).

\textsuperscript{121} See Ann E. Schlosser, Posting versus Lurking: Communicating in a Multiple Audience Context, 32 J. CONSUMER RES. 260, 264 (2005) (“It appears that reading a negative review triggers posters’ concerns with the social outcomes of their public evaluations, thereby causing them to lower their public ratings strategically. In fact, this bias was limited to posters’ public opinions—their private attitudes and thoughts did not differ.”).

\textsuperscript{122} Id. at 260

\textsuperscript{123} See Young-Jin Lee et al., Do I Follow My Friends or the Crowd? Information Cascades in Online Movie Ratings, 61 MGMT. SCI. 2241, 2256 (2015).
expression of more negative opinions in a possible attempt to lead the herd. They conclude that

“Because of selection and adjustment effects, the content posted may not necessarily reflect the customer base’s overall opinion of the product. Rather, a vocal subset of the customer base may dominate the ratings environment, consequently steering the subsequently posted evaluations and deterring some customers from contributing to the environments.” (Emphasis added)

The effects of conformity are bolstered by the propensity to reciprocate and retaliate. Consider, for example, one of eBay’s early design iterations, where buyers and sellers could rate each other after every transaction. This led reviewers to post (artificially) favorable reviews, in the hope that they will be positively reviewed by their counterparts. Consumers explained their behavior as being motivated by fear of retaliation: “[I]f I left a bad review, I might be

124 Wendy W. Moe & David A. Schweidel, Online Product Opinions: Incidence, Evaluation, and Evolution, 31 MARKETING SCI. 372 (2012); Wenqi Shen et al., supra note 65 (finding that raters choose to review less reviewed books in order to stand out and gain more attention).

125 Id. at 385. Similarly, others find that attention-seeking is another important social motivator. See Wenqi Shen et al., supra note 65, at 685 (“We find that reviewers on Amazon, where a reviewer ranking system exists, become sensitive to the competition among existing reviews and tend to avoid crowded review segments.”). Additionally, Wang finds that systems where users are encouraged to maintain their social identity generate more quality content than systems where anonymity is encouraged. Zhongmin Wang, Anonymity, Social Image, and the Competition for Volunteers: A Case Study of the Online Market for Reviews, 10 B.E. J. ECON. ANALYSIS & POL’Y 1 (2010).

afraid of being retaliated against.”

A similar issue arises with Uber and Lyft, where both drivers and passengers rate each other.

Beyond herding, conformity, and reciprocity, other social tendencies work in complex ways to undermine the integrity of reputational information. For example, proper socialization often consists of masking one’s true feelings, forgiving slights, and avoiding giving offense to others even at the cost of distorting reality (‘white lies’). But if a seller misbehaved, truthful reporting by the consumer may be required to alert others. Forgiveness and charity fill a negative role. It is hard to assess the overall effect of social motivations in the abstract, but the analysis suggests that there is a good reason to think that they will often tend to distort reputational information.

3. Financial Incentives: Cherry-Picking and Shilling

Despite the social value of reputation, individuals are not compensated for their production of reputational information. Still, firms may provide reputation creators, whether genuine consumers or not, with some form of compensation to encourage them to create favorable information. This section highlights two prominent strategies that will be termed Cherry Picking and Shilling.

Cherry picking involves the payment of a reward, offer of a discount, or the use of penalties to encourage specific consumers to

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127 See FTC, THE “SHARING” ECONOMY: ISSUES FACING PLATFORMS 42 (2016) (“[S]ome users seem to fear retaliation through a review platform.”); Edelman & Geradin, supra note 26, at 316; see also Bryant Cannon & Hanna Chung, A Framework for Designing Co-Regulation Models Well-Adapted to Technology-Facilitated Sharing Economies, 31 SANTA CLARA COMPUTER & HIGH TECH. L.J. 23, 38 (2015) (“[A] participant who dares to post a negative review may be punished by a reciprocating negative review, even if the reciprocator has nothing to gain by sabotaging the other reviewer.”)

128 See, e.g., SAUL KASSIN, ET AL., SOCIAL PSYCHOLOGY 285 (2017) (discussing the role of reciprocity with respect to reviews); Stemler, supra note 26, at 692 (discussing the effects of reciprocity in the sharing economy).

129 See Arbel & Kaplan, supra note 107 (arguing that with respect to apologies, forgiveness and waiver of lawsuits may lead to under-deterrence).

130 There is some irony in the argument that social norms can undermine social cooperation. This is especially so given the classic reversal by Adam Smith, who demonstrated that selfishness can lead to cooperation. In Smith’s analysis, the baker may have little interest in the goals of others, but his desire for wealth would lead him to bake goods that others would regard as appealing. SMITH, supra note 1.

131 See Stemler, supra note 26, at 698–702 (discussing the problem of review manipulation).
share reputational information. For example, various websites such as Testzon, Nicediscount.net, and Snagshout offer consumers free or heavily discounted products with the implied expectation that consumers will review them positively.\textsuperscript{132} To combat negative reviews, firms sometimes threaten consumers with legal action or use copyright law to argue that a review infringes on their copyright and should thus be taken down.\textsuperscript{133} Disgruntled consumers may also be given financial incentives so that they will not disseminate their opinions. Some sellers create negative incentives by the inclusion of non-disparaging clauses in their sale contracts, threatening consumers with sanctions for sharing unfavorable experiences.\textsuperscript{134} More commonly, businesses offer thinly-veiled bribes to unhappy consumers in the form of reimbursements, free meals, or ‘heartfelt’ apologies.\textsuperscript{135}

The other strategy is shilling, or astroturfing, which involves financially-motivated non-consumers pretending to be actual consumers and disseminating fake opinions.\textsuperscript{136} Shilling is reported to

\textsuperscript{132} For the purposes of this Article, the author engaged with many of these websites, and communicated with various sellers searching for ‘testers.’ Amazon prohibits products-for-review practices and all the websites are careful to explain that products are given freely for ‘testing’ purposes with no expectations of any reviews; yet, sellers exercise close control over who can participate in their product-‘testing’ and individuals who fail to review or share negative reviews will often not be allowed to participate in future ‘testing.’


\textsuperscript{135} See Arbel & Kaplan, supra note 107 (exploring the corrosive effects of apologies on deterrence).

\textsuperscript{136} See generally FTC, THE “SHARING” ECONOMY: ISSUES FACING PLATFORMS 41–42 (2016) (reviewing evidence on shilling and reporting some attempts by reputation-platforms to curb shilling); Kaitlin A. Dohse, Fabrication Feedback: Blurring the Line Between Brand Management and Bogus Reviews, 1 U. ILL. J.L. TECH. & POL’Y 363, 370-71 (2013) (reviewing some of the services that offer bogus reviews). I do not directly address here the issue
be very common, with some estimating that as much as 30 percent of online reviews are fake. In 2013, for example, Samsung was fined $340,000 because it paid for fake reviews: positive for their own products and negative for their competitors. Shilling strategies are highly diverse and sophisticated, and as suggested by their popularity, they are potentially quite potent. The supposed best-seller “Dragonsoul” is a case in point. Overnight, an unknown book had mysteriously become the number 1 bestseller in Amazon’s Kindle store, overtaking Harry Potter and other renowned books. Contributing to the mystery of its ascendancy is the fact that the book only had 15 reviews, which were not even very positive. What caused the surprising rise of this book is unclear, but many believe that it is the result of an over-aggressive shilling campaign that exploited certain loopholes in Amazon’s reputation system.

Both cherry-picking and shilling will tend to push opinions to the extreme, at the expense of middling reviews. Naively, if a firm invests in shilling, it would seem to be profit-maximizing to only post glowing reviews (or scathing reviews of its competitors). However, this motive is somewhat abated by the concern that consumers will be suspicious of overly positive reviews, or by the concern that such reviews will invite disappointment by unwitting consumers—disappointment that may lead them to write negative reviews out of spite. Still, shilled reviews would tend towards the extremes for a few reasons. Consumers will not know for certain that an extreme review of brand endorsement by opinion leaders, although this area is also rife with disingenuous endorsements.

Karen Weise, *A Lie Detector Test for Online Reviewers*, BLOOMBERG BUSINESSWEEK MAG. (Sept. 29, 2011); Nan Hu et al., *Manipulation of Online Reviews: An Analysis of Ratings, Readability, and Sentiments* 52 DECISION SUPPORT SYS. 674 (2012) (estimating fake reviews at 10%).


See Dohse, *supra* note 136, at 371–72 (reviewing online shilling techniques and the services). For an updated list of shilling services and news, see https://www.cs.uic.edu/~liub/FBS/fake-reviews.html


Astroturfing can be conceptualized as another form of advertising. There is a large body of economic literature that investigates market dynamics with advertising. See Phillip Nelson, *Advertising as Information*, 82 J. POL. ECON. 729 (1974); Kyle Bagwell, *The Economic Analysis of Advertising*, in
is false, and so they will not be able to discount it completely. Gaining credibility by lowering the rating also involves a diminished effect on sales, as lower ratings would entice fewer consumers to buy the product. Lastly, long-term corrections due to disappointed consumers only affect companies with longer trading-horizons. For these reasons, it is common to find paid reviews to be relatively extreme.

B. The Distortive Effects of Reputation’s Microfoundations on Reputational Information

The upshot of placing reputation within a framework of individual rationality, beyond greater analytical clarity, is that it allows us to draw important conclusions about the integrity, evolution, and credibility of reputational information. Based on the framework developed in the last section, two systemic conclusions will be developed here. First, the recognition that reputation will only flourish when individuals have a non-trivial incentive to create it implies that, as a general matter, reputation would be slower to evolve than traditionally recognized. I term this problem ‘reputational congestion’ and explain that it tends to amplify noise and other short-term imperfections. Second, because the incentives to create reputation are strongest when experiences are extreme, reputation will be subject to a systematic bias. It is generally expected that noise will disappear when more data is accumulated; this is the idea of regression to the mean. But

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142 See infra Section II.B.3.
143 See, e.g., Miguel Helft, Charges Settled Over Fake Reviews on iTunes, N.Y. TIMES (Aug 26, 2010) (discussing false reviews that “typically gave the games four or five stars”).
144 Recently, Professor Abbey Stemler provided an insightful and important account of such biases and distortions in the context of the sharing economy, where there are often intimate interactions between peers (such as sharing a stranger’s house or car). Stemler, supra note 26. Unlike her account, my focus here is on developing the microfoundations of reputation of consumer goods generally and exploring how flawed reputational information would be processed by sophisticated, rational consumers.
in the context of reputation, rather than experiences regressing to the mean, they tend to regress to the extreme. This dynamic is the main cause of hypes and other market distortions. And although consumers, and to some extent even reputational platforms such as Amazon or Yelp, may try to “correct” such distortions, it is impossible to reconstruct the full truth from half-truths.\textsuperscript{146} This means that distortions will translate into various market inefficiencies, and most directly, into consumer mistakes.

Before addressing these issues, it is important to clarify that bias in reputation does not render reputational information useless; indeed, consumers repeatedly use this information to guide their decisions and they would be expected to be—at some point—disabused of their trust if this information proved ineffectual.\textsuperscript{147} Rather, the argument advanced here is more subtle: reputational distortions make reputational information problematic \textit{on the margin}. That is, rather than thinking in terms of whether reputation on the whole is helpful or not, the argument focuses on the ability to compare reliably between a few similar products. In such cases, reputational information cannot be trusted to rank their relative value reliably, or so I shall argue.\textsuperscript{148}

1. Reputational Congestion

The microfoundations of reputation imply that, as a general matter, reputation creators will have weak incentives to disseminate reputational information. Whereas the costs are real and palpable— even if not always high in absolute terms—the benefits are remote, uncertain, and tend to accrue to others. Indeed, very often the consumer will not know who those others are and whether their recommendation affected them, nor would those future consumers know who created the reputational information they use to base their decisions. This does not mean that no consumer would ever produce reputational information; for some, altruism or desire to speak may be a wholly sufficient reason. Still, not all consumers are equally predisposed, and chance dictates

\textsuperscript{146} On the limits of such platforms, \textit{see infra} Section III.C.

\textsuperscript{147} \textit{See also} Stemler, \textit{supra} note 26, at 686 (“Reputation systems work to a degree.”).

\textsuperscript{148} Another issue concerns the inability to adequately assess the risk profile of a product; when choosing a restaurant, for example, a consumer would not only care about the average experience but also the likelihood of a very negative one. \textit{See infra} Section II.B.3.
that many consumers would simply not find it worthwhile to write reviews, rate products, or share word-of-mouth information.

The weakness of incentives leads to what I term “Reputational Congestion”, the slower-than-anticipated accumulation of reputational information. For there to be a sufficiently large body of consumer experiences on which future consumers can base their decisions, there would need to be a very large body of consumers purchasing the good. But as the good lacks sufficient reputational information, prospective buyers would be more hesitant to purchase it, thus slowing the development of reputational information even further. There is limited data on this question, but it is supportive of the existence of a large problem of reputational congestion: In online trade, only about one in ten consumers choose to disseminate reputational information.\(^\text{149}\)

Tabling for a moment the question of selection effects, reputational congestion prolongs the time until random noise clears. Consider first how reputation will develop in the absence of reputational congestion. When a product first hits the market, only a few adventurous early-explorers will be tempted to buy it (perhaps due to advertising, price, or other chance factors). The information that they share will form the basis for the decisions of future consumers.\(^\text{150}\) Because consumers and products are not homogenous, some early adopters will have an experience that is not representative, by chance alone. When the early-adopter shares their (unrepresentative) experience, it will have a large effect on the public perception of the product, because there are insufficient opposing opinions. The issue of this noisy information is remedied when more opinions accumulate because—as the Law of Large Numbers dictates—a large sample tends to drown the effect of chance. However, because of reputational congestion, it will take much longer for the effect of chance to disappear and for the true qualities of the product to emerge.

The following figures illustrate the evolution of reputational information over time, based on hypothetical data, moving from the first stage (10 reviews), to an interim stage with a medium number of reviews (70), to the stage where there is a large number of reviews (200). At each stage, the dashed line marks what would be the estimated average based on the information that is available, relative to the real

\(^{149}\) See supra note 93.

\(^{150}\) For an analysis of the dynamic evolution of reputation, including the possibility that early-adopters may be systematically different in their preferences and views from standard consumers, see Xinxin Li & Lorin M. Hitt, Self-Selection and Information Role of Online Product Reviews, 19 INFO. SYS. RES. 456 (2008).
average experience, marked by the straight red line. One important observation is the number of reviews that are needed to correct the false impression caused by the first 10 consumers—even 70 reviews are insufficient. \textsuperscript{151} Reputational congestion means that moving from the

\textsuperscript{151} Consider another example with a product of average 3-star quality. If the first consumer, by chance, ranks it at one star, then it would take two higher than average consumers with 4 stars to correct this impression.
first figure to the last one will take much longer than traditionally understood:

**Figure 1** -- **Estimated Average v. Real Average as the Number of Opinions Increase**

*Dashed/Blue = Estimated Average; Full/Red = Real Average*

Beyond the data on the low ratio of reviewers to consumers, it is hard to obtain evidence of reputational congestion. One set of studies, however, is potentially illuminating. In a study of LA restaurants, researchers attempted to establish the effect of a law that required
restaurants to disclose their sanitation ratings.\textsuperscript{152} In a naïve model of reputation, the effect of such a law on food-borne illnesses should be relatively small—if a person contracts such an illness, then conditions are ripe for word to travel fast: the condition of a food illness is highly salient, it is moderately easy to establish its cause, and it is sufficiently important to the well-being of others to warrant mutual interest in this information. For these reasons, information on food-borne illnesses should quickly disseminate. Despite that, the study found a very strong effect, with a sharp decline in hospitalizations due to foodborne illnesses. This finding furnishes preliminary evidence as to the degree of reputational congestion.

2. Regression to the Extreme

The discussion so far considered the possibility that not all consumers will engage in reputation creation but did not consider who amongst the consumers would choose to do so. If the selection of consumers is random, reputation will tend to be accurate over time—although reputational congestion implies that time may be very long. As more and more random views are shared, the distribution of opinions in the “sample” of consumers who share their opinions starts to approximate the distribution of opinions in the more general population. The problem is that the selection of consumers is all but random.

The production of reputation is beset by self-selection of consumers with extreme experiences, resulting in a “regression to the extreme.”\textsuperscript{153} Internal motivations select against middling reviews because those are based on experiences that are too ‘boring’ to generate

\textsuperscript{152} Ginger Zhe Jin & Phillip Leslie, The Effect of Information on Product Quality: Evidence from Restaurant Hygiene Grade Cards, 118 Q. J. ECON. 409 (2003); see also Ginger Zhe Jin & Phillip Leslie, Reputational Incentives for Restaurant Hygiene, 1 AM. ECON. J.: MICROECON. 237 (2009); Paul A. Simon et al., Impact of Restaurant Hygiene Grade Cards on Foodborne-Disease Hospitalizations in Los Angeles County, 67 J. ENVTL. HEALTH 32 (2005). The local health department collected these ratings long before restaurants were required to disclose them.

\textsuperscript{153} Another complicating factor is that reviewer idiosyncrasies play a major role in the interpretation of one’s opinion. It means more to hear a compliment from an eternally disgruntled consumer than from his Panglossian peer. In online systems it is also difficult to know how different consumers interpret a 4-star experience. All of this adds noise to the system which, in light of reputational congestion, it is hard to overcome.
the requisite sense of spite or gratitude that will overcome the costs of producing reputational information. Reciprocity norms would lead consumers to overly-represent positive experience, in the hope of receiving reciprocal reviews from sellers, and herding would tend to silence non-popular reviews that might betray the lack of sophistication of the reviewer. If a bottle of French wine is receiving extent praise, an individual consumer may be embarrassed to reveal that she did not like it, noted no hint of accents of ‘forest floor,’ and was not seduced by its ‘interplay of plump grapes and jazzy oak.’ There will be too few people willing to balance exaggerated reviews. Lastly, financial incentives also select against middling reviews because shilling and cherry picking also create pressure on fostering extreme opinions. All of these tendencies lead to what I call ‘regression to the extreme’, that is the propensity of reputational data to emphasize, rather than eliminate, outlier experiences over time.

If mostly extreme experiences are reported, the perception of the quality of goods would be distorted. In the simplest case, compare two products, product A with ten 4-star reviews and product B with ten 5-star reported reviews. Product B would seem to be superior. But, if product B has 50 unreported 2-star reviews, and product A has 50 unreported 3-star reviews, then product A is actually superior. Or, suppose that the products each have ten 5-star reviews, but product A has 20 unreported 4-star reviews and product B has 20 unreported 3-star reviews. Then the two products would appear identical, although product A has better average quality than product B. Finally, suppose that product A is superior to product B at every rating level (A has fewer 1-star or 2-star experiences but more 4- or 5-star experiences). It might still be the case that product B would appear better rated because of shilling or cherry-picking. Moreover, if product B has a greater sale volume (say, product A entered the market later), then B might still appear better rated in in the short term. And as B appears better,

154 See also Stemler, supra note 26, at 691 (“Participants [in the sharing economy] have an incentive to withhold negative reviews in order to avoid retaliation.”).
155 Based on reviews taken from http://top100.winespectator.com/wine/6-orin-swift/ and http://top100.winespectator.com/wine/wine-no-1/.
156 The average experience with product A is 3.16, and for product B it is 2.5. But the reported average of product A is 4 and for product B it is 5.
157 Technically, this makes the strong assumption of first order stochastic dominance of product A over product B.
158 Suppose product A has 20% chance of yielding a 5-star experience and a 10% chance of yielding a 1-star one (assuming all other experiences are unreported). Product B has a 15% chance of a 5-star one and 15% chance of a
consumers may be less likely to purchase product A and correct this misperception.

It is important to emphasize that the extremes do not ‘even out’—not more than two half-truths average to the truth. Naively, it may seem that the average of all the reported positive experiences and all the negative ones would mirror the actual average experience from the product. But this is false: spite is not simply gratitude multiplied by -1. There is no evidence, nor is there any real reason to expect, that the fraction of happy consumers who post reviews would be exactly equal to the fraction of unhappy consumers who would do the same. If only, say, 3 out of ten satisfied consumers share their experiences, but 5 out of ten unsatisfied ones do so, the average of these reviews will overweigh the opinions of unhappy customers. As empirical research finds, this is indeed the case—satisfied consumers are much more likely to share experiences online than unsatisfied ones. In interviews, Amazon sellers reported (and complained) of the opposite, where disgruntled consumers are more voluble. Whichever one is correct, it is clear that the tendency to share opinions based on spite is not equal to the tendency to do so based on gratitude. Nor do shilled reviews by sellers and their competitors mitigate this problem, as there is even less reason to expect these competing parties to invest exactly the same in false positive or negative reviews.

Evidence of regression to the extreme is strong and consistent. Various studies of online reputational platforms consistently find that reviews tend to be lopsided, following a J-shaped distribution. Most 1-star one but is otherwise equivalent to product A. This means that product A is superior to product B. If product B was sold to 1,000 consumers, we would expect it to have a rating of close to 3. If product A just entered the market and has 30 consumers, there is a roughly 16% chance that product B would have a better average review—by chance alone.


160 Interview, anonymous medium-sized seller on Amazon of organic products for babies (Jan. 19, 2018).

161 See, e.g., Nan Hu et al., Overcoming the J-shaped Distribution of Product Reviews, 52 COMM. ACM 144, 145 (2009) [Hereinafter, Nan Hu, J-Shaped] (detailing evidence from Amazon and arguing that the J shaped distribution "contradicts the law of “large numbers” that would imply a normal distribution"); Hu et al., True Quality, supra note 105, (finding that 54% of all products on Amazon have a review distribution that is neither normal or bimodal, and 35% have a uni-modal non-normal distribution); Yi-Chun (Chad) Ho et al., supra note 104; Chrysanthos Dellarocas & Ritu Narayan, A
reviews are in the highest category, a minority is in the lowest category, and often less than 1% of the reviews are in the interim categories—forming a J shape. On Amazon, for example, more than 72% of the products have an average rating of at least 4 stars. In Airbnb listings, the average rating is 4.5 stars. These studies repeatedly find that middling reviews are rare, and that even products with an average rating of 2 or 3 stars hardly have any middling reviews. In certain domains there seems to be a more linear increase in review scores, yet even there exists a very strong positive skew. Moreover, evidence suggests that these patterns also hold in offline settings.

The following figures, based on actual products from Amazon, illustrate this point graphically, showing the distribution of reviews.
An important challenge to this conclusion is the market-forces hypothesis; perhaps the skew in reviews does not reflect a bias in the opinions themselves, but rather that the market (or the trading platform) has effectively screened out low-quality products, so that all that is left are products that are of high quality. This is an important hypothesis that is well worthy of more intensive empirical study, but it would seem unlikely on the basis of current evidence. One problem is that, even if the products on the market are of high quality, they should still have some number, presumably large, of middling review, and in any case, this number should exceed the number of negative reviews. The high rating of many sellers on eBay, for example, is improbable, with the median positive seller rating of 100%. At the same time, there are three times as many complaints to customer service for faulty products as there are negative feedback scores.168

168 Nosko & Tadelis, supra note 26, at 9 (concluding that the high number of consumer complaints relative to the low number of negative review indicates that “there are a substantial number of transactions that went badly for which negative feedback was not left”).
Another problem for the market hypothesis is that there is very weak correlation between quality as judged by consumer reviews and quality as evaluated by professional testers or professional critics.\footnote{See Bart de Langhe, Philip M. Fernbach & Donald R. Lichtenstein, \textit{Navigating by the Stars: Investigating the Actual and Perceived Validity of Online User Ratings}, 42 J. CONSUMER RES. 817 (2016) (comparing online reviews to reviews of the same products in Consumer Reports); Roberto Centeno et al., \textit{On the Inaccuracy of Numerical Ratings: Dealing with Biased Opinions in Social Networks}, 17 INFO. SYS. FRONTIERS 809 (2015); Nilesh Dalvi et al., \textit{Para "normal" Activity: On the Distribution of Average Ratings}, \textit{PROC. 7TH INT'L AAAI CONF. WEBLOGS & SOC. MEDIA} 110 (2013).} Not only is there a difference in average quality, but there is also a systematic difference in the \textit{distribution} of opinions. Whereas consumer opinions tend to follow the J-distribution, professional critics’ opinions follow the expected normal distribution.\footnote{See Centeno et al., \textit{supra} note 169.} Indeed, one can almost hear the exasperation of the researchers trying the grapple with the finding and concluding that “critics are more normal than normal users.”\footnote{Dalvi et al., \textit{supra} note 169, at 114.} Finally, and probably most clearly, experiments reveal that consumer experiences systematically diverge from reported experiences. In one experiment 218 participants were asked to review a product that was also listed on Amazon (a CD titled “Mr. A-Z”). While the Amazon reviews were skewed, the experimental reviews followed the expected bell curve, as illustrated in the reproduced figure below.\footnote{See Lafky, \textit{supra} note 94, at 562.}
In sum, the microfoundations of reputation cause a regression to the extreme. Empirical evidence is consistent with this analysis but less so with the market hypothesis. Instead, there is a good reason to believe that reputational information systematically distorts the signal of the quality of the underlying good.

3. The Imperfection of Consumer & Platform Heuristics

Information is inert; it is the decisions that it informs that matter. If consumers can anticipate reputational distortions, it may be possible for them to “correct” for them by adjusting their expectations in the opposite direction of the distortion. If it is well known, for example, that distortions cause a 10% inflation in the rating of products, consumers can make well-informed decisions about which products to purchase by simply discounting the average rating by 10%.

platform may wish to make this correction itself.\textsuperscript{174} Hence, it may seem that rational consumers, or even non-rational consumers if they are assisted by technology or third-party reputational platforms, may be able to overcome reputational congestions and regression to the extreme.\textsuperscript{175} The goal of this section is to analyze this contention.

Before addressing this contention on its merits, it is worth noting that it faces an uphill battle, because the law in general is skeptical of such contentions in other contexts. Where there are significant distortions in information, the law often seeks to regulate and limit the underlying activities, even in situations where consumers may be aware of the existence of distortions and where third-party services may be used to correct them. Such are, for example, the limits on contractual misrepresentation, investor fraud through pump and dump strategies, false advertising, defamation, misrepresentations. The pump-and-dump scheme is especially telling because it involves the dissemination of wrong reputational information about firms.\textsuperscript{176} Even though investors may be thought to be on average somewhat more sophisticated than consumers, and even though it may be clear to those investors that pump-and-dump schemes take place, the law still chooses to proscribe such activities, fearing that consumers will not be able to compensate for such misleading strategies adequately.\textsuperscript{177}

Still, some consumers swear by various homebrew heuristics that they believe allow them to overcome the deficiencies of reputational information.\textsuperscript{178} For example, some consumers only

\textsuperscript{174} Professor Stemler proposes that platforms should be mandated to make such corrections. See Stemler, supra note 26, at 703–704. On the inherent conflict of interests of trading platforms and why consumers may not trust them, see infra Section III.C.

\textsuperscript{175} E.g., in the context of biases that result from incomplete reviews, Economist Jonathan Lafky posited that a “consumer who is aware of this bias in ratings could correct for the distortion if she was aware of what proportion of people had purchased the product but left no rating.” Lafky, supra note 94, at 567. Note, however, that very few platforms report data on the volume of sales of any given product.


\textsuperscript{177} In the unregulated space of Bitcoin, a recent research paper found that the market price of bitcoin rose up in 2013 tenfold due to manipulative trading tactics by a single trader. Neil Gandal et al., Price Manipulation in the Bitcoin Ecosystem, J. MONETARY ECON. (Forthcoming, 2018).

\textsuperscript{178} Zero Stars: How Gagging Honest Reviews Harms Consumers and the Economy, hearing of the U.S. Senate Comm. on Commerce, Science, & Transportation, 114th Cong. Nov. 4, 2015, ("[consumers reading reviews] kind
consider the opinions of trusted friends. Others, only consider products with a long history. Yet others read the language of online reviews closely, trying to discern the good and relevant from the biased and irrelevant. Looking closely at these heuristics reveals, however, that consumers and regulators should not place too much confidence in them. True, all of the heuristics are somewhat helpful, but there would be many cases where they would give a very misleading answer when used to evaluate the relative merits of two similar products.

The first barrier to all of these heuristics is that they are of no relevance if consumers do not realize that reputational information is flawed. Survey after survey, consumers express strong confidence in reputational information, describing it as a reliable source of information. Now, it is not clear whether consumers take reputation at face value or are confident in it because they believe they can mentally correct it, but the level of their confidence is at least suggestive of the former. Combined with other metrics of consumer undersophistication, there is an additional reason for skepticism.

Even if consumers realize that a problem exists, a second barrier is the ability of consumers to effectively and cheaply employ corrective heuristics. This is because most heuristics require consumers to employ statistical corrections that are computationally non-trivial and may be too cognitively demanding. Individuals are notoriously bad at these tasks. Take anchoring for example. Anchoring is the robust and well-replicated psychological phenomenon that describes how the introduction of arbitrary or irrelevant numbers affects the outcomes of

of see the folks who are a bit unhinged . . . Let the consumer sort that out is, I guess, my view on it.”

179 The reader may attempt the following real-life exercise: https://www.cs.uic.edu/~liub/FBS/fake-reviews.html#reviews.

180 See Local Consumer Review Survey, BRIGHTLOCAL (2017), https://www.brightlocal.com/learn/local-consumer-review-survey/ (finding that 97% of consumers read online reviews for local businesses and that 85% of consumers trust online reviews as much as they trust personal recommendations).

negotiations, evaluations, and work performance ratings.\textsuperscript{182} A consumer exposed to inflated reviews would need to overcome their anchoring effect before the inflation could be corrected. The literature suggests that this is difficult. Corrections also require significant statistical skills, but the median American will likely not understand what it means to be median.\textsuperscript{183} The problem is more than knowledge, it is one of application. When a woman was described as being “deeply concerned with issues of discrimination and social justice”, individuals consistently thought that she was more likely to be a feminist bank teller than just a bank teller.\textsuperscript{184} This, of course, cannot be—as obviously there are more bank tellers than there are bank tellers who are also feminists.\textsuperscript{185} One last example is the (in)ability to correct known bias. In a set of studies, researchers set out to investigate how individuals react to learning that they receive advice from a source with a known bias.\textsuperscript{186} In one study, participants were asked to estimate the cost of a house in Pittsburgh; to aid them, they were given an estimate by a local realtor who had an incentive to exaggerate her estimate, to drive up her commission. Surprisingly, the disclosure of the conflict of interest led to worse


\textsuperscript{183} One component of sophistication is motivation to evaluate complex data. Research finds that low motivation consumers are willing to rely on low quality reputational information, sometimes trusting even a single data point. Pranjal Gupta & Judy Harris, How E-WOM Recommendations Influence Product Consideration and Quality of Choice: A Motivation to Process Information Perspective, 63 J. BUS. RES. 1041 (2010).


\textsuperscript{185} But see Berit Brogaard, Linda the Bank Teller Case Revisited, PSYCHOL. TODAY (Nov. 22, 2016) (arguing that the results are driven by the See phrasing of the question rather than statistical incompetency).

Reputational Bottlenecks

outcomes; consumers either under- or over-corrected for the bias.\textsuperscript{187} In sum, cognitive limitations inhibit consumers from effectively employing correcting heuristics, even when such heuristics exist.

Mental handicaps tell only one part of the story. Some consumers are sophisticated and, perhaps more importantly, technology and trading-platforms themselves might perform correcting services on behalf of consumers. Some trading platforms, for example, employ sophisticated algorithms to screen out or underweight suspicious reviews.\textsuperscript{188} Unfortunately, these algorithms and heuristics are of limited effectiveness. To see that, it is worth considering in detail some specific examples of heuristics before making the more general case.

Perhaps the most common consumer heuristic is limiting attention to statistical trends in the data, and most commonly, average rating (its valence). The underlying idea is presumably motivated by the Law of Large Numbers and the hope that conflicting biases will cancel each other out, resulting in a credible mean outcome. This strategy is theoretically fallacious.\textsuperscript{189} Although chance variations will indeed tend to disappear in large samples, the same is not true of biased samples with self-selection.\textsuperscript{190} Clearly, an election poll on the NYtimes.com or Fox news website would not reflect the outcome of the elections and neither will the average of these two polls. It is important to recall a point made before—there is simply no reason to expect the strength of the bias on both sides to be equal or even of similar magnitude.\textsuperscript{191} Depending on the degree of selection bias, then, the mean may be misleading or completely irrelevant.

It should also be noted that limiting attention to the mean already concedes much ground. To varying degrees, consumers are risk-averse; in buying a new fridge, for example, most consumers would

\textsuperscript{187} See Daylian M. Cain, George Loewenstein & Don A. Moore, \textit{When Sunlight Fails to Disinfect: Understanding the Perverse Effects of Disclosing Conflicts of Interest}, 37 J. CONSUMER RES. 836 (2011). Another source of problems is 'licensing.' The realtors felt morally licensed to inflate their estimates when their conflict of interests was disclosed to consumers.

\textsuperscript{188} See, e.g., Killian Bell, \textit{Amazon is Using Machine Learning to Fix Its Reviews System}, BUS. INSIDER (Jun. 22, 2015).

\textsuperscript{189} See Bavli, supra note 145.

\textsuperscript{190} See supra note 161, Nan Hu, \textit{J-Shaped} ("[T]he average is statistically meaningful only when it is based on a unimodal distribution, or when it is based on a symmetric bimodal distribution. However, since product systems have an asymmetric bimodal (d-shaped) distribution, the average is a poor proxy of product quality.").

\textsuperscript{191} See supra notes 158–159 and surrounding text.
prefer a reliable brand to a hit-or-miss unknown brand, even if there is a chance that the alternative brand would prove better. In many, although not all, consumption decisions, consumers are also interested in the risk involved. For the most part, in deciding between two products of an equal mean valance, consumers would generally prefer the one with the lower degree of variance. When consumers limit attention to the mean, they discard as unreliable the distribution of experiences; but this distribution is meaningful and important.

A similar heuristic consists of investigating at the relative valence of products. The theory is simple and has some intuitive appeal; even if the reported mean is meaningless, it would be expected that the relatively better product would have higher average ratings. For example, even if all ratings are inflated, a 4-star product is expected to have more positive reviews than a 3-star product, holding all other things equal. While intuitive, this heuristic is also unreliable. The problem is that the likelihood of a favorable or a negative review depends not only on the quality of the good, but on the distribution of experiences, which has little to do with the relative quality of the goods.

To see that, consider a stylized example where there are two products of equal average quality, one is a tomato and the other one is cilantro. Whereas the tomato generates consistent pleasant experiences, cilantro is more polarizing. The figures below depict the distribution of experiences from these hypothetical products. Because only extreme experiences are reported, consumers are only exposed to experiences above or below a certain threshold; these are the shaded areas in the figures. In assessing the relative value of these two products, whose mean is equal and noted by the full red line, consumers will use the mean of reported experiences, which is denoted by the green dashed line. What emerges from the comparison is that two products, with exactly the same average quality, would nonetheless appear to have different averages. One—in this case, the tomato—appears incorrectly to have a better mean experience than the cilantro. This illustrates why relative values can also be misleading.

Technically, the distribution of experiences from the tomato is clustered around the mean while it is more dispersed for the cilantro.
A more statistically sophisticated approach would be to attempt to reconstruct the distribution from the reported tails. But this, too, is not a reliable method, because the distribution is unknown and is not necessarily unimodal or even symmetric. The following figures illustrate this point.

Another potential heuristic consists of discounting hypes and inflating anti-hypes. If after a few interactions with a trade platform the consumer learns that the ratings are inflated—relative to her average experience—by, say, 20% then she can simply deflate the ratings of every product by 20%. This strategy is equally faulty. It requires the consumer to interact a large number of times with a platform to know about the bias and its direction, and there is no guarantee that the bias exists for different products, much less for

193 See S. Rao Jammalamadaka & Vasudevan Mangalam, *Nonparametric Estimation for Middle-Censored Data*, 15 J. NONPARAMETRIC STAT. 253 (2003) (Discussing an approach to estimating from samples where there is some middle interval of missing data)
different product categories. Moreover, the consumer at best learns about the average bias, but correcting it requires deflating expectations with respect to all products. As a result, genuinely good products would also be under-estimated. Even if this strategy would make the consumer right on average, this still poses a problem for the risk-averse consumer who may not want to risk a few “bad apples” before finding a product that satisfies her needs.

Another strategy consists of increased opinion scrutiny. Instead of looking at some summary statistic like ‘average’ reviews, consumers may elect to review the qualitative content of opinions. This strategy has several advantages but is also ultimately very limited. By assessing qualitative factors, consumers can see whether the possible drawbacks of the product apply to them—that is, whether the negative opinions are provided by similarly situated consumers or by people with idiosyncratic preferences. If the only negative feature of a restaurant is that the food is too spicy, and the consumer enjoys spicy food, the consumer may feel justified in inferring that she will enjoy the food. Additionally, through close scrutiny, it may be possible to detect suspicious opinions and screen them. Against these benefits, the costs are commensurably highly. Reading opinions is time-consuming and cognitively draining; in comparing between only two brands of toilet paper on only one platform, a consumer would need to examine about 9,000 reviews. Of course, this is unrealistic, so the consumer may limit her search space by only looking at products that pass some threshold of average rating. This runs into the problem that the average is often inaccurate. Alternatively, the consumer may limit herself to only a sample of these opinions, either at random or by a valence-based criterion (only reviews which are negative, positive, or some combination thereof). This, again, raises known problems. A random sample taken from a biased sample is also biased and the small sample size may actually exacerbate the original bias. A valence-based criterion fares no better, as it completely abandons any consideration of base rates—how likely are those specific experiences to happen?

There are of course other possible heuristics, but there is good, general reason to expect those to be insufficient. Consumers are not alone in the market; they are competing against sellers with potentially adverse incentives. Sellers would like consumers to adopt positive beliefs about their products (and harbor negative ones about their

194 The task of detecting fake opinions is notoriously difficult and consumers are often overconfident in their ability to detect fake reviews. See supra note 179.

competitors), independent of the actual quality of their goods. When consumers adopt heuristics and place their confidence in those strategies, they are increasing the value of gaming those heuristics. For example, if consumers mostly focus on negative reviews, a seller can shill negative reviews that point only to irrelevant properties of the good.\textsuperscript{196} If consumers mostly pay attention to reviews written by repeat reviewers, sellers will be willing to pay people with a long review history a large premium to elicit positive reviews.\textsuperscript{197} If consumers are only willing to purchase a good with a minimum number of reviews, sellers may give it freely to the first set of reviewers and charge rents to all future consumers. As sellers are, generally, adversely positioned and financially motivated, heuristics beget loopholes which beget exploitation.

All of this suggests that the range of reputational-correction heuristics will be insufficient. Consumers are left with imperfect reputational information that is biased in ways that they are unable to correct. Relying on this information, even when applying correction strategies, would lead consumers to make the wrong decisions: purchase products they do not like and avoid purchasing the ones they do like. Over time, the more popular a heuristic becomes, the more likely it is to be exploited by opportunistic sellers.

As a last resort, many consumers opt to complement or supplant reputational information with professional reviews. Consumer Reports, USNews, PC Magazine, Michelin Restaurant Review, the NYTimes Book Review, and similar publications all profit from selling professional reputational information to consumers. Indeed, their very existence is proof of the deficiencies of word-of-mouth reputational systems. And yet, even those provide a limited solution. Such publications can be costly, they cover a limited number of products, and—perhaps most importantly—they have their own ‘microfoundations’.\textsuperscript{198}

\textsuperscript{196} E.g., a shilled review may complain that prices at a restaurant were too cheap or dishes were too big.

\textsuperscript{197} Indeed, in the review-market, sellers place a premium on sellers with a long history of reviews. Testzon, for example, assigns reviewers a score based on their history of positive reviews, and sellers are more likely to send free products to higher score reviewers.

\textsuperscript{198} Consumer reports, for example, charge $83 per year, see https://ec.consumerreports.org/ec/cro/order.htm?INTKEY=I57HLT0. Consumers exhibit distrust of professional publications and survey data suggests that they prefer consumer reviews over professional reviews. See Mehdi Ghazisaeedi et al., \textit{Trustworthiness of Product Review Blogs: A Source Trustworthiness Scale Validation}, 6 AFR. J. BUS. MGMT. 7498, 7498 (2012).
publications, it becomes more profitable for sellers to bribe those reviewers to publish favorable reviews. Indeed, there is substantial evidence of, and litigation surrounding, reviewer capture. Ultimately, third-party professional reputational systems are also insufficient.

C. Market Implications of Reputational Distortions

The microfoundations of reputation lead to distortions in the reputational information that consumers observe. It is difficult for consumers—or even trade platforms—to overcome these distortions and available heuristics are likely to be insufficient.\(^{199}\) As a result, consumers are likely to make systematic errors. Although the full dynamic effect of these mistakes demands a more general equilibrium analysis, it is useful to briefly highlight a few of the likely consequences of these distortions.

The first, and most immediate, consequence of consumer mistakes is, of course, a reduction in consumer welfare. As consumers purchase goods that are not well suited to their needs or are riskier than they would like, they incur a welfare loss. The second corollary consequence is that sellers who invest in quality will not always reap the benefits of so doing. Conversely, sellers who act opportunistically will not always be disciplined by consumers. Reputational distortions make it more difficult to discern good and bad sellers and so, in a classical market for lemons dynamic, reputational concerns will have lesser disciplinary power.\(^{200}\) This means that, on the margin, it will become less profitable to invest in quality. This leads to yet another negative consequence because lower quality means that consumers will have fewer options. It also means that overall demand for goods will fall, leading consumers to demand less and sellers to supply less.\(^{201}\)

The silver lining is that these consequences also work in reverse; any marginal improvement in the quality of reputational information improves the efficiency of the market, increases consumer welfare, and improves sellers’ position in the market. With this in mind, the Article

\(^{199}\) See, e.g., Ponte, supra note 134, at 64–65 (“it is becoming challenging to decipher more sophisticated forms of fake online reviews.”)


\(^{201}\) See also Cannon & Chung, supra note 127, at 39 (“These disincentives against negative reviews may result in market inefficiencies because users' ratings understate the negative experiences and risks associated with the transaction and slow the reporting of all but the most egregious unacceptable behavior.”).
moves to investigate the role of the law in improving reputational systems.
III. THE LAW AND REPUTATIONAL BOTTLENECKS

The analysis in Part II suggested the key importance of the private incentives to create reputation and the problems that ensue when these are misaligned. A chief corollary of this analysis is that market forces are less dependable than traditionally understood. In contract law, the traditional response to market failures—and reputational bottlenecks are indeed a form of a market failure—is the use of paternalistic, top-down regulation, such as mandatory price or quality controls.202

The goal of this section is to suggest a third way, one that is orthogonal to the choice between top-down regulation and bottom-up market discipline.203 The law can be used to unblock reputational bottlenecks and to the extent it does, this improves consumer welfare while not risking many of the known pitfalls of top-down regulation. There a variety of ways the law can unclog reputational bottlenecks, ranging from directly shaping the incentive structure to improving the operation of third-party reputational platforms, which suffer from some important limitations.204 This Part discusses some of these solutions but does not attempt to be comprehensive or exhaustive.205 Rather, the goal is to demonstrate the usefulness of thinking about regulating consumer markets through the prism of reputational bottlenecks. As such, this Part does not discuss some solutions that were previously adumbrated, such as fighting more vigorously against fake reviews or using courts to disseminate reputational information.206 After reviewing some of these solutions, this Part concludes by a comparing the traditional tools employed in contract and consumer law to the unblocking of reputational bottlenecks. The comparison reveals that unblocking reputational bottlenecks enjoys a few normative advantages over object-level regulation, offering robust consumer protection without sacrificing consumer autonomy.

202 See supra Section I.B.
203 See Strahilevitz, supra note 1, (arguing that the government should subsidize and encourage transparency among reputational platforms).
204 See infra Section III.C.
205 One casualty of the space limitations is the exploration of the role agencies can play in creating reputational information. See generally Yonathan Arbel, Adminization: Gatekeeping Consumer Contracts, 71 Vand. L. Rev. 121 (2018).
206 See Stemler, supra note 26, at 707–10 (proposing legal means to combat shilling); Parella, supra note 3; Shapira, Litigation, supra note 3 (discussing the role of courts in creating reliable reputational information).
A. Controlling Costs: Litigation Risk for Opinions

The first key lesson from the analysis is that the costs of creating reputational information matter. Costs present a serious obstacle given that the benefits of reputation creation are in general weak, inconsistent across individuals, and most importantly, accrue to other, future consumers. Consequently, costs may impede sharing of socially valuable opinions.207 From a policymaking perspective, many of the costs of reputation-generation are immutable, but fortunately, the largest cost is mutable: The risk of legal liability.

The law exposes consumers to legal risk through a variety of doctrines, such as defamation, tortious interface, injurious falsehoods (commercial disparagement),208 and false lights.209 The ‘paradox’ of these doctrines is that businesses often lose on the merits and are very rarely able to recover any payment from consumers, but they still file them frequently.210 The reason is strategic; filing these lawsuits lead consumers to frequently retract posted reviews or chill others from making them in the first place.211

The minatory nature of these lawsuits has to do, in part, with the expansive reach of the common law defamation doctrine.212 Under the doctrine, a false statement that injures the reputation of another is

207 See Lafky, supra note 94, at 561 (finding that low costs impede reputation generation).
211 See id. at 859–860 (surveying a “rapidly expanding category of Internet libel suits” and explaining them as an attempt to silence speakers rather than to recover damages); see also Lyrissa Barnett Lidsky, Anonymity in Cyberspace: What Can We Learn from John Doe?, 564 B.C. L. Rev. 1373, 1376 (2009).
wrongful even in the absence of malice. While the statement must be false for liability to attach, mistakes are bound to happen—whether by consumers or, ex-post, by judges and juries. This doctrine is only partially limited by the (surprisingly recent) introduction of First Amendment safeguards, which privilege statements of public concern that are not “provably false.” This safeguard is considered “inadequate” because consumer reviews often carry an implicit statement of fact, like the wedding guest who opined that the manager of the wedding venue was “two faced, crooked, and was rude to multiple guest[s]. . . . In my opinion [s]he will find a[way] to keep your $500 deposit.” Despite the ostensible opinion modifier, the court explained that the statement still implies factual allegations and may thus be defamatory. Now, the risk of losing a case should not be exaggerated; consumers most often prevail. Still, the doctrine is sufficiently vague and the holdings are so fact-dependent that litigation carries a risk. Moreover, the size of the risk increases with the amounts sued. New Jersey consumer Jane Perez complained about her contractor online, stating that “My home was damaged: the “work” had to be re-accomplished . . . he invoiced me for work not even performed.” In his

218 Lidsky, supra note 210, at 865.
219 Neumann v. Liles, 369 P.3d 1117, 1119 (Or. 2016).
220 Id. at 1126.
defamatory action, the contractor claimed $750,000 in damages, which she only narrowly avoided.223

Another source of costs is procedural. In the process of filing these lawsuits, consumers are often involuntary de-anonymized.224 Every month, for example, Yelp receives about six subpoenas to reveal the identity of consumers.225 Another cost is that in the process of defending these lawsuits, consumers need to expend prodigious amounts which are not always recoverable.226 Anti-SLAPP laws, meant to combat these procedural burdens, have only been enacted by a number of states and have also been inconsistently applied.227

To illustrate consider two recent examples. Matthew White complained online that his contractor provided an “[a]bsolutely horrible experience . . . Be warned!” The contractor responded with a civil lawsuit, alleging failure to pay and defamation with $125,000 in compensable harm. The parties settled their mutual claims with White paying the contractor $15,000 and removing the review.228 The aforementioned Jane Perez had to litigate the case for five full days and retract her review.229

226 E.g., a negative review of an attorney led to a two-year litigation, including appeals and various filings. See Spencer v. Glover, 397 P.3d 780 (Utah Ct. App. 2017); see also supra note 92 and the accompanying text.
227 See Aaron Smith, Note, SLAPP Fight, 68 ALA. L. REV. 303, 305 (2016) (surveying Anti-SLAPP legislation and exploring the uncertainty surrounding their applicability in federal courts).
228 See Rob Low, Yelp Review Gets Couple Sued, FOX31 DENVER (May 18, 2015). Josh Harkinson, Yelp Is Pushing a Law to Shield Its Reviewers From Defamation Suits, MOTHER JONES (Jul. 20, 2015).
Analyzing defamatory causes of action in light of the microfoundations of reputation further helps to see the inherent asymmetry that emerges from our web of doctrines that ‘protect’ reputational interests. Affording protection against negative defamatory consumer statements opens the door for businesses to prosecute negative—but only negative—statements made against their products. There is no symmetric protection against false positive reviews, unless one counts the much harder to try and prove rules against false advertisement.

To the extent policymakers seek to reduce reputational creation costs, these doctrines are relatively amenable. One possible solution is the use of privileges, absolute or partial, the kind of which are afforded to speech concerning public officials.230 This proposal runs against the objection, made by some recent authors, that privileges would also encourage reckless or deliberate lies by consumers against businesses.231 However, and without purporting to fully develop the argument here, objections of this sort have not sufficiently accounted for the public value of reputation or its microfoundations.232 Moreover, they have not analyzed the dynamic equilibrium that emerges from a lax defamation regime. In short, people would tend to place less trust in assertions that are made in the absence of defamation law, and so the negative impact of lies would be much abated. At the very least, one should adopt a more skeptical approach to the social utility of defamation laws, and courts should better understand the chilling effect of their rulings, even when the case is finally disposed in favor the consumer. Perhaps a middle-of-the-road solution is greater adoption and implementation of anti-SLAPP legislation, which is still not federally adopted and has considerable inter-state variance in the degree of protection it offers consumers.233

B. Fostering Positive Incentives

Because reputation is a public good, consumers often lack sufficient incentive to create it, a problem that is most acute with respect to middling experiences and unpopular opinions. The law that


231 See Dohse, supra note 136.

232 See Heymann, supra note 64 (arguing that the public interest dimension of reputation has been neglected)

233 See Aaron Smith, Note, SLAPP Fight, supra note 227.
relegates of consumer benefits is nascent, and exhibits considerable confusion about this basic point, taking an overly strong stance against incentivizing reviews. Here, again, the microfoundations framework is helpful in delineating the proper limits of the provision of incentives to consumers.

In an attempt to promote transparency in the market and curb false advertising, the FTC announced in 2015 new guidelines that regulate incentivized reviews.\(^{234}\) The context of these guidelines is facially reasonable; the ascendency of social media has given rise to a new wave of influencers, which are individuals with a large number of followers or ‘friends,’ as the nomenclature may be. Companies spend over $3 million dollars on paying these influencers to endorse products on their social media accounts.\(^{235}\) The FTC expressed concern that consumers fail to realize that such endorsements are not neutral and sought to require influencers to disclose their financial interest.

The result, however, is the spilling of the poor proverbial baby with the bathwater. Consumers need incentives to overcome reputational congestion and regression to the extreme, which are both the outcome of consumers not internalizing the benefits of reputational information.\(^{236}\) Despite the importance of such benefits, the guidelines impose onerous disclosure requirements that are triggered even when one has only the remote potential to appear partial, regardless of actual partiality or even the degree of such appearance. For example, if a restaurant gives free meals to everyone for a trial period without requiring any type of review, much less a favorable one, the guidelines require an affirmative duty of disclosure due to the existence of a potential expectation of opinion sharing.\(^{237}\) The same goes for a $1 dollar-off coupon, a promotion that involves participation in sweepstakes, or even a donation to charity.\(^{238}\) The imposition of such duties is problematic. There is a large difference between content-neutral incentives and content-partial incentives. By commanding disclosure of financial interest in both cases, the value of content-neutral reviews is overly-diluted. This, in turn, provides lesser interest for business owners to provide content-neutral incentives in the first

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\(^{236}\) See supra Part II.B.

\(^{237}\) FTC, THE FTC’S ENDORSEMENT GUIDES: WHAT PEOPLE ARE ASKING (May 2015) [hereinafter ENDORSEMENT GUIDES].

\(^{238}\) Id.
place. Even worse, mandating such disclosure may actually exacerbate the problem of regression to the extreme; research finds that disclosing financial incentives may create a ‘moral license’ to exaggeratedly extol the virtues of the product.\textsuperscript{239}

There is a readily available alternative. The developing international standard permits the use of content-neutral incentives.\textsuperscript{240} To be clear, permitting incentives does not mean that content-partial reviews should be tolerated, not without adequate disclosure at least. Moreover, the ability of companies to cherry-pick potentially favorable reviewers should not be discounted. Still, with careful attention to developing industry practices and with the safeguard of false advertising rules, providing content-neutral incentives to consumers for reviews, including free products, should not be discouraged. Now, one concern in this regard is that incentivized reviews would pressure consumers to post higher rating reviews, either because they would like to show gratitude for the free product or because they would like to continue receiving free products in the future.\textsuperscript{241} Research on this point is scant, and the implementation of the proposal should be evaluated as research accumulates. Still, the data we do have cuts against this concern. A recent study compared incentivized reviews to organic ones, both qualitatively and quantitatively. Not surprisingly, incentivized reviews put less emphasis on price; but more surprisingly, there was no difference in rating between the content-neutral-incentivized and organic reviews.\textsuperscript{242}

\textbf{C. Platform Meets Law: Regulation, Monitoring, and Accreditation}

Consumer trust is a valuable commodity. A platform that provides consumers with reliable reputational information can draw a significant audience, which can be monetized through various means. Indeed, this is the business model of various ‘reputational platforms’, i.e., sites that collect consumer opinions regarding their experiences

\textsuperscript{239} See Loewenstein et al., supra note 186, at 421-28.
\textsuperscript{240} See INT'L CONSUMER PROTECTION & ENFORCEMENT NETWORK, ONLINE REVIEWS & ENDORSEMENTS: ICPEN GUIDELINES FOR REVIEW ADMINISTRATORS (2016).
\textsuperscript{241} See FTC, ENDORSEMENT GUIDES, supra note 237.
\textsuperscript{242} See Maria Petrescu et al., Incentivized Reviews: Promising the Moon for a Few Stars, 41 J. RETAILING & CONSUMER SERVS. 288, 295 (2016) (finding that providing incentives does not affect the “satisfaction ratings assigned to the product in the form of ‘stars’ from one to five” although they do find some evidence of “potential linguistic and sentiment differences found in the qualitative analysis”).
with goods and services. It may seem natural now, but it was far from obvious in the early days of the internet that a shopping website would want to display information that may paint some of its traded products in a bad light. The sentiment at the time was that “[l]etting consumers rant about products in public was a recipe for retail suicide.”

It was also incredulous that consumers would be willing to trust the advertised opinions of complete strangers. Still, a small online bookseller by the name of Amazon took a bold step and adopted a system of consumer feedback. The rest, well, is history.

Reputational platforms thus have some incentive to self-regulate and have indeed taken some steps to police the reliability of the reputational information that they host. For example, Amazon uses a variety of algorithms to detect suspect reviews, prohibits the provision of incentives-for-reviews, and sues violators for violations. Importantly, these steps are taken despite the lack of any legal mandate to do so. To the extent that such systems work, they are desirable and helpful, and if the law can support them, it is highly desirable. For example, the growth of online trade platforms sometimes raises antitrust concerns; in making such determinations it is important to consider the countervailing benefit that such reputational platforms may improve reputational flows.

See Goldman, supra note 22, at 294 (reviewing examples of online reputational platforms).


See Ante, supra note 244. For a review of eBay’s history and success, see Steven Tadelis, Reputation and Feedback Systems in Online Platform, 8 ANN. REV. ECON. 321 (2016).

For historical examples of reputation systems, see supra note 52.

See SUNDARARAJAN, supra note 26.


However, the private incentive to police reputational platforms scarcely makes the law redundant. A preliminary reason is that most retail is not mediated by reputational platforms, and both retail and direct marketing are still larger activities.\textsuperscript{252} Another reason is that there are some signs of half-hearted self-regulation; for example, Amazon permits reviews by people who have not purchased the product, and most platforms do not take legal action against fake reviewers, perhaps because they are worried about the potentially negative PR implications.\textsuperscript{253} Yet another reason is that the regulatory means available to these platforms are quite limited, and mostly depend on contractual provisions, with little access to investigative powers. There is not much TripAdvisor can do, for example, to enforce its rule that family members of the owner cannot review their hotels.\textsuperscript{254}

The deepest problem with self-regulation is the inherent conflict of interest reputational platforms have due to asymmetric information. The consumer cannot directly observe all the reviews and rankings that are submitted to the platforms and so, must trust the platform. But the more trust consumers place in the platform, the more valuable it becomes to abuse it.\textsuperscript{255} The platform may, for example, list higher-margins products first, suppress negative reviews of its own products, or otherwise manipulate the market for its own advantage. Paradoxically, the fight against fake reviews exacerbates the problem. This is because the platform may feel compelled to use some screening in its display of opinions. This screening, often done algorithmically, rely on necessarily opaque standards: disclosing the criteria for deciding which review is genuine would invite abuse. As a consequence, the platform must use opaque algorithms, which give it more power to abuse consumer trust.

This conflict of interest is exacerbated by the legal power platforms have to censor reviews. A recent legal decision by the 9th circuit considered the question whether a platform was under any obligation to present the full range of reviews.\textsuperscript{256} The court held that the

\textsuperscript{252} See, e.g., Retail Revolution—US Apparel Shifts in 20 Charts, FUNG GLOBAL RETAIL & TECH. 2017 (reporting that e-commerce controls only 17% of the market in apparel).


\textsuperscript{255} See David Adam Friedman, Addressing the Commercialization of Business Reputation, 80 LAW & CONTEMP. PROBS., 73, 79 (2017) (relating the conflict of interest to the business model of the platform).

\textsuperscript{256} Levitt v. Yelp! Inc., 765 F.3d 1123 (9th Cir. 2014).
reviewee has no right to have any review posted at all, and as such, the reviewee cannot compel the platform to publish reviews it did not want to publish.257 This decision licenses platforms to present reviews according to their own discretion.

This is not an abstract concern. Yelp has been the subject of extensive litigation for allegedly manipulating reviews for businesses that were not willing to pay advertising fees.258 According to an investigation by the Wall Street Journal, the FTC received many hundreds of complaints against Yelp, alleging that the business received unfair reviews after refusing to advertise on the website.259 Another platform, Consumer Affairs, has similarly been the subject of litigation for its alleged preferential treatment of paying members which consisted of showing their reviews in a more favorable light.260 A ProPublica report also suggests that Amazon may be unfairly manipulating listings in order to promote its own goods.261

Because of this conflict of interest, reputation systems may find it difficult to establish their own reputation. The law may fruitfully intervene through a combination of mandatory and voluntary regulations. First, the law may impose fairness, neutrality, and transparency requirements on reputation platforms—a move recently recommended by the International Consumer Protection Enforcement Network (ICPEN), a network of consumer protection authorities from nearly 60 countries.262 Such requirements may be enforced through

257 Id. at 1134.
258 Id.; Reit v Yelp! Inc., 907 N.Y.S.2d 411 (N.Y. Sup. Ct. 2010); Curry v. Yelp! Inc., No. 14–cv–03547–JST, 2015 WL 1849037 (N.D. Cal. Apr. 21, 2015). Note that these cases were ultimately dismissed. See also Eric Goldman, "Court Says Yelp Doesn’t Extort Businesses," FORBES (Sept. 3, 2014) (“For years, Yelp has been dogged by allegations that it manipulates user reviews ... businesses aren't likely to stop grumbling about these concerns any time soon.”).
259 See Loten, supra note 225.
262 INT’L CONSUMER PROTECTION & ENFORCEMENT NETWORK, ONLINE REVIEWS & ENDORESEMENTS: ICPEN GUIDELINES FOR REVIEW ADMINISTRATORS (2016) (guiding reputational platforms to be “equal and fair in the collection of
routine inspection of the methods employed by the reputational platforms and investigations on the basis of complaints. Additionally, the law may offer an accreditation system. A reputational platform who is interested in formal accreditation by the agency may agree to submit itself to a set of standards and occasional regulatory inspections. By agreeing to do so, the platform may feature the agency’s accreditation seal, thus fostering greater consumer confidence. Of course, it is also possible to make such monitoring and accreditation system mandatory. Whether mandatory or voluntary, the law can ensure the quality of reputational platforms and, importantly, help them communicate this fact credibly to consumers.

D. The Role of the Law in Consumer Contracts: A New Modality

Legal interventions in consumer contracts are often met with suspicion; yet, many believe that they are ineluctable given the persistence of consumer mistakes. Such interventions run the gamut of direct term regulation through mandatory terms through ex-post revocation of unfair terms to disclosure-based regulation. For the most part, the contemporary debate focuses on two roles for legal interventions: mandatory terms and mandatory disclosures.

Up until recently, the standard approach in contract law, at least among economic liberals, was that disclosure is king; consumers make suboptimal decisions in the marketplace because they lack pertinent information and so, forcing sellers to reveal this information would cure the underlying problem. This approach enjoyed popularity because it implies a great degree of respect to consumer autonomy, requires a lesser degree of top-down intervention, and is reviews,” be “alert and proactive in the moderation of reviews,” and “transparent in publication of reviews”).

263 See supra Section I.B.


265 See, e.g., Amy J. Schmitz, Remedy Realities in Business-to-Consumer Contracting, 58 ARIZ. L. REV. 213, 217 (2016) (“Classical contract doctrine prefers formulistic disclosure rules” and “disclosure bolsters freedom of contract by giving consumers an opportunity to review contract terms before consenting” id. at 219.).
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designed to treat the problem of informational asymmetry directly. Recently, this approach has come under sustained attack, which argues that mandatory disclosure regimes fail to improve outcomes for consumers. Theories as to why this approach fails abound: the information is presented in manipulative ways (such as informational floods or careful word-picking) or does not actually contain pertinent data, consumers do not understand the information or they find its evaluation cognitively taxing, or, consumers are prone to known biases which impede their decision-making process. Such problems are often cited in support of greater object-level regulation, including price and quality controls, standard terms, and ex-post review of fairness. Still, the debate on the proper balance between consumer autonomy and consumer welfare is ongoing.

The analysis here opens the door for a new modality of legal interventions in consumer markets, one that advances consumer welfare without sacrificing consumer autonomy. This is the idea of unclogging reputational bottlenecks; laws and doctrines that work not on the object-level of contractual terms, but rather seek to improve the flow of reputation to consumers. By identifying and removing reputational failures—these structural walls that stifle the incentive to create and disseminate valuable reputational information—the law can increase consumer welfare, but without mandating any specific set of terms. When reputational channels work well, consumers can make optimal choices that account for their particular preferences in the quality-price space.

Importantly, such interventions are often superior to mandatory disclosure. This is because a sustained focus on reputational bottlenecks has a similar informational effect, but at a better cost-to-

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267 See supra note 19.
268 See Schmitz, supra note 265, at 217 (“This doctrine [of mandatory disclosure] counseled against substantive consumer protections to foster certainty, long-term planning, and an optimal allocation of resources.”).
269 See also Parella, supra note 3 & Shapira, Litigation, supra note 3 (discussing the use of courts to produce and transmit reputational information about organizations).
271 See also Strahilevitz, supra note 1 (arguing that reputational information substitutes the need for statistical discrimination in peer-to-peer interactions).
benefit ratio. First, reputational information reflects the actual experiences of other consumers. As such, it is better calibrated to the use-cases that consumers actually care about. Additionally, mandatory disclosures involve information about a variety of contingencies that might happen but often is not informative on the likelihood of such events. By reflecting the actual experiences of consumers, reputational information carries this statistical sense. Second, designing effective mandatory disclosure regimes require the regulator to have extensive domain-specific expertise. Focusing regulators on facilitating the flow of reputation to the market requires them to have less domain-specific expertise and indeed, to develop cross-domain knowledge. Third, mandatory disclosures can be gamed relatively easily, by choice of words, font, form, and so on. In contrast, while shilling is a concern, reputational information is generally less accessible to corporate manipulation.

IV. CONCLUSION

Reputation is fundamental to the operation of many markets. When reputation works, it works extremely well; it disciplines sellers at a very low cost, saving the need for courts and lawyers. This Article argued that the forces that shape and form reputation—the motivations of individuals who choose to create it—exert a lasting effect on the reliability of reputation. Reputation may evolve more slowly than is recognized due to “reputational congestion”, the lack of sufficient incentive for individuals to contribute to this public good. Moreover, reputation will tend to be biased due to the existence of a “regression to the extreme”, the idea that individual incentives to create reputation are strongest when the experience was extreme.

This account has a significant bearing on future policymaking and contracts scholarship in particular. At the object level, this account invites greater skepticism towards solutions that seek to delegalize and deregulate consumer transactions on the basis of faith in the internal regulatory power of market forces. Conversely, it supports active regulation in areas that are traditionally unregulated.

A more ambitious goal of this paper, however, has been to suggest a new paradigm for consumer contracts: The opening of reputational bottlenecks. By focusing on fostering incentives to create quality reputational information, the law can significantly improve market processes. This is not to say conventional paradigms should be abandoned, but they should definitely be supplemented with this new approach. Some examples were considered here, such as creating privileges for consumer defamation and increasing the scope of Anti-
SLAPP legislation, permitting the use of benefits in exchange for content-neutral opinion-sharing, and more generally, reconsidering the regulation of reputational platforms. While far from exhaustive, these proposals demonstrate the interface of law and reputation, and future work will seek to expand on these proposals.

We are now at a moment in time when there is a great appetite for a new way of thinking about contracts and consumer law. The previous paradigm of mandatory disclosure has not survived the recent sustained attack, which showed it to be ineffectual, wasteful, and counter-productive. Regulators who mandate disclosure find it difficult to know what information is most pertinent and to find the language to communicate it. In contrast, regulators can focus on removing reputational bottlenecks, and by that, they will clear the way for consumers to communicate with their peers. After all, who knows better than consumers what features of the product or of the consumption experience are most important to consumers?