

DISCLOSURE NORMS

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INTRODUCTION

Most law and economics scholars agree that private information represents a significant practical impediment to efficiency.¹ This consensus is richly deserved—in many real-world market settings, economic actors possess proprietary knowledge about the underlying characteristics of the transactions at issue. Sellers of real estate, for instance, often know about the existence of creaky floors, leaky roofs, and insect infestations.² Issuers of securities are privy to confidential data on financial fundamentals.³ Used car dealers possess hidden knowledge about latent mechanical defects and repair histories.⁴ Corporate fiduciaries have superior information about the merits of a

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¹ See, e.g., DOUGLAS G. BAIRD ET AL., *GAME THEORY AND THE LAW* 269-71 (1995) (discussing problems of information asymmetries for both markets and courts); ERIC RASMUSEN, *GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY* 227 (1989) (noting that in the presence of information asymmetries, garden variety assumptions about efficient competitive markets are likely to fail); Alan Schwartz, *Legal Contract Theories and Incomplete Contracts*, in *CONTRACT ECONOMICS* 76, 81 (Lars Werin & Hans Wijkander eds., 1992) (referring to contracts with terms conditioned on unverifiable private information as “legally incomplete”).

² See, e.g., *Lenawee County Bd. of Health v. Messerly*, 331 N.W.2d 203, 205-06 (Mich. 1982) (discussing the sale of a property that was unsuitable for habitation, in part because of an inadequate and uncorrectable sewage system).

³ See, e.g., *Basic Inc. v. Levinson*, 485 U.S. 224, 226-28, 232-41 (1988) (examining the standard of information materiality applicable to preliminary merger discussions in a case in which one party publicly denied that such discussions were taking place).

⁴ See, e.g., *Schneider v. Miller*, 597 N.E.2d 175, 176 (Ohio Ct. App. 1991) (discussing the sale of a car later found to have extensive underbody rust).

proposed transaction or business combination.⁵

In each of these examples (and countless others), informed parties have an incentive to capitalize on their advantage by devising strategies to exploit their less knowledgeable counterparts. Anticipating this possibility, of course, uninformed individuals may respond with cautious strategies of their own calculated to minimize their exposure. Though individually rational, such strategic maneuvering is nevertheless socially undesirable, for it tends to distort—often significantly—the dynamics of the negotiation process, discouraging value-enhancing bargains from being struck (and perhaps even encouraging value-destroying ones). Within such contexts lies a possible invitation for courts to regulate the incidence and magnitude of inefficiencies due to informational asymmetry.

And have courts ever obliged. Examples abound in which legal doctrines have been devised in an attempt—active or passive—to encourage accurate information disclosure, particularly within corporate settings, with the ostensible goal of ameliorating the dangers posed by adverse selection. The law of express and implied warranties, for example, has general and far-reaching implications for both ordinary market transactions⁶ and for “due-diligence” disputes within the mergers and acquisitions context.⁷ Corporate law discourages officers and directors from causing their firms to enter into interested transactions without first disclosing the conflict to disinterested directors or shareholders and seeking approval.⁸ And

⁵ See, e.g., *Speed v. Transamerica Corp.*, 99 F. Supp. 808, 816-20 (D. Del. 1951) (discussing a controlling shareholder who had superior information about the value of company inventory and purchased additional stock of the company without disclosing this knowledge).

⁶ See, e.g., U.C.C. §§ 2-313 to -316 (1995) (covering express and implied warranties and exclusion or modification of warranties). Indeed, warranty law is the doctrinal basis for virtually all modern products liability cases.

⁷ See, e.g., *CBS Inc. v. Ziff-Davis Publ'g Co.*, 554 N.Y.S.2d 449, 450 (N.Y. 1990) (discussing a breach of express warranty claim by a buyer who had questioned the accuracy of financial information but did not believe in the truth of the information received). Warranty law is similarly important in private placements of securities and other privately negotiated stock transactions, particularly after the limiting effect of *Gustafson v. Alloyd Co.*, 513 U.S. 561, 567-73 (1995) (constraining the ability of private purchasers to take advantage of § 12(2) of the 1933 Securities Act by adopting a narrow definition of “prospectus”).

⁸ See DEL. CODE ANN. tit. 8, § 144 (1991) (validating “interested director” transactions where the director’s interest is disclosed and the transaction is approved by disinterested directors or shareholders). While section 144 does not absolutely prohibit such transactions without full disclosure, when there is no disclosure, a corporate fiduciary must carry the burden of proving the transaction to be “fair”—a

perhaps most notoriously, both federal and state securities laws impose a daunting and complex labyrinth of disclosure regulations on individual issuers, insiders, and traders—regulations that are frequently enforceable through private rights of action.⁹ In all of these contexts (and in many others), those who fail to make the requisite disclosures or who disclose inaccurate information bear a significant risk of downstream legal liability.

Perhaps because of the considerable stakes involved, judicial inquiries into the accuracy of corporate information disclosure are now relatively commonplace. And, perhaps concomitantly, such inquiries have drawn sharp criticism from those who would advocate a more noninterventionist position. Many critics marshal at least two related arguments in support of their normative stance.

First, they contend that while third-party adjudicators are reasonably skilled arbiters of truth in garden-variety disputes, judges and juries are considerably more susceptible to judgment errors in complex disclosure disputes, where the allegedly misleading information is “soft,” speculative, or predictive in nature. Indeed, impartial adjudicators may be *particularly* likely to err in such contexts, having first to reconstruct and interpret the often technical language that attends such disclosures, and then to assess the ultimate accuracy of such statements long after the fact. These tasks are no simple feats for judges and juries, who generally possess neither technical familiarity with the underlying issues, nor any direct knowledge of the actual context in which the initial disclosures were made.¹⁰ Consequently, the argument goes, the inevitable inaccuracies that result may significantly undercut the deterrent incentives provided by legal sanctions, perhaps even rendering such sanctions counter-productive.¹¹

relatively daunting requirement. *Id.*

⁹ See generally RICHARD W. JENNINGS ET AL., *SECURITIES REGULATION: CASES AND MATERIALS* (1998) (examining various aspects of disclosure throughout the casebook).

¹⁰ See FRANK H. EASTERBROOK & DANIEL R. FISCHEL, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 100 (1991) (“Judges are neither chosen for business acumen nor fired or subject to reductions in salary if they err in assessing business situations.”); see also Jeffrey J. Rachlinski, *A Positive Psychological Theory of Judging in Hindsight*, 65 U. CHI. L. REV. 571, 572-76 (1998) (describing problems of hindsight bias that frequently plague retrospective legal assessments on technical matters).

¹¹ See, e.g., EASTERBROOK & FISCHEL, *supra* note 10, at 305 (arguing that securities fraud regimes work best when “applied to statements of issuer-specific historical fact” rather than soft, forward-looking information); RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 265-66 (4th ed. 1992) (noting that extreme judicial inaccuracy defeats the deterrent effect of legal rules); Margaret M. Blair & Lynn A. Stout, *Trust*,

Second, critics maintain that legal liability is far from the sole instrument for encouraging honesty in informationally sensitive markets. On the contrary, they assert that even without courts (or perhaps *especially* without them), extralegal “norms” of disclosure can evolve over time as a less formal, but nonetheless effective, instrument of deterrence. Indeed, many actors within corporate contexts are repeat players who fear being punished in future market transactions should they develop a reputation for nondisclosure or misrepresentation. Moreover, individuals and organizations that develop trustworthy reputations are likely to be the ones that survive in the longer term, and may, in the process, inculcate among their employees and managers a set of shared preferences for open and honest disclosure. In fact, because reputational sanctions are invoked by the parties themselves, such desires are far less susceptible to the errors and inaccuracies that plague third-party adjudication. Consequently, critics conclude, extralegal norms possess a greater capacity for effecting honest and efficient dissemination than does an inept, inaccurate, and indulgent system of regulation by judicial hindsight.¹²

The purpose of this Article is to interrogate the relationship between judicial error and extralegal norms more formally, focusing particularly on typical corporate disclosure contexts. In so doing, I shall argue that this relationship is far less clear-cut than much of the literature suggests. Using a formal, game-theoretic model of information disclosure, I demonstrate that in the presence of judicial error, a society that benefits from extralegal norms of honest

Trustworthiness, and the Behavioral Foundations of Corporate Law, 149 U. PA. L. REV. 1735, 1739 (2001) (arguing that “attempts to employ external incentives can often reduce levels of trust and trustworthiness within the firm by eroding corporate participants’ internal motivations” (emphasis omitted)).

¹² See EASTERBROOK & FISCHEL, *supra* note 10, at 98-100 (arguing that market forces are better able to discipline dishonest corporate actors than error-prone courts); see also BAIRD ET AL., *supra* note 1, at 57 (arguing that reputations may be a substitute for extralegal norms); POSNER, *supra* note 11, at 110-11 (noting that market and community discipline may sometimes substitute for legal regulation, though also providing counterarguments to this claim); Marilyn F. Johnson et al., *Shareholder Wealth Effects of the Private Securities Litigation Reform Act of 1995*, 5 REV. ACCT. STUD. 217, 217-33 (2000).

A similar sort of claim appears in other applications of norms theory. See, e.g., Edward B. Rock & Michael L. Wachter, *The Enforceability of Norms and the Employment Relationship*, 144 U. PA. L. REV. 1913, 1933 (1996) (arguing that “when the facts needed to resolve disputes are difficult to verify, the parties themselves are in a better position than a third party to evaluate them,” and that in such instances “norms built around self-enforcing rules are superior to third party enforcement”).

disclosure might ironically favor *more expansive legal regulation* than would a similarly situated society in which norms are weak or nonexistent. Thus, in contrast to the common argument that norms can (or should) substitute for error-prone law, I argue that the two phenomena may frequently complement each other.

The intuition behind my thesis is a bit subtle, and its detailed explication is therefore relegated to the formal analysis below.¹³ Nevertheless, the core intuitions emanate directly from a sequence of relatively simple observations. First, and most fundamentally, law is an inherently multidimensional policy instrument. Nearly every legal rule serves at least two distinct functions (if not more): a liability function (which determines when one is deemed to have acted wrongly) and a sanctioning function (which determines the monetary and/or nonmonetary consequences that attend wrongful conduct). Significantly, there is no a priori reason to believe that law and norms must interact uniformly across these constituent functions.

Second, norms of honesty often have the effect of augmenting the sanctioning function of law, contributing additional social penalties that further deter wrongful behavior.¹⁴ This *extralegal* contribution to sanctions enables courts to reduce the magnitude of *legal* sanctions without compromising their target level of deterrence.

Third, as noted above, unlike their legal counterparts, norm-based sanctions are often exercised by market participants directly, without the intervention of a third party. Thus, such sanctions are frequently less susceptible to the verification errors that typically hamper third-party adjudication. In turn, this implies that as error-prone courts reduce legal sanctions to accommodate social sanctions, the aggregate costs of sanctioning errors borne by market participants will also decline.

Therein lies the rub: the reduction in sanctioning-error costs identified above may be sufficiently large to permit courts to expand law's reach in other dimensions, such as its *liability* function. In other words, because extralegal norms facilitate milder legal sanctions,

¹³ See *infra* Part II (analyzing information disclosure problems through a framework drawn from game theory).

¹⁴ To be sure, extralegal norms do not operate solely on the sanctioning level, since the very definition of what constitutes "norm violation" must also be defined and specified. In the analysis that follows, however, I shall hold this latter specification role constant, varying only the former sanctioning role that norms play. See *infra* Part II.H. Nothing turns on this portrayal of norms, however, and my qualitative thesis would persist under alternative accounts of norms that varied the specification role only or both simultaneously. I revisit some of these robustness questions *infra*, in Part III.

efficiency-minded courts may become more interventionist in situations that they would otherwise eschew for fear of imposing excessive risk. Hence, by enabling milder legal penalties, truth-telling norms may ironically encourage courts to become more aggressive in specifying the universe of circumstances that trigger liability in the first place—effectively causing the long arm of the law to grow even longer (albeit somewhat less muscular). A society with both error-prone courts and extralegal norms of honesty, then, may very well end up implementing liability triggers that appear more aggressive than those of a society possessing equally error-prone courts, but less-developed norms of disclosure.

While examining the potential complementarity of law and norms is an interesting conceptual exercise, it is not merely an academic curiosity. On the contrary, it carries important lessons for lawyers, judges, and legal scholars who are engaged both in the positive inquiry about the practical domain of norms and in the prescriptive enterprise of designing law in the presence of norms. Regarding the former endeavor, much of the law and economics literature tends to portray individual behavior as relatively binary in nature—falling under the headings of “law compliance” or “norm following,” but rarely both simultaneously.¹⁵ By demonstrating the capacity for law to complement norms, my argument suggests that scholars seeking to identify the practical domain of norms should be cautious about

¹⁵ See, e.g., EASTERBROOK & FISCHER *supra* note 10, at 100 (noting that because courts are prone to errors in evaluating managerial conduct, “[i]t is better to insulate all honest [managerial] decisions from review than to expose managers and directors to review by judges and juries who do not face market pressures”); *id.* at 95-96 (“As the present value of forgone compensation [because of reputational loss] in future periods increases relative to the current gains from poor performance, liability rules become less important.”); RICHARD A. EPSTEIN, SIMPLE RULES FOR A COMPLEX WORLD 201 (1995) (“[W]here the reputational bond is strong, the legal bonds may be weak, because the incentives for good conduct can be secured without having to incur the extensive administrative costs of any system of liability.”); ERIC A. POSNER, LAW AND SOCIAL NORMS 64 (2000) (arguing that contract law’s refusal to enforce donative promises is a result of the fact that contracting parties themselves can “deter opportunism through nonlegal mechanisms more effectively than the courts could through legal mechanisms,” and asserting that “[d]octrines that prevent judicial enforcement are justified on the grounds that judicial enforcement would interfere with trust relationships”); Rock & Wachter, *supra* note 12, at 1933 (arguing that “when the facts needed to resolve disputes are difficult to verify, the parties themselves are in a better position than a third party to evaluate them,” and that “[i]n such cases, norms built around self-enforcing rules are superior to third party enforcement”); *id.* at 1938 (“[W]hen a system of norms is self-sustaining and does not impose costs on third parties . . . courts should do nothing, adopting a rule which . . . forces the parties to rely on the self-enforcing properties of their arrangement.”).

overlooking or dismissing arenas of conduct that are already governed by existing liability rules.¹⁶ Indeed, when norms and law are complements of one another, the two phenomena are likely to be highly correlated as an empirical matter. Thus, existing legal rules may be where we should begin our search for norms, not end it.

Likewise, the potential complementarity between law and norms implies that reform-minded scholars should be cautious about advocating the retrenchment or elimination of legal regulation in situations where apparently strong, norm-like behavior exists.¹⁷ To the contrary, champions of nonintervention must do more than argue that beneficial disclosure norms are plausible, or even likely. They must also demonstrate that the form of legal regulation they wish to eliminate fundamentally inhibits (rather than catalyzes) the concurrent development of norms.

Before proceeding, it is perhaps prudent to pause and clarify a few important caveats to my argument. First, as should be clear from the foregoing discussion, my principal arguments are most relevant to contexts involving deceptive statements by informationally advantaged parties. Legal doctrines that fall within this domain include topics like misrepresentation, deceit, and securities fraud. My analysis is somewhat less relevant to whether the act of disclosure itself should be mandatory or left to market participants.¹⁸ While this is an important line of inquiry, and has itself spawned significant attention among law and economics scholars, it will enter my analysis only tangentially. Instead, my principal focus is on whether courts should construe the precontractual statements made by privately informed parties as creating the prospect of legal liability.

Second, the related question of whether contractual freedom can

¹⁶ See, e.g., Marcel Kahan, *The Limited Significance of Norms for Corporate Law*, 149 U. PA. L. REV. 1869, 1872-73 (2001) (arguing that norms are relatively unimportant in corporate law, but eliminating from the analysis all areas of behavior that are already governed by existing legal liability regimes).

¹⁷ See, e.g., EASTERBROOK & FISCHEL, *supra* note 10, at 1 (explaining that the duty of loyalty may still require legal regulation when "penalties through markets are inadequate"); POSNER, *supra* note 11 at 110-11 (stating that legal remedies against fraud may remain necessary even when market remedies against misrepresentations seem adequate); Edward B. Rock & Michael L. Wachter, *Islands of Conscious Power: Law, Norms, and the Self-Governing Corporation*, 149 U. PA. L. REV. 1619, 1622 (2001) (arguing that corporate law protects and perfects the choice of firms "to replace legal governance of relations with nonlegally enforceable governance mechanisms [that is, norms]").

¹⁸ Indeed, as shall become apparent below, the model that I analyze effectively presumes that all sellers make a disclosure before the market opens.

“solve” all problems of information disclosure is also relatively tangential to my analysis. While this is undeniably an important question for legal theory (and, by all indications, will continue to be so), my inquiry is somewhat more fundamental still. Indeed, the very principle of freedom of contract presupposes that courts can readily ascertain what parties are contracting for to begin with. It is of little more than rhetorical assistance in contexts such as those analyzed here, where courts must assign liability implications to the often opaque and technical disclosures made by contracting parties. When judicial interpretation is itself prone to error, the idealized and rarified notion of contractual freedom loses much of its meaning and analytical power.¹⁹

Third, I should endeavor to clarify (at least minimally) my conception of a “norm” in the analysis that follows. After all, there is great disagreement among scholars as to what exactly constitutes the stuff of norms.²⁰ Some subscribe to an account that is closely tied to economic self-interest, under which an individual rationally chooses to comply with an established pattern of behavior for fear of incurring sanctions from others or damage to her reputation.²¹ An alternative account argues that norm-like behavior emerges as the result of increasing returns, or “network externalities” associated with a specific set of practices that become difficult to alter once widespread.²² Still other scholars offer an account of norms that is more thoroughly rooted in deep preferences, arguing that individuals actually develop (or evolve towards) a taste for behaving in a manner consistent with the existing standard.²³ Each of these alternative accounts shares a

¹⁹ Having said that, as the formal analysis below demonstrates, there may well be certain circumstances in which it would actually be *inefficient* for courts to allocate maximal contractual freedom to parties, because allowing such autonomy might provide market participants with an incentive to send inefficiently costly signals to others. See *infra* Part II (discussing what happens when adjudication becomes severely inaccurate); see also Phillippe Aghion & Benjamin Hermalin, *Legal Restrictions on Private Contracts Can Enhance Efficiency*, 6 J.L. ECON. & ORG. 381, 381-83 (1990) (making a similar “costly-signaling” argument).

²⁰ See, e.g., Robert E. Scott, *The Limits of Behavioral Theories of Law and Social Norms*, 86 VA. L. REV. 1603 (2000) (outlining various accounts of norms and some of the confusion caused by them).

²¹ E.g., POSNER, *supra* note 15, at 34 (defining social norms as “the behavioral regularities that occur in equilibrium when people use signals to show that they belong to the good type”).

²² E.g., Kahan, *supra* note 16, at 1882-95 (discussing norms and corporate powers).

²³ E.g., Robert Cooter & Melvin A. Eisenberg, *Fairness, Character, and Efficiency in Firms*, 149 U. PA. L. REV. 1717, 1724 (arguing that internalized guilt can force people not to violate a norm).

“behavioral” perspective on norms—conceiving them to be commonly shared practices that people tend to pursue even though legal rules alone do not compel them to do so. This perspective stands in stark contrast with many philosophers’ views of a “norm,” which hinge more squarely on a moral imperative that is (or at least can be) independent of preferences. Without exception, the arguments I make below all subscribe to the former, behavioral views of norms rather than the latter, moral view.²⁴ Moreover, in situations in which I wish to concentrate on a specific behavioral account of norms, I will do so explicitly.

Finally, I should reiterate that my thesis is one that emphasizes a possibility, and not an inevitability. In other words, the analysis below demonstrates that law and norms *can* complement one another, but not that they *must always* do so. There are undoubtedly numerous situations where norms and law are substitutes, and in those contexts it may be perfectly defensible for policymakers to relax legal regulation in order to encourage the evolution of healthy norms.²⁵ I have no quarrel with such arguments. Rather, my enterprise in this Article is to emphasize the complexity of the relationship between law and norms, and by so doing admonish policymakers not to be cavalier about the instrumental relationship between law and norms when advancing their positions.

My analysis proceeds in three parts: Part I of this Article provides a brief summary of two nonexhaustive situations in which legal disclosure regulations and associated safe harbors play important practical roles for the corporate practitioner—warranty law and securities law. I argue that within both of these areas (and potentially many others), the rhetorical debate over safe harbors tends to invoke the twin arguments outlined above—the fear of judicial error and the promising deterrent role of extralegal norms.

Building on these observations, Part II provides the core substantive analysis, developing a simple framework drawn from game theory to analyze information disclosure problems. Using a representative numerical example, I demonstrate how legal rules—if sufficiently accurate—may be able to respond efficiently to problems of private information. Nevertheless, when adjudication becomes

²⁴ While the moral account of norms is important (and may well have links with at least some sociological views), this Article shall have little to say about them.

²⁵ Indeed, even within the formal example described below, law and norms substitute for one another on the sanctioning dimension, while complementing one another on the liability dimension. See *infra* Part II.

severely inaccurate, the beneficial effects of law can dissipate completely, thereby providing a tentative justification for constraining the reach of disclosure laws (by, for example, liberalizing safe harbor rules).

Part II then switches gears to ask whether the same analysis would persist in a society with an equally error-prone legal system, but in which constituent actors were motivated partially by extralegal norms of honesty. Contrary to received wisdom, the added presence of such norms may ironically justify a relatively unforgiving safe harbor rule even when liberal safe harbors would be optimal in the absence of norms.

Part III examines variations and extensions to the model, asking (among other things) whether my arguments are sensitive to a few important variations, such as might change if one accounted for fully internalized norms, the “expressive” role of law in setting norms, or a more complete account of norms as an endogenous artifact of repeat play. I conclude that such variations are likely to do little to alter my principal qualitative thesis about norm-law complementarity, and may even strengthen it in certain respects.

I. DISCLOSURE, LAW, AND SAFE HARBORS

This Part presents a brief analysis of two important (but nonexhaustive) areas within corporate practice where the law plays an important role in regulating market disclosures: contractual warranties and anti-fraud provisions of federal securities law. Interestingly, both of these doctrinal applications tend to provide (in some form or another) certain “safe harbors” for sellers who wish to avoid the risk of prospective liability to the recipient of the disclosure. As we shall see, these safe harbors essentially what amounts to a linguistic threshold of protected disclosure beyond which the disclosing party risks subsequent legal liability. The usual rhetorical justification of such safe harbors is that they act—either explicitly or implicitly—as buffers against the specter of judicial error, allowing norms of behavior to play a larger role.

A. *Warranty Law*

Warranty law has come to play a far-reaching and important role in corporate practice. To be sure, merchants for a long time have faced liability for breach of implied or express warranties concerning consumer goods. Yet warranty law easily transcends the traditional

bounds. A well-known example of this expansion is products liability law, the result of a direct mutation of implied warranties during the early twentieth century.²⁶ But warranty law also plays an important role in the mergers and acquisitions context. For example, it is now commonplace for acquisition targets to make explicit warranties to buyers regarding the value of a company's goodwill, its intellectual property, its other tangible assets, the existence of adverse tax or wage consequences of a change in control, and the like.²⁷ Such warranties are, in fact, particularly common in situations where an extensive due diligence period is impossible, either because of the secrecy of the acquisition, time constraints, or the lack of previous disclosures by the target (if, for example, it is privately held).²⁸ Indeed, such devices have become so prevalent within the M&A context in the last five years that they have spawned an entire subindustry of liability insurance policies for sellers (and even buyers) who later are found to have breached express warranties in a control transaction or sale of assets.²⁹ Moreover, for disappointed buyers who purchase securities through privately negotiated transactions, state-based warranty law similarly may be their most availing alternative.³⁰

Hence, this sub-Part explores the law of both implied and express warranties in greater detail, emphasizing the dictates of the Uniform Commercial Code ("U.C.C."). Although the U.C.C. is not compelling authority for all warranty cases, it is for many (including the inter-firm sales of assets), and courts frequently tend to cite the U.C.C. as persuasive authority even when it is not strictly applicable.³¹

²⁶ See LAWRENCE M. FRIEDMAN, *A HISTORY OF AMERICAN LAW* 460, 684-85 (2d ed. 1985) (noting that products liability law "hardly existed" before 1900, but exploded during the twentieth century).

²⁷ See, e.g., Judith L. Church, *Intellectual Property Aspects of Corporate Acquisitions*, in ALI-ABA COURSE OF STUDY MATERIALS: CORPORATE MERGERS AND ACQUISITIONS 323, 343-45 (American Law Institute, Sept. 2000) (outlining potentially desirable representations and warranties regarding the transfer of intellectual property).

²⁸ See *id.* at 346 (advising practitioners to use representations and warranties to supplement due diligence).

²⁹ Joseph P. Monteleone, *Financial Insurance Solutions to Exposures Arising from Merger, Acquisition and Related Transactions*, in SECURITIES LITIGATION 2000, at 479 (PLI Corporate Law & Practice Course, Handbook Series, PLI Order No. B0-00NV, 2000), WL 1199 PLI/Corp 479.

³⁰ See, e.g., Peter V. Letsou, *The Scope of Section 12(2) of the Securities Act of 1933: A Legal and Economic Analysis*, 45 EMORY L.J. 95, 128 (1996) (arguing that state warranty law is more availing than § 10(b) litigation for private purchasers after *Gustafson v. Alloyd Co.*, 513 U.S. 561 (1995)).

³¹ Moreover, the U.C.C.'s provisions on limiting or disclaiming warranties is incorporated wholesale in the Uniform Computer Information Transactions Act

1. Implied Warranties

In agreements governed by the U.C.C., warranties are virtually ubiquitous. In fact, seller warranties are thought to be so important for such contracts that they constitute some of the most important default rules of commercial law. Courts routinely imply warranty obligations into U.C.C.-governed contracts in order to fill the inevitable gaps left unaddressed by express terms. Although there are a number of important implied warranties,³² perhaps the most sweeping and important of them is the implied warranty of merchantability ("IWM").³³ A distant cousin and doctrinal ancestor of modern product liability law, the IWM essentially constitutes a guarantee by the seller that the purchased goods will not possess unexpected, latent flaws that would impair their functionality or prove unreasonably dangerous under normal conditions.³⁴

Much of the application of the IWM turns on the U.C.C.'s definition of merchantability—a definition that draws on a quasi-empirical standard representing an average or ordinary measure of quality within the relevant product market.³⁵ As Section 2-314 states:

Goods to be merchantable must be at least such as:

- (a) pass without objection in the trade under the contract description; and
- (b) in the case of fungible goods, are of fair and average quality within the description; and
- (c) are fit for the ordinary purposes for which such goods are used; and
- (d) run, within the variations permitted by the agreement, of even kind, quality and quantity within each unit and among all units involved; and

("UCITA").

³² A more complete analysis might consider, among other things, the implied warranty of fitness for a particular purpose, the implied warranty of title, and the implied warranty of "informational content" under UCITA. I do not touch these here.

³³ The IWM is also incorporated wholesale into both Article 2A of the U.C.C. and UCITA.

³⁴ JAMES J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE: SECURED TRANSACTIONS § 9-7, at 349-50 (4th ed. 1995).

³⁵ For an example of a case where a court struggled with the merchantability of cigarettes because of evidence that they cause cancer, see *Green v. American Tobacco Co.*, 409 F.2d 1166 (5th Cir. 1969) (per curiam). In that case, the Fifth Circuit overruled its prior judgment, see *Green v. Am. Tobacco Co.*, 391 F.2d 97 (5th Cir. 1968) (en banc), and adopted the reasoning of the dissent, which had found that the cigarettes at issue were merchantable because "they [were] exactly like all others" that could be purchased, *id.* at 110 (Simpson, J., dissenting).

- (e) are adequately contained, packaged, and labeled as the agreement may require; and
- (f) conform to the promises or affirmations of fact made on the container or label if any.³⁶

The first three of the above aspects of merchantability underscore the conceptual measure of quality that the IWM envisions. Although neither the U.C.C. nor the case law more generally mandates a particular statistical measure of central tendency (such as median, mean, or mode), the implicit instruction to a court is clear: the court must formulate a view about the relevant population of comparison within a domain of identical (or at least close substitute) goods, a task not unlike what an antitrust court attempts to accomplish when defining a relevant market for determining market power.³⁷ Perhaps unsurprisingly, then, characterizing the relevant domain by which to measure “ordinary purposes” is no mean judicial feat, and is a source of consistent contest within litigated cases. Courts have been willing to entertain numerous theories about the relevant comparison class, including evidence about course of dealing,³⁸ the norms of trade practice,³⁹ compliance (or noncompliance) with governmental regulatory standards,⁴⁰ and products that carry a comparable sales price.⁴¹

Factors (d) through (f) listed in section 2-314 evince a slightly different set of considerations—those pertaining to the role of express contracting. Indeed, the IWM is a true default rule (at least in theory), and allows the parties to augment, relax, or completely supersede its doctrinal contours by express contractual provisions. (Such modifications, which are quite common in practice, receive

³⁶ U.C.C. § 2-314(2) (1995).

³⁷ Of course, there is no particular reason to think that the conventional antitrust definition of a relevant market, which hinges on the degree to which consumers are willing to substitute out of the posited market in the face of a price increase, must also be the operative definition for courts in assessing product quality, but the fact-specificity of the test clearly requires courts to specify some “equivalence class” of products against which to measure deviation. See JOHN E. MURRAY, JR., MURRAY ON CONTRACTS § 100 (3d ed. 1990).

³⁸ *Id.*

³⁹ *Kassab v. Cent. Soya*, 246 A.2d 848 (Pa. 1968).

⁴⁰ See, e.g., *George Byers Sons, Inc. v. E. Europe Imp. Exp., Inc.*, 488 F. Supp. 574, 580 (D. Md. 1980) (finding breach of implied and express warranty for failing to provide motorcycles that conformed to all federal standards).

⁴¹ See, e.g., U.C.C. § 2-314 cmt. 7 (1995) (“In cases of doubt . . . the price at which a merchant closes a contract is an excellent index of the nature and scope of his obligation under the present section.”).

more detailed attention below).

Before moving on, one final characteristic of the law of implied warranties (which is shared with the law of express warranties) deserves particular mention. Even if a plaintiff is able to demonstrate that the purchased goods fall short of merchantable quality, this showing alone does not relieve her of the task of further demonstrating that the shortcoming was the actual and proximate cause of her economic loss. This causation requirement—in principle—can significantly constrain IWM litigation, particularly for harms that are especially latent, in which the product's flaw bears only an attenuated relationship to the putative resultant loss. Notwithstanding this limitation, courts have not been overly exacting in evaluating proof of causation, so long as the plaintiff is able to demonstrate the existence of some discernible and plausible nexus between the defect and the harm.⁴²

2. Contracting Out

As noted above, the IWM is a thorough-going default rule, and permits the parties to execute express agreements that alter or displace its terms. Of course, such express provisions could cut in the direction of either weakening or strengthening the buyer's rights against the seller, and I address each possibility in turn.

Consider first the case of weakening the buyer's rights. The U.C.C. provides two specific mechanisms by which a seller partially or wholly may disclaim the IWM. Under section 2-316(2), a seller may limit or disclaim expressly the IWM by mentioning specifically the word *merchantability* in conjunction with other meaningful, limiting language. Whether a court ultimately grants legal effect to such attempts hinges largely on whether the language used by the seller is adequate to put the buyer on notice of the seller's refusal to bear the risk of prospective product failure. The U.C.C. therefore requires that written disclaimers and/or limitations must be conspicuous to a reasonable buyer (e.g., by distinct typeface, location, and appropriate headings), and that both oral and written disclaimers cannot be so general or elliptical in their reference so as to lose coherent meaning.⁴³

⁴² WHITE & SUMMERS, *supra* note 34, § 9-9, at 357-58.

⁴³ See, e.g., *Ins. Co. of N. Am. v. Automatic Sprinkler Corp. of Am.*, 423 N.E.2d 151, 153-54 (Ohio 1981) (holding that the language, "[t]his warranty is in lieu of all other warranties," failed as a disclaimer of all implied warranties because of its lack of

The second approach for disclaiming the IWM—provided by section 2-316(3)—involves the invocation of prescribed magic words, such as “as is,” “with all faults,” or other terms that call attention to a sweeping intent to disclaim implied warranties.⁴⁴ Although the two model phrases suggested by the section are not strictly necessary to invoke protection, they are often sufficient, and thus represent what might be considered a “linguistic safe harbor” for disclaiming implied warranties. Indeed, the case law is replete with examples where a warranty disclaimer is ruled valid under section 2-316(3) despite the absence of the model terms from the section. In virtually every case, courts have concluded that the disclaiming language was the equivalent to or exceeded that measure of caution prescribed by the safe harbors in the U.C.C.⁴⁵

Although the rationale behind subsection (3) is not clear-cut, the subsection almost surely expands the ability of sellers to disclaim implied warranties with greater certainty relative to pre-U.C.C. cases decided under the Uniform Sales Act.⁴⁶ This very well may correspond with the view of at least some scholars that the as-is doctrine provides a valuable measure of assurance for sellers, who might otherwise bear large costs to avoid unintended liability

precision about the quality of the goods).

⁴⁴ U.C.C. § 2-316(3) (1995). The identical provision appears in section 406(c) of UCITA.

⁴⁵ See, e.g., *O’Neil v. Int’l Harvester Co.*, 575 P.2d 862, 864-65 (Colo. Ct. App. 1978) (holding language that read “as is without warranty of any character expressed or implied” was sufficient to inform buyer); *Joseph Charles Parrish, Inc. v. Hill*, 325 S.E.2d 595, 597 (Ga. Ct. App. 1984) (holding the statement “I accept the car in its present condition” to be the equivalent of “as is”); *Attaway v. Tom’s Auto Sales, Inc.*, 242 S.E.2d 740, 742 (Ga. Ct. App. 1978) (holding same for the words “all cars sold as is [with] no guarantee”); *First Nat’l Bank v. Husted*, 205 N.E.2d 780, 784 (Ill. App. Ct. 1965) (holding that the words “in its present condition” are the functional equivalent of “as is”). *But see Providence & Worcester R.R. v. Sargent & Greenleaf, Inc.*, 802 F. Supp. 680, 687-88 (D.R.I. 1992) (holding that implied warranties were not effectively disclaimed when the asserted disclaiming language failed to mention “merchantability” and was not conspicuous).

⁴⁶ See *WHITE & SUMMERS*, *supra* note 34, § 12-6, at 430 (collecting pre-U.C.C. authority). Indeed, it is not difficult to find post-U.C.C. cases in which courts give effect to an “as is” clause without considering the surrounding circumstances. See, e.g., *Trailways Fin. and Acceptance Corp. v. Euro-Flo Tours, Inc.*, 572 F. Supp. 1227, 1230 (D.N.J. 1983) (“The language of the ‘as is’ provision of the contract precisely precludes claims of misrepresentation or breach of any express or implied warranties of fitness or merchantability.”); *Henderson v. Ford Motor Co.*, 547 S.W.2d 663, 670 (Tex. Civ. App. 1977) (holding that plaintiff accepted a car “as is” despite substantial confusion and document inconsistency about whether the car was new or used).

produced by a creative or error-prone court.⁴⁷ At the same time, however, the possibilities created by subsection (3) are not limitless. For instance, in spite of the absence of an explicit conspicuousness requirement under this subsection, a number of courts have nonetheless read in that element, and require that any sweeping as-is limitation also be sufficiently conspicuous to alert the reasonable buyer.⁴⁸

As was noted above, the default nature of the IWM does not preclude parties from moving in the opposite direction, by strengthening (rather than limiting) the buyer's protections. Indeed, the U.C.C. also permits parties to augment the IWM with the inclusion of express warranties creating a reasonable expectation of additional seller obligations. The communicative means by which such express warranties come into being can be quite varied, and include not only direct oral or written affirmations, but also simple description, or even the qualitative characteristics manifested by a sample of the purchased goods.⁴⁹

As one might expect, a fair amount of judicial ink has been spent on the distinction between a warranty-creating affirmation (or equivalent communication) and inconsequential "puffing" by a seller. Perhaps equally unsurprising is the lack of clear doctrinal distinction between the two (notwithstanding this inordinate attention). Indeed, two well-known commentators note that "one who reads a few cases gets the strong impression that the puff [versus] warranty conclusion is only the product of an unobserved and subtle analysis that has to do with the reasonableness of the plaintiff's reliance, the seriousness of the plaintiff's injury, and other similar factors."⁵⁰ Accordingly, perhaps, the distinguishing elements that do (surreptitiously) emerge from the doctrine share many of the hallmarks of warranty disclaimers (albeit in the reverse direction). Greater degrees of formality, directness, precision, and conspicuousness in the seller's assertion all favor an ultimate judicial finding of an express warranty.⁵¹ Ultimately, then, the determination comes down to an often thinly articulated

⁴⁷ See E. ALLAN FARNSWORTH, CONTRACTS § 4.26, at 296 (3d ed. 1999) (noting that in the presence of such risks, sellers could be expected to engage in wasteful efforts of redrafting).

⁴⁸ See, e.g., *Patton v. McHone*, 822 S.W.2d 608, 616-17 (Tenn. Ct. App. 1991) (holding "the as-is language must be conspicuous . . . and must be contained on a form affixed to the side window of the car").

⁴⁹ U.C.C. § 2-313 (1995).

⁵⁰ WHITE & SUMMERS, *supra* note 34, § 9-4, at 335.

⁵¹ *Id.*

and opaque judgment about context.

Contextual assessments such as these are perhaps at their sharpest in the curiously common case in which a contract contains *both* an express warranty and an express disclaimer thereof. In such a case, when the seller's signals seem to be at cross purposes, courts have relatively few choices. While they are sometimes able to craft harmonious interpretations of the competing terms (as indeed the U.C.C. so instructs them⁵²), the more frequent outcome appears to come down to choosing which of the two competing clauses to nullify. Here, the U.C.C. instructs courts to resolve ambiguities in a manner that denies legal effect to an attempted disclaimer when in the presence of a cognizable express warranty.⁵³ While this tie-breaking rule certainly appears to favor buyers, one must keep in mind that it preserves a fairly wide berth for judicial maneuvering. Indeed, as noted above, the existence of a legally enforceable express warranty hinges on a contextual, all-things-considered determination of the buyer's reasonable expectations. The very inclusion of a conspicuous disclaimer can (and frequently does⁵⁴) lead courts to conclude that no express warranty existed to begin with, and therefore that the seller's representations never became part of the so-called basis of the bargain. This substantial interpretive freedom, of course, can often be counterproductive because—as some scholars have argued—it spawns an unpredictable and costly form of legal arbitration that is of little value to many buyers.⁵⁵

B. Securities Law

Although contractual warranties represent a significant example of how the law regulates (and sometimes refuses to regulate) disclosures within a market setting, perhaps a more notorious set of examples can be found in securities law. Indeed, both state and federal securities law contain numerous forms of disclosure regulations. Some regulations literally compel issuers to disclose material information that might bear on the future market value of

⁵² U.C.C. §2-316(1).

⁵³ *Id.*

⁵⁴ See WHITE & SUMMERS, *supra* note 34, § 12-3, at 417-18 (showing that courts tend to view the presence of a disclaimer as an absence of warranty).

⁵⁵ *Ser*, e.g., Victor Goldberg, *Institutional Change and the Quasi-Invisible Hand*, in THE ECONOMICS OF CONTRACT LAW 74, 76 (Anthony P. Kronman & Richard A. Posner eds., 1979).

their securities.⁵⁶ Other regulations, on which I shall concentrate below, govern inaccuracies, omissions, and fraud in the actual disclosures themselves (whether compulsorily or voluntarily made).⁵⁷

Among antifraud regulations, one observes both judicially or legislatively created safe harbors that protect at least certain types of disclosure (especially within the Rule 10b-5 context). Two particularly important, well-known, and sweeping examples of such safe harbors within federal law deserve particular attention: the judicially crafted doctrine popularly known as the “bespeaks caution doctrine,” and the statutory safe harbor promulgated by the Private Securities Litigation Reform Act of 1995 (“PSLRA” or “Reform Act”).⁵⁸ Each of these safe harbors regulates liability solely for forward-looking projections (as opposed to existing or historical facts⁵⁹) made by a defendant. Moreover, much like the “as is” doctrine in warranty law, each of them works to immunize a defendant from liability should her prospective representations prove incorrect. I shall address each of them below, in turn.

1. The Bespeaks Caution Doctrine

As far as evolutionary narratives go, the development of law regulating forward-looking disclosures is a winding and interesting tale. Indeed, the SEC discouraged (and sometimes prohibited) forward-looking projections for roughly the first forty years of its existence. By the latter half of the 1970s, however, the SEC had changed its policy stance and began to encourage at least limited prospective disclosure by promulgating limited safe harbors for certain forward-looking statements contained in documents filed with

⁵⁶ For example, Item 303 of Regulation S-K requires disclosure of certain predictive information in the Management Discussion and Analysis (“MD&A”) section of an annual report. 17 C.F.R. §§ 229.10. Similarly, the SEC requires disclosure of forward-looking information in a going-private transaction on Schedule 13E-3 (Item 9). 17 C.F.R. §§ 240.0-1.

⁵⁷ As noted in the Introduction, *supra* notes 18-19 and accompanying text, my analysis focuses most centrally on legal rules governing false disclosures rather than those mandating disclosure.

⁵⁸ Pub. L. No. 104-67, §§ 21E, 27A, 109 Stat. 737, 749-52, 753-56 (codified at 15 U.S.C. §§ 77z-2, 78u-5 (Supp. IV 1998)). These two examples are far from the only safe harbors in federal law (not to mention state law). I concentrate on these two principally, however, because of their overall importance and reach.

⁵⁹ The distinction between forward-looking disclosures and disclosures about existing facts is an elusive one in and of itself, but is beyond the scope of this Article.

the SEC.⁶⁰ These regulatory safe harbors, however, proved relatively inconsequential, both because of their modest reach, and because they were subject to a permissive “reasonability” scienter standard that plaintiffs could often finesse to defendants’ motions for dismissal or for summary judgment. From the shadow of this environment of limited protection grew a somewhat more liberal safe harbor, created not by the SEC or Congress, but rather by a string of precedents within the courts themselves. The so-called “bespeaks caution doctrine” (“BCD”) is a judicially created safe harbor for securities fraud disclosures first developed in the late 1980s. Now adopted in some form or another within every federal circuit to have considered it,⁶¹ the BCD is widely identified as the first safe harbor doctrine of general applicability for regulating disclosures of information by issuers. Although its precise contours vary by circuit, the kernel of the doctrine teaches that the disclosure of forward-looking information which is accompanied by “meaningful cautionary language” about the information’s speculative nature is deemed immaterial as a matter of law. Such a conclusion has obvious legal significance: indeed, in order to be actionable, virtually all private rights of action under federal securities law require a plaintiff to demonstrate the materiality of the misstated information at issue.⁶²

⁶⁰ Most notably, the SEC promulgated Rule 175 under the 1933 Act, *see* 17 C.F.R. § 230.175 (2000), and Rule 3b-6 under the 1934 Act, *see* 17 C.F.R. § 240.3b-6 (2000).

⁶¹ *See, e.g.,* Stavroff v. Mayo, No. 95-4118, 1997 U.S. App. LEXIS 32774, at *20 (6th Cir. Nov. 12, 1997) (stating that the defendants had no obligation to disclose information they were not required by law to divulge under section 10(b) and Rule 10b-5); Shapiro v. Cantor, 123 F.3d 717, 721-22 (2d Cir. 1997) (same); Grossman v. Novell, Inc., 120 F.3d 1112, 1118 (10th Cir. 1997) (same); *In re Burlington Coat Factory*, 114 F.3d 1410, 1418 (3d Cir. 1997) (same); Gasner v. Bd. of Supervisors, 103 F.3d 351, 356 (4th Cir. 1996) (same); Shaw v. Digital Equip. Corp., 82 F.3d 1194, 1205-06 (1st Cir. 1996) (same); Saltzberg v. TM Sterling/Austin Assocs., 45 F.3d 399, 399 (11th Cir. 1995) (same); Rubinstein v. Collins, 20 F.3d 160, 167 (5th Cir. 1994) (same); Moorhead v. Merrill Lynch, 949 F.2d 243, 245 (8th Cir. 1991) (holding that detailed cautionary language was present so that the plaintiffs had no basis to bring a federal securities fraud claim); *see also* Scott v. Steingold, No. 97 C 7871, 1998 U.S. Dist. LEXIS 15810, at *22-*25 (N.D. Ill. Sept. 30, 1998) (holding that the plaintiff pleaded elements of fraud under section 10(b) with sufficient particularity to meet the heightened standard in fraud cases); *In re Boeing Sec. Litig.*, 40 F. Supp. 2d 1160, 1179 (W.D. Wash. 1998) (dismissing the plaintiffs’ claims of accounting fraud); Schaffer v. Evolving Sys., Inc., 29 F. Supp. 2d 1213, 1223 (D. Colo. 1998) (holding that the alleged failure to disclose financial statements was pleaded with sufficient particularity to bring a fraud claim under section 10(b)).

⁶² With the exception of section 12(a)(1) of the ‘33 Act, 15 U.S.C. § 77f (1994 & Supp. IV 1998), all other major federal private rights of action for disclosure-oriented securities fraud require that the plaintiff demonstrate materiality. *See, e.g.,* TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438 (1976) (requiring the plaintiff to demonstrate

Two important conditions historically have constrained defendants attempting to invoke the BCD. First, the doctrine stubbornly resists any formulaic approach as to what constitutes "meaningful cautionary language." Courts consistently have held that routine, rehearsed, or boilerplate language (for example, "because of inherent market risk, your results may vary") fall short of invoking protection.⁶³ Rather, the requisite quantum of cautionary language under the BCD is inherently contextual, and must be tailored to specific future projections, estimates, or opinions challenged by the plaintiff, to affect the "total mix" of information provided to reasonable investors.⁶⁴

Second, even in those cases in which tailored and seemingly sufficient cautionary language attends a projection, at least some courts employing the BCD may still ultimately grant the plaintiff relief. A number of courts treat such language as merely a factor to be weighed along with others in determining whether the statement constituted an important factor in a reasonable investor's decision to invest.⁶⁵ Still others would deny protection under the BCD if a defendant knowingly made false forward-looking statements, even

materiality in the section 14(a) proxy fraud context and specifying a test therefor); *see also* Basic Inc. v. Levinson, 485 U.S. 224 (1988) (adopting the same materiality test for section 10(b) plaintiffs); *In re* Caterpillar, Inc., SEC Administrative Proceeding File No. 3-7692 (1992) (imposing a materiality requirement on Item 303 disclosures pursuant to section 13(a) of the '34 Act).

⁶³ *See, e.g.,* Semerenko v. Cendant Corp., 223 F.3d 165, 183 (3d Cir. 2000) (holding that press releases predicting earnings restatement were not accompanied by sufficient cautionary language and that general statements about risks were not "sufficiently substantive and tailored to satisfy the requirements of the bespeaks caution doctrine"); Gray v. First Winthrop Corp., 82 F.3d 877, 884 n.9 (9th Cir. 1996) (holding that generalized warnings in a secondary offering prospectus, such as "some assumptions will inevitably not materialize," were so amorphous as to be meaningless); Warsaw v. Xoma Corp., 74 F.3d 955, 960 (9th Cir. 1996) (holding that general disclaimers in SEC filings of the risks inherent in FDA approval insufficiently qualified the defendant's sanguine prognostications under the BCD).

⁶⁴ *In re* Donald Trump, 7 F.3d 357, 371 (3d Cir. 1993). This contextual test is (as one would expect) derivative of the most general materiality test for federal securities fraud violations: that is, that there must be a "substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the total mix of information made available." *TSC Indus.*, 426 U.S. at 449.

⁶⁵ *See* Rubenstein, 20 F.3d at 167 (holding that "cautionary language is not necessarily sufficient . . . to render predictive statements immaterial as a matter of law"); *In re* Donald Trump, 7 F.3d at 373 (refusing to establish a "sweeping rule that cautionary statements will always render misrepresentations or omissions immaterial as a matter of law" and insisting that the emphasis was on the context in which the statements were made).

when accompanied by an adequate precatory disclaimer.⁶⁶

Nevertheless, the bespeaks caution doctrine has proven to be an important and general form of safe harbor for prospective disclosures. Much like warranty disclaimers, the BCD ultimately requires courts to determine whether (and to what extent) the overall content of an issuer's disclosure puts buyers on notice that the seller is unwilling to bear the risk that specific representations (and associated assumptions) will not be realized. Indeed, at least one federal court has made the analogy between BCD and warranty law explicit, holding that, under the BCD, "projections of future performance not worded as guarantees are generally not actionable under the federal securities laws."⁶⁷ Moreover, as we shall see below, despite the subsequent promulgation of a statutory safe harbor in the PSLRA, the BCD is still relatively vibrant and important, both in interpreting the statutory safe harbor and as the chief form of protection for defendants who are exempted specifically from the Act.

2. Reform Act

Notwithstanding the presence of a maturing bespeaks caution doctrine, by the mid-1990s Congress had become convinced that liability risks were sufficiently significant to have an inefficient "chilling effect" on the willingness of issuers (particularly within the high-technology industry) to disclose projections to the marketplace. A chief motivation for this conclusion was the perceived unpredictability of the BCD when administered by judges who themselves could fall prey to systematic errors of judgment causing them to find fraud only with the benefit of hindsight.⁶⁸ This conviction led to the passage, over a presidential veto, of the Private

⁶⁶ See *Luce v. Edelstein*, 802 F.2d 49, 56 (2d Cir. 1986) ("[A]llegations that defendants made specific promises to induce a securities transaction while secretly intending not to carry them out . . . are sufficient . . . to state a claim for relief . . .").

⁶⁷ *Raab v. Gen. Physics Corp.*, 4 F.3d 286, 290 (4th Cir. 1993) (citation omitted).

⁶⁸ Indeed, part of the explicit rationale for the Act was the apprehension that a theory of "fraud by hindsight" would become commonplace in securities litigation. Such a theory (which is a distant cousin of the well-known "fraud on the market" strategy) would argue that a precipitous drop in share price should constitute presumptive evidence that issuers actively concealed the prospects for bad news in their earlier projections. William S. Feinstein, *Pleading Securities Fraud with Particularity—Federal Rule of Civil Procedure 9(b) in the Rule 10b-5 Context*: *Kowal v. MCI Communications Corporation*, 63 GEO. WASH. L. REV. 851, 857 (1995). For more on the psychological theory of hindsight bias, see Jeffrey J. Rachlinski, *A Positive Psychological Theory of Judging in Hindsight*, 65 U. CHI. L. REV. 571 (1998).

Securities Litigation Reform Act in December 1995.⁶⁹

Although the Reform Act introduced a number of important changes to securities law (including, for example, heightened pleading requirements, compulsory Rule 11 inquiries, and limited discovery stays), the most important reform for the purposes of the instant analysis was its promulgation of a formal, statutory safe harbor for forward-looking statements.⁷⁰ The safe harbor provision (which is codified into both the '33 and '34 Acts) limits the liability exposure of issuers and their authorized agents who disclose forward-looking projections or assumptions pertaining thereto that later prove incorrect.

The range of forward-looking statements falling within the statutory safe harbor is relatively broad, and includes any written and oral projections⁷¹ about prospective performance, such as: (1) specific financial projections as to revenues, income, earnings, capital expenditures, capital structure, or dividends; (2) general financial projections about the company's future financial performance; (3) managerial projections about future goals, operations, or products and services; and (4) any statements about underlying assumptions that bear on the above projections.⁷²

At the same time, however, Congress specifically excluded from protection a number of potential defendants thought to pose particular risks of fraud or abuse. Thus, the statutory safe harbor is inapplicable to initial public offerings, penny-stock issuances, rollup transactions, tender offers, and going private transactions (among others).⁷³ Also exempt from protection are "naughty" actors who, during the previous three-year period, were found in violation of securities laws, were subject to securities law cease-and-desist orders, or were convicted of various crimes of moral turpitude (such as bribery and extortion).⁷⁴

⁶⁹ See JAMES HAMILTON, PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995: LAW & EXPLANATION 11 (1996) (recounting the history of the Act's passage).

⁷⁰ 15 U.S.C. §§ 77z-2, 78u-5 (Supp. IV 1998).

⁷¹ In particular, written projections can include MD&A in Forms 10-K and 10-Q, and any outside review that makes forward-looking statements when the reviewer is retained by the company to assess the company's forward-looking statements.

⁷² 15 U.S.C. § 77z-2(i)(1).

⁷³ *Id.* § 77z-2(b). Other exemptions include offerings by blank-check companies, disclosures made pursuant to beneficial ownership statements under section 13(d) of the '34 Act, statements included in financial statements complying with GAAP, and statements made by an investment company. *Id.*

⁷⁴ *Id.*

In spite of these limitations, defendants who qualify for the Act's safe harbor may find a veritable gold mine of protection. Indeed, the statute provides two, apparently alternative, means by which potential defendants can avoid liability. The first alternative, which is clearly fashioned after the bespeaks caution doctrine, shields from liability any statement that is specifically identified as a forward-looking statement, so long as that statement is "accompanied by meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those in the forward-looking statement."⁷⁵ But even if an issuer fails to identify its projections as forward-looking and/or fails to couch them in the requisite cautionary language, the Act allows for an alternative means of protection through a heightened scienter standard. In particular, the second prong of the statutory safe harbor shields a defendant from liability unless the plaintiff can show that the disclosing party issued projections with "actual knowledge" of their falsity. Proving a lesser state of mind (such as recklessness) for the disclosing party is now apparently insufficient.⁷⁶ Both of these prongs have proven to be influential in post-Act litigation. I therefore address each in turn.

a. *The "Cautionary Language Prong"*

Because the cautionary language prong of the statutory safe harbor closely resembles the BCD, the consensus expectation of commentators at the time of passage was that this portion of the Act would closely track the BCD case law. To a relatively large extent, this expectation has proven to be correct, but there are a number of caveats to this prognosis. First, unlike the BCD precedent, the statutory case law seems to be evolving in a fashion that is at least slightly more receptive to formulaic colonization. For instance, at least two courts have refused to grant safe harbor protection to a defendant whose projections, while accompanied by the requisite cautionary language, were not specifically identified as "forward-

⁷⁵ *Id.* § 77z-2(c)(1)(A)(i).

⁷⁶ *See, e.g.,* *Gross v. Medaphis Corp.*, 977 F. Supp. 1463, 1471 (N.D. Ga. 1997) (avoiding a direct decision on the issue of recklessness but implying that more consciously fraudulent acts would have to be alleged); *Rasheedi v. Cree Research, Inc.*, [1997 Transfer Binder] Fed. Sec. L. Rep. (CCH) 99, 566 (M.D. N.C. Oct. 7, 1997), available at 1997 U.S. Dist. LEXIS 16968, at *6 ("Contrary to Plaintiffs' contention, the Defendants do not have to caution against every conceivable factor that may cause results to differ.").

looking” statements.⁷⁷ On the other hand, courts have largely retained the general doctrinal proposition that mere “boilerplate” warnings that do not identify specific risks are insufficient to get past the first prong of the statutory safe harbor.⁷⁸

Be that as it may, the Reform Act certainly has spawned a fairly common practice of issuing formulaic, boilerplate warnings. Although neither the language of the Reform Act nor the SEC provides specific guidance or examples for what constitutes “meaningful cautionary language,”⁷⁹ a number of nearly canonical models have now become commonplace. One of the more popular (though less than creative) approaches in SEC filings is to include a separate heading entitled, “Cautionary Forward-Looking Statement,” followed by the following language: “The Company hereby identifies the following important factors which could cause the Company’s actual financial results to differ materially from any such results which might be projected, forecast, estimated or budgeted by the Company or its officers or employees in forward-looking statements.”⁸⁰

Press releases typically follow a similar approach:

Statements contained herein which are not historical facts are forward-looking statements. The forward-looking statements in this press release are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements involve a number of risks and uncertainties including, but not limited to, product demand, pricing, market acceptance, risk of dependence on third party suppliers, intellectual property rights and litigation, risks in product and technology development and other risk factors detailed in the Company’s Securities and Exchange Commission Filings.⁸¹

⁷⁷ See *Blum v. Semiconductor Packaging Materials Co.*, No. C.A. 97-7018, 1998 U.S. Dist. LEXIS 6868, at *6 n.2 (E.D. Pa. May 5, 1998) (declining to give safe harbor status to the statements in press releases, although they were “forward-looking,” because the statements were not “‘identified’ as forward-looking . . . and they were not ‘accompanied by meaningful cautionary statements’” (citation omitted)); *Robertson v. Strassner*, 32 F. Supp. 2d 443, 450 (S.D. Tex. 1998) (“[I]nclusion of some cautionary language in a company’s disclosures is ‘not enough to support a determination as a matter of law that defendant’s statements were not misleading.’” (citation omitted)).

⁷⁸ *In re Boeing Sec. Litig.*, 40 F. Supp. 2d 1160, 1169 (W.D. Wash. 1998).

⁷⁹ Indeed, the SEC has strongly resisted the urge to provide either good or bad models of cautionary language, fearing that either example would be prone to exploitation by potential plaintiffs or defendants. See *SEC Staff Has Some Constraints in Providing Guidance on Safe Harbor*, Sec. L. Daily (BNA), Nov. 7, 1997, at d3.

⁸⁰ See Jay B. Kasner, *The Safe Harbor for Forward-Looking Statements Under the Private Securities Litigation Reform Act of 1995*, in *SECURITIES LITIGATION 2000*, at 133, 184 (PLI Corporate Law & Practice Course, Handbook Series, PLI Order No. B0-00NV, 2000).

⁸¹ *Id.* at 185.

Whether courts over time will tend to be more receptive to such boilerplate approaches than they are under the BCD largely remains to be seen. Likewise, whether the scienter requirement for defendants is likely to be eroded under the first prong also remains to be seen. Indeed, reading the statute textually (not to mention the Conference Committee Report⁸² on the safe harbor provision), the cautionary language prong contains no express teleological component. Thus, protection under this prong would not apparently turn on whether the speaker actually or constructively knew whether the projection was false or misleading at the time of disclosure. While most courts have resisted this textualist reading in favor of the traditional BCD approach,⁸³ it is still relatively up for grabs. As such, it remains a potentially significant (though largely untested) departure from pre-Act doctrine.

Finally, it is worth noting that the cautionary language prong of the statutory safe harbor also retains the pre-1995 conception of "materiality." As before, satisfactory cautionary language will essentially have the effect of rendering the disclosure immaterial as a matter of law. But even when the language is insufficiently cautious, the content of the disclosure itself may be deemed immaterial if a reasonable investor would not have thought the true information important at the time she made her investment. As with the pre-1995 doctrine (and warranty law), then, severe or obvious forms of "puffery" are unlikely to constitute material disclosures.

b. *The Scienter Prong*

The scienter prong of the statutory safe harbor is undoubtedly the more profound departure from the BCD (at least as it is conventionally understood). Simply put, it provides that a defendant—regardless of whether she has complied with the cautionary language prong—can avoid liability unless the plaintiff can prove actual knowledge of the statement's falsity at the time that it was made.⁸⁴

⁸² *Id.* at 166.

⁸³ *See, e.g.,* ABF Capital Mgmt. v. Askin Capital Mgmt., 957 F. Supp. 1308, 1325 (S.D.N.Y. 1997) ("No cautionary statements can immunize the defendants if they knew or recklessly disregarded that these representations were false at the time they were made." (citations omitted)).

⁸⁴ *See* Bryant v. Avado Brands, Inc., 100 F. Supp. 2d 1368, 1374 (M.D. Ga. 2000) (stating that even in the absence of meaningful cautionary language, plaintiffs must demonstrate that defendants had actual knowledge that statements were false when

This level of scienter clearly eclipses that which implicates other securities fraud claims that fall outside the statutory safe harbor (though the precise scienter standard for these cases is now infamously in a state of interjurisdictional flux).⁸⁵ Moreover, the import of the elevated scienter requirement compounds further still when viewed alongside two other major components of the 1995 Reform Act. First, all private-action plaintiffs are now required to plead "with particularity facts giving rise to a strong inference that defendant acted with the requisite state of mind."⁸⁶ Explicitly, the plaintiff must specify separately each alleged misleading statement, giving precise reasons why it was misleading.⁸⁷ Such elevated pleading requirements make it more difficult to surpass preliminary judicial scrutiny for *any* level of scienter, no less one that requires a plaintiff to demonstrate actual knowledge. Second, the Act imposes a mandatory discovery stay pending motions to dismiss, presenting additional obstacles for plaintiffs who hope to use the discovery process to amend their complaints.

made); *Gross v. Medaphis Corp.*, 977 F. Supp. 1463, 1473 (N.D. Ga. 1997) ("Even if forward-looking statements are not accompanied by meaningful cautionary statements, defendants are insulated from liability if the plaintiff cannot show that the forward-looking statements were made by or with the approval of an executive officer of the company who had 'actual knowledge' that they were false or misleading.").

⁸⁵ Indeed, for such non-safe-harbor cases, the exact quantum of scienter required has become an item of disagreement among the circuit courts. The Second and Third Circuits require that a "plaintiff may plead scienter by alleging either facts establishing motive to commit fraud and opportunity . . . or facts constituting circumstantial evidence of either recklessness or conscious behavior." *In re Advanta Corp. Sec. Litig.*, 180 F.3d 525, 525 (3d Cir. 1999); see *Press v. Chem. Inv. Servs. Corp.*, 166 F.3d 529, 538 (2d Cir. 1999) (stating that the pleading may allege either motive and opportunity or "circumstantial evidence of conscious misbehavior or recklessness"). When the Reform Act was enacted in 1995, the Second Circuit interpreted the Reform Act as having raised the standard to the level they had already been using and thus continued as they had been. *Press*, 166 F.3d at 537-38. The Second Circuit test was considered to be the most restrictive in the country before the Reform Act, but now may be the weakest. The Sixth Circuit, interpreting the Reform Act differently, adopted a more stringent test, requiring direct proof sufficient to create "a strong inference of recklessness, but not by alleging facts merely establishing that a defendant had the motive and opportunity to commit securities fraud." *In re Comshare, Inc. Sec. Litig.*, 183 F.3d 542, 549 (6th Cir. 1999). Finally, the Ninth Circuit, again interpreting the Reform Act to have raised the pleading requirement bar previously set by the Second Circuit, adopted the harshest test of all, asserting that a "plaintiff . . . must plead, in great detail, facts that constitute strong circumstantial evidence of deliberately reckless or conscious misconduct." *In re Silicon Graphics, Inc. Sec. Litig.*, 183 F.3d 970, 974 (9th Cir. 1999).

⁸⁶ Reform Act, 15 U.S.C. § 78u-4(b)(2) (Supp. IV 1998).

⁸⁷ *In re Sunbeam Sec. Litig.*, 89 F. Supp. 2d 1326, 1336 (S.D. Fla. 1999).

C. *Reflections on the Doctrine*

As the various examples above illustrate, both contract law and securities law have implicit safe harbor principles within them that shield potential defendants from liability contingent on a court's interpretation of an initial disclosure. A common thread running through all of them is that the content of the legal disclosure rule plays an important role in shaping and justifying expectations among eventual purchasers. Thus, most of the safe harbor doctrines and statutes considered above hinge primarily on whether, all things considered, the defendant's disclosure is sufficient to put reasonable buyers on notice about the specific speculative risks that attend the purchase. If the defendant's signal appears excessively optimistic, scantily accounting for possible downside risks or future variability, the protection of the safe harbor is unlikely to be available. In some sense, then, courts in all of these cases are attempting to measure the content of a defendant's disclosure against a threshold standard that triggers liability.

Such patterns are common throughout corporate and securities law. Indeed, although not addressed separately above, there are numerous other areas of corporate practice where similar threshold assessments about the adequacy of disclosure play critical roles. The fiduciary duty of loyalty, for example, strongly discourages self-interested transactions between fiduciaries and their corporations. Such transactions are voidable unless the fiduciary has adequately "cleansed" her conflict of interest, using one of three generally available techniques. Two of these techniques involve disclosure and authorization by disinterested directors or by shareholders.⁸⁸ As with the examples offered above, there is a persistent debate in the case law over what constitutes a safe harbor for such prior disclosures (such as whether a fiduciary may simply disclose the material facts of the transaction, or must specifically warn against its potential one-sidedness).⁸⁹ A similar debate likewise imbues cases in which fiduciaries have attempted to cleanse a breached duty of care by disclosure and subsequent approval.⁹⁰

⁸⁸ See DEL. CODE ANN. tit. 8, § 144 (1991) (enumerating disclosure requirements for interested directors).

⁸⁹ See, e.g., ROBERT C. CLARK, CORPORATE LAW §§ 5.2-3, at 167-79 (1986) (collecting authorities discussing the Delaware law of self-dealing by directors).

⁹⁰ See, e.g., *In re Wheelabrator Techs., Inc. S'holders Litig.*, 663 A.2d 1194 (Del. Ch. 1995) (holding that a fully informed shareholder vote did not extinguish the shareholders' duty of loyalty claim but did extinguish their breach of duty of care).

Within each of these applications, liberalizing a safe harbor is tantamount to relaxing the substantive threshold that separates “cheap” and “expensive” talk, thereby expanding the universe of signals a defendant may send without fear of liability. Perhaps unsurprisingly, then, a common normative justification for safe harbors throughout appears to be the looming specter of judicial error.⁹¹ The safe harbor creates a certain (or at least less uncertain) margin for engaging in cheap talk—that is, disclosures that do not trigger future liability risks.

Although cheap talk may seem inefficient (or at least superfluous) on first blush, it very well may prove to be part of an apt substitute for legal regulation if norms of disclosure are sufficiently strong. Indeed, it is at least possible that disclosing parties may, over time, develop habits for honesty (animated by reputational, altruistic, or other reasons) and would consequently tend to make truthful disclosures even in the absence of fraud liability. Some scholars have argued that such norms of disclosure actually have taken root since the passage of the Reform Act. Johnson et al., for example, argue that the frequency of disclosures of hard protections among a sample of high-technology companies increased significantly after the promulgation of the statutory safe harbor, with no significant effect on overall accuracy. This leads them to conclude that relaxing the intensity of the litigation environment surrounding firms need not have deleterious effects on firms’ willingness to make voluntary and accurate disclosures of forward-looking information.⁹²

Standing alone, however, these observations do not provide much of a theoretical account of how legal rules should account for the possible presence of strong norms. In particular, they do not tell us much about the extent to which legal rules and truth-telling norms interact with one another. In order to make any steps toward understanding this interaction, it is necessary to delve more deeply into the theoretical underpinnings of disclosure, safe harbors, and norms. It is to this task I now turn.

II. A MODEL OF INFORMATION DISCLOSURE

The previous Part argued that safe harbors governing information disclosure have come to play an increasingly significant role within a

claim).

⁹¹ See *supra* notes 9-12 and accompanying text.

⁹² Johnson et al., *supra* note 12, at 224.

number of corporate contexts. Explicitly, it illustrated what appear to be two of the chief policy justifications for the existence (and recently, the liberalization) of such safe harbor doctrines: first, that at least in contexts in which information is soft, speculative, and difficult to verify, the likelihood of judicial error severely dampens the law's deterrent power, perhaps even to the point of rendering legal regulation counterproductive; and second, that in such contexts, extralegal sanctions may hold a comparative advantage over adjudication in achieving optimal deterrence, further justifying the move towards nonintervention.

This Part seeks to evaluate these dual claims more rigorously, using theoretical tools drawn from game theory. By employing a formal model of information disclosure, I endeavor to illustrate the central arguments of this Article. First, consistent with the common wisdom, I argue that the risk of judicial error, if sufficiently large, probably supports a less interventionist approach by courts, all else held constant. Second, and more interestingly, however, the introduction of extralegal norms of honesty need not strengthen the argument for nonintervention (as many analysts implicitly assume).⁹³ Indeed, the example I develop below demonstrates that norms can have exactly the opposite effects.

While the first of these conclusions is largely consistent with the existing literature, the second is somewhat more counterintuitive, and therefore it may be helpful to pause at this juncture and reiterate the basic intuition that animates my analysis. As viewed from a utilitarian perspective, truth-telling norms have the effect of imposing additional nonlegal sanctions on any seller who misleads other market participants.⁹⁴ Consequently, as norms of honesty become increasingly salient, they are able to shoulder a greater portion of the deterrent burden, thereby permitting courts to relax legal penalties without undermining society's overall deterrence goals. Critically, however, because norm-based sanctions are not subject to (at least some) errors that often hamper third-party adjudicators, the process of dampening legal sanctions will also reduce the aggregate costs of risk due to error borne by market participants. This observation is pivotal: since milder legal sanctions reduce error costs, courts can afford simultaneously to be *more* aggressive in specifying the universe

⁹³ See *supra* note 12 (providing examples of this more conventional approach).

⁹⁴ This might be accomplished, for example, through reputation, nonlegal punishment, guilt, shame, and the like. The necessity of distinguishing between these various sources of norms for current purposes is addressed *infra* at note 142.

of contingencies that create liability in the first place. In other words, by doing some of the deterrence work that would otherwise be relegated to damages, honesty norms ironically permit courts to expand law's reach even as they weaken its grasp.

Throughout the analysis that follows, I shall develop a relatively simple, game-theoretic framework for analyzing information disclosure in markets in the presence of adverse selection problems. For the sake of simplification, this model will abstract considerably from certain of the complexities in the doctrines described above and focus solely on how the law can address information problems in relatively simple negotiations between a single uninformed buyer and a single informed seller. Initially, I shall assume that extralegal norms of honesty are absent in this market, concentrating solely on the interaction between information disclosure, liability regimes, and judicial error. After these tasks are complete, I shall consider the effect of introducing extralegal norms, demonstrating how such phenomena may plausibly complement legal liability.

A. *On Models, Reality, and "Fit"*

As noted above, the model I employ for the analysis follows a relatively simple structure based on a negotiation between a single buyer and single seller over an asset whose characteristics are privately known by the seller. This framework captures the important elements of many contracting problems, but it necessarily suppresses a fair amount of institutional detail. This simplification may be particularly striking in the securities fraud context, which tends to involve a number of complexities not reflected by a simple model. Before moving on with the detailed analysis, then, a few comments about the "fit" between the model developed below and securities markets are appropriate.

A common objection to the use of economic models in legal analysis is that they are unrealistic: They often fail to capture the factual nuances that pervade real-world situations, a failure that (to some) renders their results untrustworthy.⁹⁵ In many respects, this criticism is altogether accurate. At the same time, however, the realism criticism misses one of the principal purposes of using models

⁹⁵ See Lynn M. LoPucki, *Strange Visions in a Strange World: A Reply to Professors Bradley and Rosenzweig*, 91 MICH. L. REV. 79, 109 (1992) (arguing that the unrealistic assumptions of perfect markets and zero transaction costs render any theory based on such assumptions "false").

in the first place. Any model of behavior—whether it is motivated through economic intuitions or something else—is, by definition, a deliberate simplification. Its very purpose is to isolate the most intuitively compelling characteristics about a problem and to study their mutual interaction. Done thoughtfully, such an approach facilitates deductive reasoning and precise insights, which can spawn new intuitions about the problem—intuitions that frequently elude strictly empirical or descriptive analyses. These intuitions, in turn, can play a role (though perhaps not an exclusive one) in informing subsequent policy choices.

To be sure, one should never be cavalier about making simplifying assumptions. Indeed, a well-designed model, at the very least, should take significant care to capture the central aspects of the problem at issue.¹⁰⁰ Failure to do so, while not rendering the resulting theory “false,” does limit its usefulness as a practical matter. Consequently, because securities law tends to exhibit a number of peculiar complexities not present in ordinary contractual environments, it is well worth considering whether and to what extent the analysis that follows is able to capture at least some of the central tensions at play in securities markets.

Three possible differences between contract and securities law seem particularly important. First, while contractual contexts usually concern pre-sale disclosures made by sellers, the lion’s share of securities fraud charges involve allegations of fraudulent projections subsequent to the initial sale of securities. Many fraud actions, for example, are brought by disappointed purchasers who bought securities through the secondary market pursuant to an overly optimistic disclosure by the original issuer. Other (though drastically fewer) actions are brought by disappointed sellers who sold shares to a third party on the heels of an overly pessimistic disclosure by the issuer. Note that in either case, the misleading forecast is not made by the plaintiff’s trading partner, but rather by an entity (the issuer) that is external to the transaction.

Second, securities fraud complaints frequently involve statements that technically are not made by the issuer itself (which is often a corporation), but rather by its officers and directors (most typically), or some combination of fiduciaries, authorized employees,

¹⁰⁰ Moreover, a well-designed model should clearly distinguish between simplifying assumptions (that is, those that can be relaxed without altering the qualitative results) and critical assumptions (that is, those that cannot).

controlling shareholders, or auditors. It may therefore be impossible to analyze the disclosure incentives of an "issuer" without first looking into the incentives of the actual individuals who speak on its behalf, and who are themselves involved in an agency relationship at the company.

And finally, unlike contract law (in which contractual instruments are often thought to be bargained for face-to-face), public securities markets are largely thought to constitute contexts in which prospective shareholders are not allowed to bargain (except, perhaps, with their feet). This inability for shareholders to "fend for themselves" with express contractual terms is presumably what justifies the existence and enforcement of securities laws that provide such protection.⁹⁷

The upshot of these caveats is that, in spite of its similarities to contractual environments (on which the model below is based), securities law may entail factual contexts that are quite distinct from a simple buyer-seller relationship. Indeed, thinking seriously about securities fraud requires one to consider the incentives and behavior of distinct buyers, sellers, disclosing entities, and agents who speak on behalf of such entities. Within simple contractual scenarios, in contrast, the latter three are frequently coextensive. Add to this the purchaser's inability to bargain personally with issuers, and the practice of lumping the two contexts together on the basis of their similarities may be asking too much.

Although these caveats are well-taken, I ask the reader's indulgence in allowing me to pursue my inclination to lump, for the following reasons. Consider first the possibility that the securities law context is different because of an intrafirm agency relationship (that is, the second distinction noted above). Here, it seems, contract and securities contexts actually have many more similarities than differences. Indeed, it is probably a great exaggeration to claim that "most" or even "many" commercial contract and/or warranty disputes involve an individual rather than a corporate entity. Virtually all consumer warranty and due diligence disputes involve allegations of inadequate disclosures by a business entity itself, even though the actual representation is obviously made by an authorized agent of the entity. To be sure, it is often important to ask whether agency costs

⁹⁷ See, e.g., *SEC v. Ralston Purina Co.*, 346 U.S. 119, 125 (1953) ("[T]he applicability . . . should turn on whether the particular class of persons affected need the protection of the Act.").

systematically distort the sorts of disclosures that authorized agents are likely to make to the market, but this consideration is not a factor that necessarily distinguishes contract from securities law.

Similarly, the presence or absence of face-to-face bargaining is not always a defining distinction between a contract and a security. Indeed, it is not difficult to find examples of contracts that involve little or no face-to-face bargaining, but nonetheless are regulated solely by contract law. Most consumer warranties, for example, are the product of “take it or leave it” offers by sellers, leaving little room for the buyer to dicker over precise terms while at the checkout counter. From the other direction, many forms of securities also legitimately qualify as contracts, and are therefore regulated under both regimes. Corporate debt securities, for example, are commonly considered to be “securities” covered by federal law and also fall within the rubric of “debt contracts” for purposes of state law. Consequently, the presence or absence of face-to-face bargaining does not preordain what constitutes a contract versus a securities claim (at least on first principles).⁹⁸

This leaves one remaining distinction between contracts and securities: that the “disclosing” entity need not be coextensive with either the buyer or the seller in the transaction(s) at issue. To be sure, this is a distinction that is largely unique to securities law.⁹⁹ At the same time, however, securities law contexts frequently do implicate situations in which the disclosing entity is also privy to a contract, including initial and secondary offerings, aftermarket transactions, private placements, and going-private transactions. Each of these contexts arguably falls within some form of safe harbor rule governing disclosure (though not always the same one).¹⁰⁰

Moreover, even in those situations in which the disclosing party is truly distinct from the trade, there may be a number of reasons to think the firm is nonetheless motivated by similar goals as the seller—

⁹⁸ Having made these points, I hasten to add that the model considered below deliberately attempts to capture the take-it-or-leave-it context of securities market transactions. See *infra* text accompanying notes 108-10.

⁹⁹ There are, however, notorious examples in contract law in which this distinction evaporates. See, e.g., *MacPherson v. Buick Motor Co.*, 217 N.Y. 382 (1916) (holding a manufacturer of a defective automobile liable for product defects, notwithstanding a lack of contractual privity with the eventual purchaser).

¹⁰⁰ For instance, disclosures associated with IPOs, going-private transactions, and roll-up transactions are all exempted under the 1995 Reform Act’s safe harbor, though they still arguably fall within the jurisdiction of the related “bespeaks caution” doctrine.

to maximize the market price of the firm's stock. Indeed, it is now commonplace for CEOs and other corporate officers who make disclosures to be compensated in a manner that is directly tied to share price, either through stock options or through outright incentive pay. Even those without explicit incentive pay may realize implicit rewards from a high stock price, such as lucrative job offers from competing firms. Furthermore, other practical factors may create incentives even at the entity level for maximizing aftermarket stock price. A firm's cost of capital, for example, frequently turns on the existence of a thick equity cushion—the impression of which is surely augmented by a robust share price. Thus, even in those situations in which an issuer has no personal stake in impending trades, it may harbor incentives very much like (if not identical to) those of a privately informed seller.

Thus, while securities law certainly exhibits a number of important characteristics that are distinct from contractual environments, both scenarios nonetheless reflect incentive structures that share a number of important common traits. Like issuers of securities and their agents, contractual sellers have an incentive to overstate the quality of their wares. Like financial markets, many contractual contexts involve market transactions with little or no bargaining. And like securities fraud actions, many contractual disputes revolve around allegations that a party made misleading or inadequate disclosures before the transaction occurred. While certainly not exhaustive, these central similarities between contract and securities law provide some justification for using a unified framework to examine both of them. Just such a framework is explored below.

B. *Framework*

Consider a seller (“she”), denoted by *S*, who initially owns a single asset (described at greater length below), and is considering whether to attempt a sale to a buyer (“he”), denoted by *B*. The asset could take many conceivable forms, such as a consumer good, the goodwill and/or assets of a business, or a financial security. The ultimate value of the asset, however, is not a sure thing as it depends on a future state of the world. In one state of the world, the asset will prove to be a “success,” yielding a payoff of \$100 for its owner; in the other state of the world, however, the asset will prove to be a “failure,” yielding no payoff whatsoever.

The buyer is assumed to be well-diversified and thus risk-neutral,

and he therefore values any uncertain future payoff stream (denoted by X) at its expected value. The seller, on the other hand, is assumed to be risk-averse, and she thus values an uncertain payoff stream at less than its expected value.¹⁰¹ To reflect this trait, suppose that the monetary valuation (or so-called “certainty equivalent”) that S places on X consists of its expected value, less some risk premium, which increases with the variability of X . To be a bit more mathematically precise, I suppose in what follows that the seller’s certainty equivalent payoff to holding payoff stream X is given by:

$$U_S(X) = (\text{Expected value of } X) - \underbrace{k \cdot (\text{Variance of } X)}_{\text{Risk Premium}}$$

The parameter k in the above expression captures the extent to which S is risk averse. As the value of k grows, the risk premium that S would require for her to hold X increases accordingly.¹⁰² Although k could plausibly take on any range of values, for concreteness I shall assume arbitrarily in what follows that it is equal to $1/300$.

If all assets had a commonly known level of risk, it would be easy for the buyer and seller to strike a deal in which the ownership interest in the asset (along with all the risk) is transferred to the buyer, who is—on account of his risk neutrality—the most efficient risk bearer. Complicating matters, however, is the fact that assets are not homogeneous. In particular, I assume that an asset can be of low or high quality (when viewed at the time of sale). “Low”-quality assets have a relatively modest probability of proving successful, only 4 in 10 (or 40%). “High”-quality assets, in contrast, have a significantly more attractive success rate of 8 in 10 (80%). For simplicity, I assume that an asset is as likely to be of high quality as it is to be of low quality when viewed *ex ante*. Thus, in the absence of any information about the asset’s quality, the expected probability of a successful payoff is

¹⁰¹ For the purpose of illustrative ease, assume that S is the only risk-averse player. In many situations, this is not an overly brave assumption. For instance, in securities markets, the fact that most buyers are well-diversified allows them to behave as if they are risk-neutral. Moreover, so long as the seller remains risk-averse herself, allowing for buyer risk aversion offers no significant additional insights. I take up this possibility again explicitly *infra* at note 122.

¹⁰² Those familiar with the economic literature will recognize that this certainty equivalent approximates a form of utility function that economists often use to represent risk-averse preferences. Indeed, the certainty equivalent function denoted in the text can be derived from a utility function exhibiting a constant absolute risk aversion (or “CARA”) of the form $U(X) = A - B \cdot e^{-\gamma X}$. For such a utility function, relatively small gambles can be represented by a certainty equivalent preference function similar to the one in the text, where $\gamma = 2k$.

simply the average of high- and low-quality success rates, or 6 in 10 (60%). Consequently, someone who is wholly uninformed about the asset's quality might think of it as essentially a third type of asset, which I shall hereinafter refer to as "uninformed" or "medium" in quality.

Given this framework, it is possible to state the certainty-equivalent payoffs that each player would receive were she the sole owner of a high-, medium-, or low-quality asset. This information is reflected in Table 1 below:

Asset Type	<i>S</i> 's Valuation	<i>B</i> 's Valuation
Low	$(0.40) \cdot (100) - \frac{(0.24) \cdot (100)^2}{300} = \32.00	$(0.40)(100) = \$40.00$
Medium	$(0.60) \cdot (100) - \frac{(0.24) \cdot (100)^2}{300} = \52.00	$(0.60)(100) = \$60.00$
High	$(0.80) \cdot (100) - \frac{(0.16) \cdot (100)^2}{300} = \74.67	$(0.80)(100) = \$80.00$

Table 1: Certainty Equivalents by Type of Asset

Notice from the table that for each type of asset, there are gains from trade available. Indeed, the cumulative assumptions that (1) *S* is risk-averse while *B* is risk-neutral, (2) the asset's ultimate value is uncertain ex ante, and (3) once realized, the asset's value is identical for both players, jointly imply that it would always be efficient for *S* to transfer her complete ex ante interest in the asset (along with all the risk) to the buyer.¹⁰³ For reasons elaborated below, however, such a transaction may not always be feasible.

The heterogeneity of asset types gives rise to a key tension motivating the analysis: private information. I assume that the seller has better information than the buyer about the type of asset that is being sold. Explicitly, I suppose that before encountering the buyer, the seller receives some noisy information about the likely success rate of the asset. Two-thirds of the time this information tells her precisely whether the asset is of low- or high-quality; the remaining one-third of the time, the information received by *S* has no decipherable message whatsoever (and therefore tells her nothing). Critically, only the

¹⁰³ I do not consider the possibility of debt financing in this analysis, principally for explanatory ease. Most of the signaling considerations herein apply with equal force to debt contracts, whenever debt holders bear some financial risk.

seller knows for sure whether she received an informative signal, and, if so, what its content was. The buyer is aware only of the fact that the seller may have received an informative piece of information.¹⁰⁴

The framework described above essentially gives rise to a signaling game between the seller and buyer in which it is commonly known by both *S* and *B* that there are (as viewed at the time of sale) three types of assets—low-, medium-, and high-quality—and that each type of asset is equally likely *ex ante*.¹⁰⁵ For shorthand, I shall define a “high-quality seller type” as a seller who knows that she possesses a high-quality asset. I shall similarly define “medium-quality” and “low-quality” seller types as those who possess these respective pieces of information.

C. Verifiable Information

It is important to take note of the fact that a buyer’s inability to observe a seller’s type need not, by itself, be entirely disabling. For example, even without an independent ability to observe quality, there may be certain types of “hard” information that buyers can verify fairly easily once the seller has disclosed it and opens up her proverbial “books” for inspection. For such types of information, the presence of asymmetric information turns out to be rather unproblematic. Indeed, even in the absence of a legal compulsion to do so, sellers would want to disclose their information to the buyer *sua sponte*.

This phenomenon—known to game theorists as *unraveling*—can be understood more clearly through a simple narrative. Suppose that there were no legal disclosure requirement whatsoever. In such a situation, the uninformed buyer would (at least on first blush) be willing to pay no more than the mean value he perceives the asset to be worth (or \$60 in this case). Clearly, the high-quality seller would never be willing to sell for this amount (as her own valuation of the asset, per Table 1, is \$74.67), and would initially be inclined simply to walk away. However, the high-quality seller could do better by revealing her information to the buyer. Indeed, if she did so, her disclosure (once verified) would increase *B*’s willingness to pay for the asset from \$60 up to \$80—a price at which the high-quality seller type would happily sell. Anticipating this effect, then, a high-quality seller

¹⁰⁴ And, implicitly, the buyer knows the probabilities associated with receiving the various signals.

¹⁰⁵ In other words, the asset’s quality is drawn randomly from a discrete distribution of project types, each with *ex ante* probability of one-third.

would always prefer to reveal her knowledge right away.

Given that a high-quality seller would reveal that information immediately, a rational buyer would update his assessment of the asset's value should he receive no such disclosure. In particular, the buyer would now be able to infer that the seller must be a medium- or low-quality type, and accordingly would be willing to pay no more than \$50 for the asset (the average value for the medium- and low-quality assets). Such a price, of course, would now be prohibitively low even for the medium quality seller (who values keeping the asset at \$52). Thus, this seller now would also have an incentive to disclose her information in order to convince the buyer that her asset is worth \$60. Hence, once she realizes that a high-quality seller would immediately reveal her knowledge, a medium-quality seller would always have an incentive to follow suit.

This unraveling process leaves the low-quality seller as the only one who remains silent. But this silence is now of little moment: From the buyer's perspective, the seller's silence unambiguously reveals her low quality, and thus the buyer would reduce his willingness to pay yet again to \$40 should no disclosure occur. And, moreover, the low-quality seller would happily accept this sum.

Importantly, this unraveling result gives rise to a first-best efficient equilibrium in which all private information is shared and all types of sellers successfully sell their entire ownership stake to the buyer.¹⁰⁶ In such a situation, the aggregate level of social welfare attained would be precisely equal to the ex ante expected value of the asset, or:

$$\frac{1}{3} \cdot (0.4 + 0.6 + 0.8) \times (\$100) = \$60.00.$$

Thus, in a world in which the seller's disclosure is easily verifiable, there is a happy story to be told (or at least an efficient one) even in the absence of law. The only plausible outcome is one entailing full disclosure and first-best efficiency.

On some level, perhaps, the full disclosure produced by the unraveling phenomenon can be considered a type of norm, given that all individuals engage in the practice without external prodding from courts. But this account of what a norm is adds little to the notion of a static, game-theoretic equilibrium. Indeed, full disclosure is the only

¹⁰⁶ Although the discussion above assumes implicitly that the buyer always purchases at a price equal to his (post-disclosure) willingness to pay, there are other equally efficient equilibria in which the price is any value between the buyer's and seller's valuations, as reflected in Table 1, above.

equilibrium outcome within this strategic setting, and thus any more nuanced view of what a norm is (for example, a selection device among numerous equilibria, or a type of preference that admits new equilibria) is simply inapposite.

As such, I shall not dwell on this particular case any longer, other than to reiterate that in the presence of verifiable disclosures, strategic incentives are so strong as to render law rather superfluous.¹⁰⁷ There is, however, a much more interesting story about the interaction of disclosure, law, and norms in those situations where a seller's information is unverifiable. It is to those considerations I now turn.

D. *Unverifiable Information*

As noted above, matters become somewhat more complicated when information is prohibitively difficult for buyers to verify. In such instances, the unraveling phenomenon described in the previous subsection would cease to function.¹⁰⁸ Indeed, if buyers can never confirm the content of disclosed information, the act of disclosure is hardly distinct (at least on first principles) from mere puffing, or "cheap talk." This is a significant problem, capturing many real-world transactions (within ordinary markets, financial markets, and even intrafirm markets). For example, nonverifiability is roughly analogous to situations in which the important attributes of a good take the form of speculative, forward-looking, or "soft" information about the asset—information that is difficult, if not impossible, for either the buyer to verify at the time made, or for a court to verify *ex post*. The

¹⁰⁷ A few caveats to this conclusion are worth flagging at this point. In particular, there may be situations in which a seller's disclosure is verifiable, but costly for a seller to acquire or to send. In either situation, sellers may rationally (but perhaps inefficiently) choose not to acquire the information or to make any disclosures whatsoever to the buyer. In such circumstances, laws forcing disclosure may sometimes work to counteract these inefficiencies. See Masahiro Okuno-Fujiwara et al., *Strategic Information Revelation*, 57 REV. ECON. STUD. 25 (1990) (providing the conditions sufficient to guarantee complete revelation of private information but also providing examples where complete revelation will not occur). In addition, when the content of an individual's information is multidimensional, complete disclosure may also not obtain in equilibrium in the absence of laws compelling such disclosure. See *id.* at 38-39 (explaining why it is more profitable for a firm to conceal information than to disclose it when its information is multidimensional). I will not dwell on this possibility in what follows for two reasons. First, time and space constraints compel me to focus on the more pertinent case of unverifiable (rather than costly) disclosures, a case which turns out to exhibit some similar properties. And second, many of the most important doctrines and statutes regulating disclosure—that is, antifraud provisions—act not so much as to require as to regulate its content and consequences once made.

¹⁰⁸ *Id.* at 37-38, 45-46.

balance of my analysis, then, focuses on the situation in which a seller's information is neither observable by the buyer nor verifiable in court.

An important by-product of nonverifiability is that it may (unlike the case of unraveling) provide a normative role for law and/or extralegal norms. Indeed, both law and norms can help to attach consequences to representations made by a seller. Most obviously, even without the convenience of verifiability, *S* may try to send signals to the buyer about her type. Such signals, while certainly constituting cheap talk in a world without law or norms, might well become meaningful in the presence of such disciplining constraints.

The subsections that follow attempt to address these questions more explicitly. Accordingly, I shall impose the same structure as above on the commercial interaction at issue. In all of the instances studied below, the seller is assumed to make a take-it-or-leave-it price offer to the buyer. Along with this offer, however, the seller may send an unverifiable signal (that is, make a "disclosure") about the quality of the asset she is selling. In so doing, she can send one of three signals: first, she might disclose *L*, which communicates the signal, "I have a low value asset"; second, she might disclose *H*, which communicates the message, "I have a high-value asset"; or, finally, she could disclose *M*, which communicates the message, "I have received no meaningful information, and thus I have only a medium-quality asset."¹⁰⁹ Once he has received the price and signal from the seller,¹¹⁰ the buyer decides whether to accept or reject it, with acceptance culminating in an immediate sale at the quoted price and rejection culminating in an immediate cessation to the bargaining process with the seller retaining ownership of the asset. After a sale (if any) is consummated, chance determines whether the asset is valueless or worth \$100, according to the true underlying probabilities. The consequences that follow from this determination, if any, will differ according to the role played by law and/or norms of behavior. The basic structure of the game is given by Figure 1, below. In the Figure, nature (player *N*) moves first to select (at random) a seller "type" (*S*),

¹⁰⁹ In some respects, the inclusion of *both* a price and an information disclosure is superfluous, given that the price quoted may itself be a signal of quality. I present them as separate messages here, however, for the sake of clarity.

¹¹⁰ Importantly, the buyer does not know for sure whether a particular disclosure (for example, *H*) actually came from that type of seller. Only if the underlying incentives are appropriately calibrated will these signals be truthful ones in equilibrium. See *infra* Part II.E.2.

S_M , or S_H). Whichever type of seller is chosen then makes a disclosure of her type (L , M , or H) followed by a price demand (σ_L , σ_M , or σ_H). The buyer (B) may accept or reject this demand.

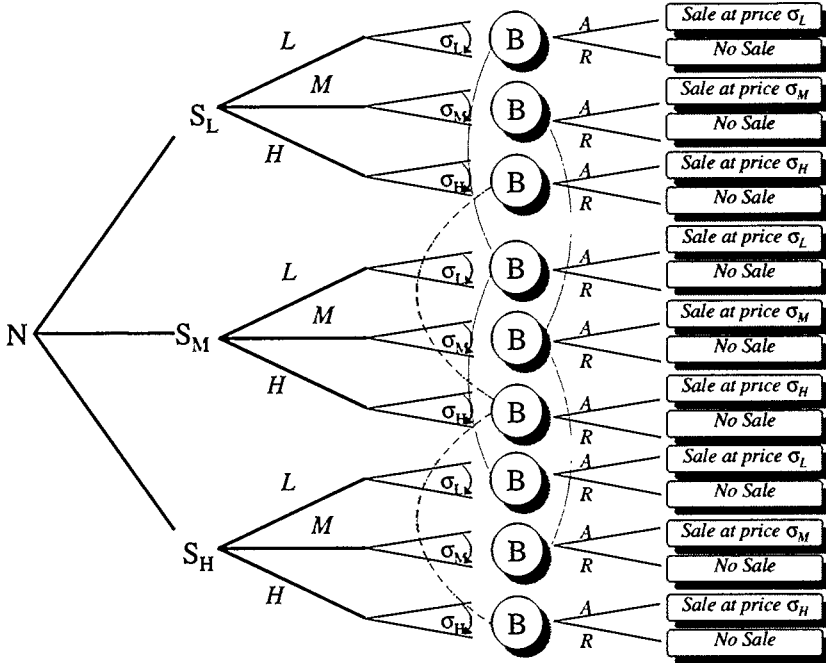


Figure 1: Extensive Form of Disclosure Game

E. The Effect of Disclosure Law

For the moment, let us postpone any discussion of norms, and concentrate solely on whether law alone can help provide a partial solution to problems of asymmetric, unverifiable information. As is demonstrated below, law often can provide incentives that induce efficient disclosure, but only if courts are not prone to substantial errors themselves. In the presence of judicial error, however, not only may legal rules fail to provide adequate incentives, but they may in fact prove to be counterproductive.

1. Anarchy

Consider first how the market described above might work under

a state of “anarchy”—that is, when there are no legal consequences placed on the practice of seller disclosures.¹¹¹ This is, in many ways, the most severe case to consider, and accordingly it turns out that the only plausible outcomes are those in which only the lowest-quality seller successfully makes any transactions. In other words, anarchy induces all other sellers to decide (inefficiently) to stay out of the market.

In order to understand why this type of equilibrium emerges, it is perhaps most helpful to walk the reader through a representative one,¹¹² emphasizing the relevant intuitions along the way. Most significantly (and as one might conjecture), the absence of legal consequences attending to disclosure gives rise to a situation in which disclosure becomes completely uninformative, and correspondingly all types of sellers simply decide at random which of the three possible disclosure signals (*L*, *M*, or *H*) to send. To understand why disclosures must be uninformative in equilibrium, suppose that each of the sellers had adopted a distinct strategy of disclosing her type truthfully. In such a case, the buyer certainly would exploit this truthful behavior to infer which type of seller he was facing, and would accordingly be willing to pay the most (that is, \$80) when he received the posited signal *H* of the high-quality seller. Knowing this, of course, the low- and medium-quality sellers would have a strong incentive to emulate their high-quality counterpart’s signal, in an attempt to extract this higher price. Their incentive to emulate, however, would not be lost on the buyer, who upon hearing the signal *H*, would now revise his inference downward and would be willing to pay at most the average value of \$60 for the asset. Importantly, this revised willingness to pay now falls short of the high-quality seller’s reservation value of \$74.67, and thus she would no longer wish to sell at this price.¹¹³ Clearly, then, our initial hypothesis of a “separating equilibrium,” in which each seller made a truthful disclosure, cannot

¹¹¹ Recall as well that in this Part I am holding in abeyance the possibility that extralegal norms are at play. I shall return to this consideration below.

¹¹² While multiple equilibria are possible in this case involving different strategies, their outcomes are always identical.

¹¹³ It is important to note here that if (contrary to the example in the text) sellers were extremely risk-averse (or placed no value on the asset for other reasons), then the high-quality seller still might be willing to sell at the average price. In this case, all sellers simply would sell at the average ex ante price of \$60, which would be first-best, and there would be no need for either law or norms. I therefore concentrate on what I perceive to be the more interesting case in which higher-quality sellers would be unlikely to participate in the market unless they could convince the buyer of their quality.

be correct. Moreover, if the high-quality seller ever attempted to switch to a different signal, the other two seller types would just as happily emulate that new signal, thwarting the high-quality seller's efforts to distinguish herself. This cycling, emulatory behavior equilibrates only if all three types of seller randomize completely among the three possible signals, which is exactly what occurs in equilibrium, as illustrated in the table below:

<i>S</i> Type	Signal	Mkt. Price	<i>S</i> 's Payoff	Inefficiency
Low	<i>L, M, or H</i>	\$40.00	\$40.00	\$0.00
Medium	<i>L, M, or H</i>	None ¹¹⁴	\$52.00	\$8.00
High	<i>L, M, or H</i>	None	\$74.67	\$6.33

Table 2: Equilibrium in Absence of Law

As a result of the seller's uninformative disclosure, the buyer simply will ignore such signals altogether and concentrate solely on the quoted price. In theory, of course, one optimistically might imagine that the price demanded by the seller itself would constitute a signal about quality. Unfortunately, however, it turns out that the same problems as those discussed above recur to dash these hopes. Hypothesize, for example, that each of the seller types quoted a different price, with the high-quality seller demanding \$80, the medium-quality seller demanding \$60, and the low-quality seller demanding \$40. Because the buyer would correctly infer an \$80 price to reveal high quality, the buyer would accept that offer. Knowing this, however, the low- and medium-quality sellers would both want to abandon their hypothesized strategies and emulate the \$80 offer. Once again, the hypothesis of distinct, acceptable price offers from each type of seller cannot constitute an equilibrium.

In fact, it turns out that this logical story repeats itself for any hypothesized set of price quotes in which either the medium- or high-quality seller makes a "serious" offer¹¹⁵ to the buyer: were a serious offer ever believed by the buyer in equilibrium, the low-quality seller would immediately emulate it, causing the buyer to reduce her willingness to pay and thereby vitiating the higher-quality seller's

¹¹⁴ Both the medium- and high-quality sellers would make a nonserious offer to the buyer (such as \$400) and thus there will be no transaction.

¹¹⁵ By "serious" offer, I mean an offer that has a chance of being accepted. For example, a price quote of \$400 from the seller would never be taken seriously by the buyer, since the asset's ultimate value is at most \$100.

initial incentive to make the offer. Consequently, the only serious offer in equilibrium has to come only from the low-quality seller, who quotes a price of \$40—a price that is accepted by the buyer.¹¹⁶

For those familiar with the law and economics literature, the strategic dynamic described above will have an extremely familiar ring. Indeed, it is nothing more than the familiar “lemons problem” first highlighted by George Akerloff more than a quarter century ago.¹¹⁷ Just as in his approach, the presence of private, unverifiable information can lead to a situation in which only low-quality assets, or “lemons,” are ultimately bought and sold.¹¹⁸ Owners of higher-quality assets rationally choose to keep them off the market, unable to convince buyers of their “true” worth.

Not only does the lemons problem deter numerous potential trades, but it does so at the cost of reducing social welfare below its first-best potential. In our running numerical example, for instance, the lemons problem reduces total expected social welfare to:

$$\frac{1}{3} \cdot (\$40) + \frac{1}{3} \cdot (\$52) + \frac{1}{3} \cdot (\$74.67) = \$55.57$$

which falls short of the first-best level (of \$60) by \$4.43.¹¹⁹

¹¹⁶ The discussion in the text contains only a verbal description of the equilibria that emerge in this setting. For readers wishing greater precision, a plausible sequential-equilibrium strategy is as follows: (1) all sellers randomize evenly over their disclosure strategy; (2) the low-type seller demands a price of \$40; (3) the medium- and high-type sellers make nonserious price offers (such as \$101); and (4) the buyer accepts any offer less than or equal to \$40, rejecting all others. For completeness, it is important to specify the buyer's beliefs as well. One set of beliefs that suffices is as follows: (1) regardless of the disclosure signal received (*L*, *M*, or *H*), the buyer believes it to have come from any seller type with equal likelihood; and (2) should the buyer ever receive a “serious” price offer (that is, anything of \$80 or less), he believes it to have come from the low-quality seller. It is confirmed easily that this constitutes a sequential equilibrium that is outcome equivalent to all other sequential equilibria. For more on the precise definition of a sequential equilibrium, see David M. Kreps & Robert Wilson, *Sequential Equilibria*, 50 *ECONOMETRICA* 863, 863-64 (1982).

¹¹⁷ George A. Akerloff, *The Market for Lemons: Quality Uncertainty and the Market Mechanism*, 84 *Q.J. ECON.* 488 (1970).

¹¹⁸ As noted above in note 113, if all sellers are extremely risk-averse, then all would be willing to sell for \$60, and the lemons problem would not arise.

¹¹⁹ One might wonder, of course, whether a meager \$4.43 is really all that important given that the potential stakes involved are in the neighborhood of \$60. Indeed, the inefficiency noted here is less than 10% of the total surplus available. While this critique is numerically correct, it is easy to alter the example in ways that leave it qualitatively unaffected yet magnify the extent of the inefficiency. If, for example, the ultimate owner of the asset were required to sink an irreversible, specific investment of \$40 in order to produce any later payoff, the net value of the asset ex post would be \$0 for a low type, \$10 for a medium type, and \$20 for a high type. In this case, the nominal inefficiency of the lemons equilibrium would recur, but now

2. Introducing Law

If asymmetric information gives us lemons, can we use law to make lemonade? The answer to this question tends to be somewhat elusive. It turns out that the introduction of law certainly can help, but only insofar as courts are relatively reliable. When, in contrast, courts are prone to committing severe errors, the introduction of legal liability can be even worse than anarchy. There are two possible ways that the law may be able to approach the lemons phenomenon described above. I address them each in turn.

First, and most simply, one could try to attack the lemons problem by brute force. If, for example, courts (acting *ex post*) were substantially better than capital markets (acting at the time of disclosure) at verifying the truthfulness of seller disclosures, then one might be able to address the lemons problem relatively easily: Simply require disclosure by the seller in all instances, and impose stiff penalties on any seller who, after the fact, is determined to have misrepresented herself. This brute-force approach seems to be the theoretical scenario that much of securities regulation has come to reflect. To the extent that it is feasible (and relatively inexpensive), this direct approach is both attractive and worth pursuing.

While on first blush, disclosure requirements may seem like a panacea for lemons problems,¹²⁰ such solutions suffer (at least sometimes) from significant drawbacks. Most notably, there may be very few contexts in which courts have a comparative advantage over securities markets at determining the truthfulness of seller disclosures. Indeed, there are a number of reasons to think that judicial processes are even worse at doing so.

First, the judicial inquiry requires that a court reconstruct the knowledge possessed by the seller at the time the disclosure was made, a task that is at least freighted with uncertainty and at most impossible, particularly when the disclosure at issue involves "soft" information. Second, even if a court successfully could reconstruct the seller's knowledge at the time of disclosure, the administrative costs in

would constitute nearly 45% of the surplus potentially available. Given the ease with which one can manipulate the relative importance of the nominal value of the inefficiency in this example, I shall favor the simpler formulation given in the text, focusing instead on the fraction of this inefficiency that judicial intervention can eliminate.

¹²⁰ Indeed, many legal scholars habitually construe them as such. See, e.g., CLARK, *supra* note 89, § 4.2, at 150-57 (arguing that mandatory disclosure rules are socially efficient).

conducting such an inquiry might render the game unworthy of the candle. And finally, even a court that could overcome these obstacles would have to remain vigilant against letting knowledge about subsequent losses color its (and a jury's) inquiry into the scienter of the seller at the time disclosure is made. It may be difficult for many courts and juries to avoid susceptibility to hindsight bias in conducting this assessment (a problem that largely created the perceived need for a statutory safe harbor in the first place).¹²¹

When these limitations are prohibitive, however, there is yet another means by which legal rules can confront the lemons problem. Within the framework discussed above, one might simply interpret a seller's disclosure to be a type of constructive warranty. Consider, for example, the following legal regime: If a seller represents her asset to be of high quality and a buyer purchases it, the seller must stand ready to compensate the buyer in the amount of $\$D_H$ should the asset turn out to be worthless. Similarly, sellers disclosing medium- or low-quality assets must stand ready to compensate a disappointed buyer in the amounts of $\$D_M$ and $\$D_L$, respectively. Unlike the brute-force option, this warranty-like approach does not require an in-depth inquiry into the seller's state of mind at the time of disclosure, and requires the court merely to mete out the appropriate remedy in those situations.

As it turns out, such an arrangement can solve, at least partially, the lemons problem noted above, so long as damages amounts are set appropriately. In particular, one can manipulate the magnitude of the respective damages to ensure that low-, medium-, and high-quality sellers perfectly reveal their types and that the buyer purchases from all of them. To implement such a scheme, however, it is necessary to ensure that D_M is large enough relative to D_L to keep the low-quality seller from mimicking her medium-quality counterpart. In turn, one must be sure that D_H is sufficiently high relative to D_M to keep the medium-quality seller from mimicking the high-quality seller.

Finally, within these constraints lies one other important goal:

¹²¹ See, e.g., Rachlinski, *supra* note 10, at 616-17 (discussing the "heightened pleading requirement" for securities fraud claims to prevent "fraud by hindsight," but noting that it does not "entirely purge the system of the bias's influence"). Yet another factor impeaching the generality of disclosure requirements is the fact that such requirements implicitly presuppose the ultimate verifiability of the seller's information. In such instances, there may be no need for law whatsoever, since a seller simply can disclose the relevant information *sua sponte*. See *supra* text accompanying note 107 (noting exceptions to the law's superfluosity in the presence of verifiable disclosures).

that of minimizing—to the extent possible—the collective size of the above guarantees. Indeed, the substantive effect of this approach is to place at least some liability risk on the seller, who (recall) is risk-averse. Thus, this solution to the lemons problem cannot eliminate all inefficiencies. Much like a good driver often must signal her quality by accepting a larger deductible or lower copayment, a high-quality seller must be willing to submit to greater liability exposure to signal her quality. This residual risk that sellers must bear represents a type of residual agency cost.

As a consequence of this observation, it is clear that an “efficient” legal rule will tend to set the smallest damages level, D_L , equal to zero. Indeed, if a court were to choose some larger number, it would also be necessary to increase both of the other damages amounts, D_M and D_H , so as to preserve the differences among them that give sellers the incentives to communicate truthfully. Doing so, however, would inefficiently cause risk-averse sellers as a group to bear more risk than is necessary.¹²² In many respects, then, setting $D_L = \$0$ is tantamount to stipulating a “safe harbor” absolving anyone who discloses L from future liability.¹²³

Assuming then, that we fix $D_L = \$0$, let us ask what values of D_M and D_H would be optimal. Note first that the effective “guarantee” offered by the seller who discloses either M or H will alter the price that a rational buyer is willing to pay. Indeed, now knowing that his purchase is partially insured, the buyer will be willing to pay a larger price than he hitherto would have been willing to put forward. Thus, for example, if the buyer is sure that the signal M has come from the medium-quality seller, then he will be willing to pay the expected value of the asset plus the expected value of the warranty (or, $\$60 + (0.4) \times D_M$). Similarly, a buyer who believes a signal of H has come from a high-quality seller would be willing to pay the sum of the expected values of the asset and the contingent legal right (or, $\$80 + (0.2) \times D_H$).

Keeping in mind this price effect, all that remains is to set the

¹²² Of course, if the buyer were also risk-averse, it might be efficient for the parties to share the financial risk between them, by (for example) setting $D_L > 0$. I do not delve further into this possibility, however, for two reasons. First, the principal intuitions of this Article can be made without adding another layer of complexity. And second, if the asset were divisible, buyer risk aversion would likely result in the seller alienating only a portion of the asset, such that D_L would once again be equal to zero.

¹²³ Note that there are alternative types of safe harbors, such as vitiating liability for anyone who discloses either L or M ; I shall take these variations up at greater length in later sections. See *infra* Parts II.G, II.H.2.

remaining damages amounts in a way that ensures that the seller reveals her information truthfully (that is, a “separating” equilibrium). As it turns out, the minimum damages amounts that ensure such truthful revelation are given by $D_M = \$76.56$ and $D_H = \$90.61$.¹²⁴ At these damages levels, a separating equilibrium will emerge, whose central characteristics are shown in the table below:

S Type	Signal	Dam. Amt.	Mkt. Price	S's Payoff	Inefficiency
Low	L	\$0.00	\$40.00	\$40.00	\$0.00
Medium	M	\$76.56	\$90.62	\$55.31	\$4.69
High	H	\$90.61	\$98.12	\$75.62	\$4.38

Table 3: Equilibrium Under “Optimal” Disclosure Law

There are a number of pertinent observations one can make from this table. Note first from the second column that each of the sellers discloses her type truthfully. Thus, the specter of legal liability permits the sellers’ information to be communicated credibly to the market, thereby providing a signaling “solution” to the lemons problem.¹²⁵

Second, the liability exposure to which the medium- and high-quality sellers submit *actually exceeds* the expected value of the underlying assets they are selling. For instance, the uninformed, medium-quality seller must guarantee the buyer a payoff of \$76.56, even though the asset she was selling had an expected value of \$60 at the time she sold it. Similarly, the high-type seller had to guarantee over \$90 for the buyer even though the expected value of the asset was only \$80.¹²⁶ At the same time, of course, the liability risk the sellers

¹²⁴ These figures are computed as follows. Consider first how high D_M needs to be to keep the low-type seller from mimicking the medium-type seller. This condition boils down to:

$$40 \leq 60 + (0.4) \cdot D_M - (0.6) \cdot D_M - \frac{(0.4) \cdot (0.6)}{300} \cdot D_M^2,$$

which is satisfied for any $D_M \geq \$76.56$. Fixing D_M at exactly \$76.56, then, the medium-quality seller would truthfully disclose (and not try to emulate a high-quality seller) when:

$$60 - \frac{(0.4) \cdot (0.6)}{300} \cdot (76.56)^2 \leq 80 + (0.2) \cdot D_H - \frac{(0.4) \cdot (0.6)}{300} \cdot D_H^2,$$

which is satisfied for any $D_H \geq \$90.61$.

¹²⁵ This solution is not perfect, of course, since it requires high- and medium-quality sellers to retain some risk (detailed below).

¹²⁶ The idea of optimal damages which are supercompensatory in this fashion might seem strange to some law and economics scholars. However, as the discussion

face is capitalized into prices that are also significantly higher than the expected value of the underlying asset. Moreover, the liability risk that sellers bear is still less than the volatility risk they would have faced had they kept the asset for themselves. Indeed, the medium-quality seller now receives an expected payoff of \$55.31 here, exceeding her outside option of \$52. Similarly, the high-type seller's expected payoff is \$75.62, which also exceeds her outside option of \$74.67.

Finally, it is important to note that the separating effects of disclosure laws cash out into a measurable increase in total welfare (at least compared to the anarchic case). Under the legal regime outlined above, total social welfare is equal to:

$$\frac{1}{3} \cdot (\$40) + \frac{1}{3} \cdot (\$55.31) + \frac{1}{3} \cdot (\$75.62) = \$56.98,$$

which, while less than first-best, is larger than the \$55.57 generated under the no-regulation world. Moreover, lest one wonder whether the modest absolute differences are important, the effect of disclosure laws in this example is to reduce the expected value of the inefficiency by a full 32%.¹²⁷ Consequently, at least when legal rules that regulate disclosures function well, such rules can represent a fairly efficient policy choice.

F. *The Effects of Judicial Error*

While the truth-enhancing benefits of legal liability are clearly encouraging, their ultimate merits are far from universal. In particular, if courts face difficulties in verifying a seller's information at the time of disclosure,¹²⁸ the advantage of law becomes more questionable. Two particularly worrisome possibilities of judicial error may be relevant here. First, a court may be prone to misdiagnosing whether the purchased asset has in fact become valueless. Second, a court may incorrectly perceive what signal actually was sent by the seller.

in the text indicates, these damages are not actually supercompensatory once one factors in the capitalized price effect of prospective damages. Nevertheless, in neither the literature nor the case law does there appear to be much appreciation for the fact that apparently supercompensatory remedies would ever be optimal. *But see* CLARK, *supra* note 89, § 4.2, at 150-57 (defending the use of "severe" sanctions in disclosure contexts). Though I do not focus on this argument here, it is conceivably important enough to justify a separate (and, as yet, unwritten) paper.

¹²⁷ That is, $(56.98 - 55.57) / (60 - 55.57)$.

¹²⁸ *See supra* text accompanying notes 120-21.

Although empirical data either supporting or rejecting this claim is difficult to find, my strong conjecture is that there is a much greater risk of the second type of error than of the first. Indeed, the very presence of a plaintiff in the courtroom sends a strong signal that value has been lost and that the underlying asset is worth little or nothing. Moreover, without first demonstrating that such a loss occurred, it would be difficult for a plaintiff to make out a theory of remedy. Thus, it seems likely that the predominant risk of error is that a court may misunderstand which signal was sent originally. It is this type of error I concentrate on here.¹²⁹

To wit, consider a variation on our running example in which the court faces a problem in verifying which signal was sent by the seller. With probability $(1 - q)$, the court correctly identifies the actual content of the seller's disclosure. However, with the complementary probability q , the court mistakenly identifies the seller's disclosure for one of the other two signals, each with probability $q/2$. This error structure is reflected in the following table:

	Court detects <i>L</i>	Court detects <i>M</i>	Court detects <i>H</i>
<i>S</i> discloses <i>L</i>	$1 - q$	$q/2$	$q/2$
<i>S</i> discloses <i>M</i>	$q/2$	$1 - q$	$q/2$
<i>S</i> discloses <i>H</i>	$q/2$	$q/2$	$1 - q$

Table 4: Probability of Judicial Error

It is most natural to assume in what follows that $0 \leq q \leq 2/3$. Indeed, under such an assumption, $q = 0$ corresponds to the special case in which the court is perfectly accurate, while $q = 2/3$ corresponds to the situation in which the court's verification skills are nonexistent and the judge simply chooses one of the three disclosures at random.¹³⁰

How would the game play out in the face of judicial error such as

¹²⁹ It is important to add, however, that it would not be overly difficult to build into the model the alternative form of judicial error (that is, error in diagnosing the ex post value of the asset). Indeed, a framework very much like that developed below could apply to this alternative sort of judicial error, and would yield nearly identical results. In the interests of clarity and concision, however, I have opted to focus on the type of error that appears most likely in many litigated disputes.

¹³⁰ The reader should note that Table 4 implicitly assumes that the court will commit each type of misdiagnosis with the same probability, $q/2$. If one were willing to construct an even more complex framework, one could allow for differential probabilities for each type of error. Such an alteration contributes unnecessary complexity to the model, however, as the basic intuitions remain the same.

that described above? As one might expect, the answer to this question hinges on the value of q . To see this most clearly, consider the two extreme cases of $q = 0$ and $q = 2/3$, corresponding respectively to the polar situations of complete judicial accuracy and complete lack thereof. In the former case, the analysis of the previous subsection continues to hold true, and appropriately-set damages rules from Table 3 support a second-best outcome in which sellers truthfully disclose.

The latter case (that is, $q = 2/3$) is essentially equivalent to a court choosing liability at random. Here, just as with anarchy, disclosure becomes a largely irrelevant action, and, regardless of her signal, the seller would face an expected liability payment of $(D_M + D_H)/3$ should the asset turn out to be worthless. In other words, *with errors this severe, the seller's precise disclosure would have no differential effect on her exposure to liability.* As one might guess, then, the lemons problem would recur here, and only the low-quality buyer would ever be willing to make a serious offer in equilibrium. Perhaps worse, however, is the fact that for positive magnitudes of damages (that is, $D_M > 0$ and/or $D_H > 0$), the lemons outcome here is actually worse than in the case of anarchy: for not only is the low-quality seller the only active seller, but she now must bear the ever-present risk of legal error—a risk that was not present in a world without law. In such a world, then, the most efficient institutional response would be to set $D_M = D_H = 0$, essentially eliminating courts from the picture altogether.

When the error rate is somewhat less extreme, however, there still may be some hope that disclosure regimes can play a nontrivial role. Indeed, in the example studied here, it is still possible for such regimes to induce both truth-telling and successful transactions by all sellers so long as the incidence of judicial error is less than approximately 24%.

The table below illustrates what such a regime would look like at error rates of 0% (as a baseline), 10%, and 20%.

	0% Error Rate		10% Error Rate		20% Error Rate	
Type	Dam.	S's Payoff	Dam.	S's Payoff	Dam.	S's Payoff
<i>L</i>	\$0.00	\$40.00	\$0.00	\$38.48	\$0.00	\$36.70
<i>M</i>	\$76.56	\$55.31	\$82.54	\$54.54	\$89.53	\$53.60
<i>H</i>	\$90.61	\$75.62	\$96.67	\$75.27	\$103.64	\$74.86
Mean	\$55.42	\$56.98	\$59.75	\$56.10	\$64.39	\$55.05

Table 5: Equilibrium for Differing Judicial Error Rates

There are a few important things to notice about this table. First, as the rate of judicial error increases, damage amounts, along with prices, tend to rise accordingly, so as to preserve the deterrent role of legal liability amid the random noise caused by judicial error. As one moves horizontally across the table, mean damages increase from \$55.42 under perfect accuracy to \$64.39 under a 20% error rate. Second, while judicial inaccuracy makes sellers of all types worse off, its effects fall particularly hard on sellers of lower-quality assets. Indeed, note that the introduction of a 20% error rate reduces the high-quality seller's expected payoff by \$0.76, but it reduces the low-quality seller's expected payoff by a full \$3.30.¹³¹ The reason that low-quality sellers suffer more than high-quality sellers is quite easy to understand. The lowest-quality seller—who sends the most pessimistic signal possible—risks only one type of mistake: one in which the court creates liability exposure where the seller intended there to be none. Conversely, the highest-quality seller—who makes the most optimistic disclosure possible—also risks only one type of mistake, but here it is the possibility that a court will err in the direction of exoneration, rather than liability enhancement.

Finally, and most importantly, the introduction of judicial error can erode severely the social value of disclosure laws by muddying the consequences of any given signal. Indeed, as the error rate increases from 0% to 10%, total welfare declines from \$56.98 to \$56.10. More striking, however, is the fact that judicial error can become so severe that disclosure regimes are no longer economically beneficial. Indeed, as illustrated in Table 5, once the rate of error grows to 20%, law actually engenders a worse social outcome (\$55.05) than that which would emerge from a world without any law whatsoever (\$55.57).

G. *Liberal Safe Harbors*

From the analysis above, it appears that judicial error—when sufficiently severe—eviscerates any net efficiency gains from a legal liability regime. Consequently, one might be led to conclude that law can play no constructive role whatsoever in the presence of such errors.

This conclusion, however, turns out to be somewhat hasty. Indeed, throughout the analysis above, I have assumed that the task

¹³¹ Error reduces the medium-quality seller's payoff by a more moderate, but still nontrivial, \$1.71.

for the legal rule was to induce truthful disclosures and trade with all types of buyer-seller combinations. To do so, it was necessary for courts to employ a distinct damages amount to attend each of the possible disclosures that a seller might send (D_L , D_M , and D_H). When judicial errors become extreme, these damages levels must be set so high that the resulting risk severely hampers any welfare gain. Conspicuously left out of the analysis are various “partial” disclosure laws that attempt more modestly to address only some of the constraints imposed by the lemons problem.

One possible partial solution involves the creation of what is effectively a more liberal “safe harbor” for disclosing sellers. Recall that under the schemes previously analyzed, the most pessimistic signal (L) incurred no liability beyond the risk of court error,¹³² while more optimistic signals (M and H) triggered increasingly greater threats of subsequent damages. Thus, the legal approach studied above granted a limited (or “stingy”) safe harbor only for the most pessimistic message possible, while anarchy represented the opposite extreme, in which a safe harbor applied to every type of disclosure.

As it turns out, a highly error-prone judicial system may sometimes be able to salvage at least some vestige of the benefits from liability rules by partially (but not completely) relaxing its safe harbor protections. Consider, for example, the situation represented by the two right-most columns of Table 5, in which the incidence of judicial error was relatively high, at 20%. As the earlier analysis demonstrates, even with such high error rates it is possible to set up a disclosure regime that induces truth-telling and trade in all cases; however, so doing would produce an outcome even worse than anarchy (or equivalently, an unconditional safe harbor). But now, consider the effects of a third, middle ground, in which a court extends safe harbor protection to any seller who discloses either message L or message M , but maintains liability for a seller who is found to have disclosed the most optimistic signal, H . Such a regime, then, would effectively set $D_L = D_M = 0$, and $D_H > 0$, as illustrated below:

¹³² That is, $D_L = 0$.

S Type	Optimal Dam.	Signal Sent	Mkt. Price	S's Payoff	Ineffic.
Low	$D_L = \$0.00$	{L, M}	\$45.48	\$38.43	\$1.57
Med.	$D_M = \$0.00$	{H}	\$89.25	\$53.94	\$6.06
High	$D_H = \$91.39$	{L, M, H}	None ¹³³	\$74.67	\$6.33

Table 6: Optimal Safe Harbor Under 20% Error Rate

Table 6 illustrates predicted equilibrium behavior assuming D_H were set optimally (which turns out to be at $D_H = \$91.39$). First it is worth noticing that this more generous safe harbor precludes the high-quality seller from entering into any transaction. This result should not be surprising, since liberalizing the safe harbor effectively reduces the number of distinct messages a seller can send to the market from three to two (as L and M are now legally equivalent messages). Given that sellers still come in three flavors, then, the safe harbor's truncation of the number of distinct signals a seller can send implies that either (i) at least two types of seller would have to "pool" with one another (that is, employ the same strategy); or (ii) at least one type of seller would choose to exit the market. Table 6 illustrates that the latter effect is what tends to occur, both in this example and more generally. Namely, the high-quality seller finds it unprofitable to pool with the medium-quality seller, and therefore simply chooses to make a nonserious price offer, which inevitably is rejected by the buyer. The low- and medium-quality sellers, on the other hand, continue to make successful transactions with the buyer.

Second, notice that the more liberal safe harbor rule also affects the content of the respective sellers' disclosures in interesting and potentially nonuniform ways. With greater room to maneuver, the low-quality seller is now indifferent between representing herself as a low type or medium type because the two signals have identical effects. Assuming she randomizes between them, her mean disclosure would become more optimistic under the liberal safe harbor. Similarly, the medium-quality seller now also exaggerates, representing herself to be a high-quality seller, so as to distinguish herself from the low-quality seller.¹³⁴ The high-quality seller, in contrast, is indifferent about the signal she sends, since she plans on

¹³³ The high-type seller makes a nonserious offer (such as \$400), and thus there is no market-clearing price.

¹³⁴ Of course, the buyer is aware of this exaggeration, and values the asset accordingly.

making no serious price offers. Thus, the high-quality seller may well randomize among the three signals, and consequently her mean disclosure becomes more pessimistic after the liberalization of the safe harbor.

Third, note that the damages incurred by the medium-quality seller are large (\$91.39), at least relative to the level she committed to in Table 5 (\$89.53). There are two reasons for this increase. First, the medium-quality seller no longer fears the possibility of a “false positive,” in which a court misdiagnoses her moderate signal to trigger even greater liability than she intended. The only type of judicial error she faces now is a “false negative,” in which a court absolves her from liability entirely. Thus, she is willing to risk greater liability exposure in those instances in which the court gets it right. Second, for roughly the same reasons, the low-quality seller also is relatively less worried about severe false positives under the liberal safe harbor, and it therefore takes a larger damages amount to deter her from attempting to pass herself off as a higher-quality seller.

Finally, and most importantly, the equilibrium described above results in an expected level of joint welfare equal to:

$$\frac{1}{3} \cdot (\$38.43) + \frac{1}{3} \cdot (\$53.94) + \frac{1}{3} \cdot (\$74.67) = \$55.68,$$

which exceeds that associated with both the stingy safe harbor in Table 5 (\$55.05) and the categorical safe harbor of anarchy (\$55.57). Note, however, that while the liberal safe harbor results in a Pareto improvement over anarchy,¹³⁵ high-quality sellers are slightly worse off when compared to the stingy safe harbor provision analyzed in the previous sub-Part.¹³⁶ This observation is important, for it suggests that the high-quality seller would strictly prefer a system that did not exclude her from entering the market. In particular, a seller of type *H* might desire to contract out of this liberal safe harbor regime, making an express warranty exceeding even that which the above scheme associates with the most optimistic signal. If she did so, however, it would have negative implications for other seller types, who now could bear greater risk should courts similarly err in identifying when such express terms exist. Given this negative externality, not only would a liberal safe harbor regime be socially optimal, but it might also have to be immutable in nature, so as to

¹³⁵ In other words, no type of seller is worse off, and at least one is better off.

¹³⁶ Indeed, the high-quality seller receives an expected payoff of \$74.67 under the liberal safe harbor, but \$74.86 under the stingy one.

prevent the high type of seller from attempting to contract around it.¹³⁷

Nevertheless, as viewed *ex ante*, the analysis clearly reveals a chief value of liberal safe harbors, which can be summarized as follows:

In the presence of judicial inaccuracy, a liberalized safe harbor regime can help to reduce the equilibrium risk borne by many sellers. It does so, however, at the cost of constraining at least some sellers' ability to make credible disclosures about their quality, which in turn deters them from making value-enhancing transactions. When judicial inaccuracy is sufficiently severe, however, the former effect tends to dominate the latter effect.

H. Norms and Disclosure

The discussion thus far has largely neglected how norms fit within the analysis. This omission seems especially conspicuous in light of (1) the title of this Symposium; and (2) the title of this Article. Nevertheless, the long windup has been deliberate, and with any luck it has set the stage for understanding how (and whether) "norms" of disclosure interact with the strategic considerations mentioned above. The current sub-Part takes substantially more direct aim at this precise question.

As noted in the Introduction of this Article, there is currently an interesting and sometimes contentious debate about the normative relationship between behavioral norms and substantive law.¹³⁸ This debate implicates disclosure law as well. For example, some scholars recently have suggested¹³⁹ that after the passage of the liberalized safe harbor provision in the PSLRA, issuers continued to make relatively truthful disclosures, even though such disclosures were augmented by the sort of cautionary language prescribed by the Act (and thus did not risk future liability). If one interprets this observation as evidence that sellers are prone to adopting a taste for accurate disclosure, their observed reactions may well justify the liberalization of the safe harbor provisions within securities law. In other words, this logic suggests that the existence of disclosure norms (at least good ones) justifies a less aggressive posture of law.

In this sub-Part, I shall argue that even if truth-telling norms are

¹³⁷ See also Aghion & Hermalin, *supra* note 19 (making a similar argument).

¹³⁸ See, e.g., Jeffrey J. Rachlinski, *The Limits of Social Norms*, 74 CHI-KENT L. REV. 1537, 1541-42 (2000) (documenting "the caveats that social psychological research suggest for the value of social norms for policymakers").

¹³⁹ Johnson et al., *supra* note 12.

plausible within a disclosure setting (a question I defer until later¹⁴⁰), the implications for law are not nearly as clear cut as the above logic suggests. To be sure, truth-telling norms may be able to do some of the sanctioning work that a legal rule otherwise might have to perform, enabling courts to reduce damages without affecting deterrence. But there very well may be other dimensions on which legal rules operate—such as the very threshold at which liability is triggered in the first place—where the presence of norms actually militates in favor of more aggressive legal doctrines than those that would be appropriate in the absence of such norms. In other words, I shall argue that disclosure norms and disclosure laws may be policy complements of (rather than substitutes for) one another.

1. Truth-Telling Norms

The first step in the argument is to understand how norms might be beneficial within the disclosure context studied in this Article. But in order to do so, it will be necessary to reiterate what I mean when I refer to a norm. As noted in the Introduction, my focus in what follows concentrates on a behavioral rather than a moral account of norms.¹⁴¹ Thus, my conception of a norm is as a tendency for individuals to adopt a particular strategy or pattern of behavior within a broader social context. Moreover, I shall suppose predominantly in what follows that such norms tend to be value-creating rather than value-destroying or impeding.

Both of these assertions are potentially contestable. Indeed, there may be situations in which norms do not easily arise, or when they do they have destructive effects. Indeed, I shall argue later that disclosure contexts may represent an example of both of these problems. But for now, I shall proceed under a view of norms that is relatively sanguine about their possibilities.

Returning to our continuing example, let us consider one way in which one could introduce a norm of “truth telling” into the analysis. In particular, suppose that sellers experience a measure of “disutility” if they make an optimistic disclosure to buyers about an asset that later turns out to be worth nothing. Under such an approach, a seller who represents herself to be of medium quality would suffer a cost whose monetary equivalent is G_M in the event that the asset turns out to be worthless, while a seller representing herself to be of high quality

¹⁴⁰ See *infra* Part II.H.1.

¹⁴¹ See *supra* text accompanying notes 20-24.

would suffer an analogous cost of G_{H^p} when $G_M < G_{H^p}$ (For simplicity, suppose that a seller who represented herself to be of low quality would suffer no future disutility, content that she had “warned” the buyer by sending the most pessimistic disclosure possible.)

Although I do not attach a unique story to the source of the extralegal disutility described above, it potentially could come from any number of alternative accounts. It might, for example, represent a reputational loss that a seller experiences as other market players come to think she is unreliable. Or, alternatively, it might represent the punishment that a seller expects to suffer in the future because other market participants believe her to have acted dishonestly. Or, it might represent a more direct measure of disutility, such as the shame that one feels at having disappointed other market participants. Any of these interpretations (and perhaps others) conceivably admit the representation made here.¹⁴²

If one views truth-telling norms in this fashion, then there is an obvious implication for when and whether additional legal sanctions are necessary, and, if so, what they would look like. Most directly, consider the case studied in Part II.B, in which a seller’s information was unverifiable and courts were not prone to error. Moreover, let us assume arbitrarily that $G_M = \$2$ while $G_H = \$5$. The existence of truth-telling norms acts as an additional deterrent for sellers who are contemplating misrepresentation. Because of this deterrent, the terms of an optimal disclosure law are likely to change as well, a prediction that is borne out in equilibrium. Table 7, below, describes the players’ equilibrium behavior in the presence of a truth-telling norm and optimal damages:

¹⁴² The reader should note that I am not asserting that reputational costs, anticipated punishment, and shame are identical concepts. Indeed, there are many important differences between these concepts—differences that often matter analytically. Nevertheless, within the current framework, each of these concepts lends itself to a utilitarian representation similar to that analyzed in the text. Given that each of them has been posited to be a source for norms, this observation adds to the generality of the argument.

The alert and skeptical reader, of course, may still be troubled by this formulation, particularly given that S does not suffer any disutility unless the asset turns out to be worth nothing. This reader might argue that a more parsimonious account of truth-telling norms—particularly those rooted in feelings of guilt or shame—would assume that the seller’s disutility from misrepresentation would be realized at the moment she lies, not simply when she is caught. Indeed, such internalized norms are the basis for so-called “character norms” discussed at length by Cooter and Eisenberg in this issue. Cooter & Eisenberg, *supra* note 23. I address this possibility explicitly in the next Part of this Article (which turns out to strengthen rather than weaken my argument).

S Type	Signal	Dam. Amt.	Mkt. Price	S's payoff	Ineffic.
Low	<i>L</i>	\$0.00	\$40	\$40.00	\$0.00
Med.	<i>M</i>	\$72.06	\$88.82	\$54.81	\$5.19
High	<i>H</i>	\$84.15	\$96.83	\$74.76	\$5.24

Table 7: Equilibrium Under Truth-Telling Norm:

$$G_M = \$2; G_H = \$5$$

Comparing Table 7 with its earlier counterpart (Table 3), it becomes clearer how disclosure norms and law interact with one another. Within this particular context, at least, legal sanctions and extralegal norms clearly function as substitutes for one another, but far from perfect ones (as we shall see below). Note that truth-telling norms clearly can do part of the deterrence work that damages had done hitherto, thereby allowing a reduction in the requisite damages levels (by \$4.54 in the case of medium-quality disclosures and \$6.46 in the case of high-quality disclosures). Correspondingly, market clearing prices also decline, reflecting the reduced actuarial value of prospective legal recovery in the presence of smaller damages.

Nevertheless, it is important to note that the introduction of truth-telling norms into the analysis does not constitute a complete “wash” from an efficiency perspective. Indeed, in the equilibrium illustrated in Table 7, the total expected welfare of the parties is equal to \$56.52, quite obviously less than the \$56.98 if no truth-telling norms existed and damages did all the work. Moreover, as the importance of the truth-telling norm increases (that is, G_M and G_H grow), this differential continues to widen. Note also that truth-telling norms such as these not only fare worse than law from an aggregate efficiency perspective, but they are in fact Pareto-inferior to it: no one is better off under the posited set of norms, and some parties are worse off.

In order to understand why this efficiency loss occurs, one must recognize a critical difference in the ways that law and truth-telling norms deter misbehavior. On the one hand, legal rules deter seller misrepresentations by creating a credible threat of future transfer payments from sellers to disappointed buyers. Truth-telling norms, on the other hand, deter not through the threat of transfer payments, but rather through the prospect that the seller might suffer an uncompensated hedonic harm in the future. Such harm represents a pure welfare loss. The buyer does not gain when it is invoked, and he is therefore unwilling to capitalize the ex ante value of the seller's actuarial loss into the price of the asset. Thus, truth-telling norms

carry with them a component of deadweight loss that is not present in legal rules. Because this deadweight loss is always invoked (at least with some probability), the efficiency loss should not be terribly surprising.

Despite the apparent advantage of law over norms, one should take care not to overinterpret this result. First, the existence of truth-telling norms (including those described above) is probably less a product of policy choices than it is a constraint on such choices. Thus, a society may not be free to “choose” whether it has norms, and the welfare comparison does not reflect a feasible pair of policy options. But additionally, the way that we have introduced norms into the analysis (that is, as *ex post* disutilities) tends to call into question the very enterprise of even making welfare comparisons, because they effectively stack the deck against norms by characterizing them as deadweight losses. Had we alternatively chosen to represent norms not as a psychic “cost” for disappointing buyer expectations, but rather as a hedonic “benefit” for confirming those expectations (a distinction that seems almost semantic), the welfare comparisons would have cut in the opposite direction. But of course, such a conclusion would have been equally questionable.

Consequently, one should be somewhat wary of the indeterminate enterprise of comparing norms to law from a welfare perspective. In light of this problem, it is perhaps more fruitful and interesting to focus merely on whether and how the existence of disclosure norms affects the underlying structure of optimal legal rules. And as the discussion above indicates, truth-telling norms tend to represent partial substitutes for legal sanctions and therefore may tend to soften the severity of optimal sanctions once other norms are taken into account. Left unaddressed, however, is the extent to which this tendency persists in the presence of judicial error—situations in which legal rules are not especially apt policy instruments. I focus on this question in the next Part.

2. Norms, Errors, and Safe Harbors

The discussion above has noted the potential for norms to substitute (at least partially) for legal sanctions—a potential that others writing in the field have also noted.¹⁴³ One might surmise that this potential is most likely to be realized when, for one reason or

¹⁴³ See sources cited *supra* note 15.

another, legal rules are difficult to implement or apply with much efficacy. Such a situation almost certainly characterizes the case of extreme judicial error. Indeed, as the earlier analysis concluded, even in the absence of norms, severe risks of error may justify slackening disclosure laws by, for example, liberalizing safe harbor rules so as to temper the prospective risks imposed by erroneous verdicts.

One might therefore conjecture that adding norms into the mix should push this intuition even further. Indeed, unlike liability rules, the sanctions that attend a norm violation do not hinge on a court's correct diagnosis of a seller's earlier disclosure. Rather, they are realized immediately by the seller herself as soon as the buyer's expectations (created by the earlier disclosure) are disappointed. The ability of norm-based sanctions to sidestep judicial uncertainty, then, would seem to buttress the argument that legal rules should be de-emphasized in the presence of severe judicial error.

However, this reasoning, while facially plausible, is potentially quite flawed. Indeed, the very accuracy of norm-based sanctions espoused above may justify rather than impeach the desirability of complementary legal liability. In particular, in the context of our running example, truth-telling norms such as those discussed above can militate against generous safe harbors in the presence of judicial error, *even though* such safe harbors would be efficient in the absence of norms.

Consider the same example developed above, but suppose now that courts are prone to errors that cause them to misdiagnose the seller's disclosure with probability q (with the form of misdiagnosis split equally among the other two possible signals). Moreover, assume that $q = 20\%$; recall that this is a level high enough to justify a liberalized safe harbor (that is, $D_2 = D_M = \$0$) in the absence of norms. Table 8 below compares the *optimal* legal regime under two scenarios: under the first, no disclosure norms exist; under the second, sellers who disclose M or H suffer respective disutilities of \$2 and \$5 should they make a sale and should the asset eventually prove valueless.

Seller Type	$G_M = \$0; G_H = \0			$G_M = \$2; G_H = \5		
	Opt. Dam.	Signal	Price	Opt. Dam.	Signal	Price
Low	$D_L = \$0.00$	{L, M}	\$45.48	$D_L = \$0.00$	L	\$51.15
Med.	$D_M = \$0.00$	H	\$89.25	$D_M = \$86.40$	M	\$91.63
High	$D_H = \$91.39$	{L, M, H}	None	$D_H = \$99.44$	H	\$97.64

**Table 8: Optimal Damages Under Differing Truth-Telling Norms;
Error Rate = 20%**

The left-hand section of the table simply restates the equilibrium illustrated earlier in Table 6 (in which disclosure norms are absent). Recall from that analysis that the optimal legal rule—in the presence of a 20% error rate—entailed a liberalized safe harbor rule, in which neither signal *L* nor signal *M* triggered liability. Only if a court detected the most optimistic signal possible (*H*) did the seller incur liability, in the amount of \$91.39. Moreover, recall that under such a regime, high-quality sellers essentially fled the market, finding it unprofitable to trade.

The introduction of disclosure norms (reflected in the right-hand portion of the table) clearly changes the qualitative characteristics of the optimal legal rule. But surprisingly, rather than diminishing the domain of judicial intervention, norms appear to enhance it. Indeed, notice that the optimal legal rule in this context prescribes a stingy (rather than liberal) safe harbor, in which only the most pessimistic form of disclosure (*L*) allows a seller to escape future liability.

In order to understand this counterintuitive effect, it is necessary to appreciate once again the incentivizing role that norms play. As noted above, norms create a legally independent reason for players to be predisposed toward truthful disclosure. In light of such proclivities, there is less remaining “work” for legal rules to do in sanctioning misfeasance. Consequently, an optimal legal rule in the presence of disclosure norms can impose smaller penalties on the actors while still maintaining a targeted level of deterrence.¹⁴⁴ However, the very act of relaxing the requisite level of damages also reduces the amount of equilibrium legal risk on sellers—sufficiently less, in fact, that it once again becomes practical and efficient for the

¹⁴⁴ To see this effect in Table 8, notice that the damages a medium-quality seller faces in equilibrium clearly decreases from \$99.44 in a world without norms, to \$91.63 in a world with them. Recall that in a norm-less world, the liberal safe harbor causes the medium-quality seller to overstate her quality, representing herself to be of high-quality so as to distinguish herself from the low-quality seller.

law to incentivize disclosure and market transactions by all three types of sellers. Doing so, of course, requires the sellers to be able to send three distinct signals, which in turn implies distinct damages associated with each type of disclosure.

Reiterating, because truth-telling norms are able to carry some of the load in affecting individual incentives, they enable courts to choose more moderate legal sanctions than would otherwise be necessary to achieve a given level of deterrence. This attenuation in legal sanctions, in turn, reduces the aggregate error costs associated with legal rules. In so doing, however, it simultaneously enables error-prone courts to be more aggressive than they otherwise would be in establishing legal triggers for liability. And thus, a society that benefits from a healthy norm of truthful disclosure ironically may have what appears to be a more rigorous set of antifraud provisions than a similarly situated society that is not characterized by such norms.

This result stands in stark contrast with much of the received wisdom about the relationship between law and norms in corporate and commercial contexts. Indeed, as noted above, the existence of efficiency-enhancing norms is commonly perceived to provide a justification for abandoning or substantially relaxing legal sanctions.¹⁴⁵ The example above demonstrates very much the opposite. With error-prone courts, optimal disclosure laws would tend (at least in this example) to be less aggressive in a world without truth-telling norms than in a world with them. Any norm-based defense of legal nonintervention would therefore have to reconcile itself with the potential complementarity between law and norms—a reconciliation that does not appear to be widely appreciated.

III. EXTENSIONS, LIMITATIONS, AND CAVEATS

While the observations of the preceding Part provide some interesting insights, it must be kept in mind that these observations are products of a simplified model of strategic behavior. As with any model, the example developed does not capture all of the intricacies and dimensions of the interaction between legal institutions and norms. Thus, an inquiry into the robustness of the above intuitions is probably in order. While a complete accounting of all possible variations is impossible for an article of this length, one nonetheless can explore how certain extensions may alter its results. This Part

¹⁴⁵ See *supra* note 15 (citing scholarship that advocates the retrenchment or elimination of legal sanctions when and where strong norm-like behavior exists).

examines three such extensions. First, I consider the effects of introducing fully internalized norms of honesty, whose utilitarian effects are felt not *ex post* (as assumed above), but at the very moment of disclosure. Second, I consider the relationship between the intuitions exposed here and an alternative source of complementarity between law and norms, which some have labeled the “expressive law.” Finally, I examine how one might go about endogenizing the norms described in the previous Part and whether such an effort would significantly alter the results.

A. *Internalized Norms*

In spite of its aim for generality, the preceding Part made a particular (and potentially limiting) assumption about the nature of truth-telling norms. Explicitly, it assumed that norms took the form of a utilitarian loss suffered by the seller who has disclosed a relatively optimistic signal, but whose asset turns out to be worthless.¹⁴⁶ Note that such a definition explicitly ties the role of norms to *ex post* outcomes: sellers suffer disutility only if they disappoint the market by making a disclosure that in hindsight proves too optimistic. Moreover, even a truthful seller incurs this loss should her asset turn out to be worthless.

Such a representation may seem relatively unappealing for those who conceive of norms as an internalized element of preferences.¹⁴⁷ Indeed, if an individual actually harbored an internalized preference for truth-telling, then such a norm would operate on a substantially distinct plane from that described above: it would be immediate and direct. The seller who lies would suffer measurable disutility immediately, regardless of whether the asset turns out to be valuable. By the same token, the seller who discloses truthfully should not suffer, under this approach, the risk of future disutility depending on the asset’s *ex post* value. Because the model developed above does not represent norms of truth-telling in this direct, immediate fashion, it is natural to wonder whether its conclusions would be compromised by this variation.

Significantly, it turns out that none of the qualitative arguments developed above are critically affected by the introduction of internalized norms. On the contrary, the most critical assumption for

¹⁴⁶ See *supra* text accompanying note 142.

¹⁴⁷ See, e.g., Cooter & Eisenberg, *supra* note 23, at 1723-24 (likening extralegal behavior to “character norms” that are simply a component of preferences).

the thesis of this Article is that truth-telling norms are less susceptible to error than are legal rules—an assumption that becomes *amplified* when norms are fully internalized into individual preferences. Consequently, if truth-telling norms were so ingrained in individuals' preferences to act immediately upon the disclosure rather than upon ex post realization, the effect would be to fortify the accuracy advantage that norm-like behavior has over legal sanctions. In turn, my core arguments actually become stronger if one conceives of norms as acting at the time of disclosure rather than realization.

B. *Expressive and Informational Roles of Law*

A second possible extension of the analysis would incorporate the insights developed above with what some refer to as the “expressive” role of law in effectuating and perpetuating norms.¹⁴⁸ As a number of scholars have noted, it is difficult for norms of any flavor to work on a society-wide basis unless there is a general consensus among individuals about what distinguishes norm violation from norm compliance. For example, reputational norms require people to agree about what differentiates a good from a bad reputation. Repeat players must coordinate as to which actions constitute cooperation and which constitute defection. Actors in a system of network economies must mutually agree about which standard or contractual form has the widest appeal and recognizability. Even those who advocate internalized sources of norms assert that the source of this internalization often resides in a moral position common to everyone in the society.

The process of coordination, however, is rarely uncomplicated. It is often a daunting task to induce a large, diffuse set of individuals to act in concert with one another, particularly when there is no readily available and ubiquitously respected device to orchestrate their individual actions. Legal rules, however, may provide just the public vehicle for ensuring that the applicable standards of behavior are common knowledge (or at least close to it).¹⁴⁹ By simply expressing the type of behavior that constitutes the applicable norm, legal rules very well may constitute an official, notorious, and public source of information, providing a focal point around which norm-like behavior

¹⁴⁸ See, e.g., Robert Cooter, *Expressive Law and Economics*, 27 J. LEGAL STUD. 585 (1998).

¹⁴⁹ See Eric Talley, *Interdisciplinary Gap Filling: Game Theory and the Law*, 22 LAW & SOC. INQUIRY 1055 (1997) (reviewing BAIRD ET AL., *supra* note 1).

may begin to accrete on a society-wide basis.¹⁵⁰

In spite of its renewed popularity, most of the arguments pertaining to expressive law are hardly novel. Indeed, the kernel of such arguments can be traced at least as far back as Hume.¹⁵¹ Nevertheless, the notions embedded in theories of expressive law hold relevance for my core thesis—not as a limitation, but rather as an additional extension of the idea that law and norms may well be complements of one another. Indeed, if law serves a pivotal expressive function in engendering norms, then many sorts of norms would be unattainable without the concurrent support of law to coordinate, educate, and inform individuals about the aspirational content of norm compliance. Thus, I am relatively untroubled (and am even slightly encouraged) by the arguments offered by expressive

¹⁵⁰ Some scholars have gone even further, arguing that in addition to providing information about the applicable norm, the content of an expressed legal rule may actually change people's preferences more directly. See, e.g., Robert Cooter, *Do Good Laws Make Good Citizens? An Economic Analysis of Internalized Norms*, 86 VA. L. REV. 1577, 1580 (2000) (discussing social norms that regulate civic acts); Richard H. McAdams, *A Focal Point Theory of Expressive Law*, 86 VA. L. REV. 1649, 1672 (2000) (noting that behavior tends to follow what legal decisionmakers proclaim); Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903, 953-55 (1996) (discussing "the function of law in expressing social values and encouraging social norms to move in particular directions"). While this additional claim has been challenged by others, including Scott, *supra* note 20, at 1637-46, the content of this challenge is not directly relevant to the current discussion, and I therefore omit its details.

¹⁵¹ Hume's account of norm compliance appears to be largely influenced by reputational considerations:

What farther contributes to encrease their solidity, is the interest of our reputation, after the opinion, *that a merit or demerit attends justice or injustice*, is once firmly establish'd among mankind. There is nothing, which touches us more nearly than our reputation, and nothing on which our reputation more depends than our conduct, with relation to the property of others. For this reason, every one, who has any regard to his character, or who intends to live on good terms with mankind, must fix an inviolable law to himself, never, by any temptation, to be induc'd to violate those principles, which are essential to a man of probity and honour.

DAVID HUME, *A TREATISE OF HUMAN NATURE* 501 (L.A. Selby-Bigge ed., Oxford Univ. Press 1965) (1888). According to Hume, the imposition of law is what places a public patina of notoriety on what forms of behavior constitute norm compliance and norm violation. It is, in fact, a public signal, which itself helps individuals assess their own compliance with the norm and helps others to agree about the same rules, so as to trigger these reputational devices correctly. Indeed, as Hume continued,

[I]n the *state of nature*, or that imaginary state, which preceded society, there be neither justice nor injustice, yet I assert not, that it was allowable, in such a state, to violate the property of others. I only maintain, that there was no such thing as property; and consequently cou'd be no such thing as justice or injustice.

Id.

law theorists, as they dovetail nicely, albeit on distinct grounds, with those offered here.¹⁵²

C. *Endogenous Norms*

One of the more convenient attributes of the foregoing analysis is that it lent itself to a relatively simple—if not altogether concise—analysis of equilibrium behavior. Despite the necessity of accounting for multiple seller types, Bayesian beliefs, and strategic outcomes, the analysis was much simplified by the fact that the game could be analyzed as a simple one-time exchange between the buyer and seller. Indeed, recall that the utilitarian notion of norms that entered the analysis above was assumed to exist exogenously, as a hedonic disutility in the event that the seller disappointed the buyer through an optimistic signal to the market.¹⁵³ Thus, it was possible to confine the analysis of the model to a relatively straightforward, static environment. Moreover, utilizing this specification facilitated a number of general conclusions about the role of norms as behavioral phenomena, without forcing us to commit to a single theoretical account of them.¹⁵⁴

While this approach is certainly tractable and general, such traits come at a considerable price: they are a relatively artificial and thin account of a norm (at least by some measures). For example, one of the motivations offered for the utilitarian norms presented in the previous Part was that they represented the anticipated downstream punishments that the seller could expect in future periods should she deviate today.¹⁵⁵ While intuitively clear, it nonetheless seems a bit odd to invoke such imagery without explicitly attempting to analyze the very intertemporal considerations that supposedly create such incentives in the first place. The purpose of this Part, then, is to demonstrate how the example developed above might be extended to a dynamic environment in which the applicable norm emerges

¹⁵² At the same time, however, I take no position here on the ultimate persuasiveness of the expressive law position, as it is somewhat independent of the one offered here. See generally Scott, *supra* note 20, at 1627 (criticizing expressive theories of law that are unrelated to simple information dissemination as incapable of yielding falsifiable predictions).

¹⁵³ That is, through the introduction of disutilities G_M and G_H .

¹⁵⁴ See *supra* text accompanying note 24.

¹⁵⁵ Another related but not identical rationale was that the hedonic harm represented the reputational loss suffered by the seller. Although commonly perceived as the same, reputational losses and anticipated punishments from other market participants are not identical concepts. BAIRD ET AL., *supra* note 1, at 187.

endogenously through repeat play.

At the onset, however, I should note that this form of generalization poses at least two difficulties for an analysis of this type, one technical and the other conceptual. The technical difficulty stems from the fact that superimposing a dynamic interaction on top of an already complicated signaling game can complicate significantly one's formal analysis. This added complexity sometimes renders both predictions and intuitions somewhat elusive in the larger analysis.¹⁵⁶

Second, introducing repeat play tends to increase (often significantly) the number of distinct equilibria that are plausible outcomes of repeat play. While a simple repetition of the static equilibria of the game is still a plausible outcome, new equilibria also emerge that would not have been possible in the absence of repetition. Indeed, it is the repetition of the strategic interaction that allows the parties themselves to punish today's misdeed by threats of market punishment or outright exclusion tomorrow. In such contexts, it is difficult to predict which of these many equilibria will ultimately emerge as the most salient.

Notwithstanding these shortcomings, one can still hazard a few general observations about the relationship between legal rules and endogenous norms of behavior in the disclosure context. To facilitate such observations, however, I must resuscitate briefly the extended example studied in the previous Part, making the following modifications to its framework to simplify the analysis. Rather than contending with three distinct asset types, suppose that there are only two: a high-quality asset (*H*), which yields a successful payoff 60% of the time; and a low-quality asset (*L*), which yields success only 40% of the time. Assume further that both players are risk-neutral, but that *S* values the asset (regardless of its quality) at \$8 less than *B*.¹⁵⁷ Finally, suppose that each stage of the signaling game ends immediately with

¹⁵⁶ For example, Eric Posner has offered a theory of norms that advocates combining repeat play with an information signaling game (albeit a slightly different one). See POSNER, *supra* note 15, at 16 (offering a model of norm-based cooperation among players, in which individuals play cooperatively to signal their relative patience to others). Perhaps appreciating the complexity of his enterprise, however, Posner elects not to analyze a formal model built around such premises, opting instead to opine about the qualitative characteristics that, in his estimation, such a model might exhibit. *Id.* at 35 (recognizing that he does not fully address such methodological issues, and noting that "some of these gaps . . . reflect mathematical and theoretical problems . . . to which I have nothing to contribute").

¹⁵⁷ Thus, the gains from trade now exist because of different tastes over the asset itself rather than different risk preferences. This alteration greatly simplifies the mathematics.

probability $1/10$, but continues to a next round with probability $9/10$.¹⁵⁸

As before, let us begin within a state of anarchy, in which there is no law regarding disclosures whatsoever. Consider the following question: can the repeated game yield a “cooperative” equilibrium in which the seller always tells the truth notwithstanding the absence of a legal rule? In order to answer this question, it is necessary to answer two additional questions. First, what is the implicit punishment that the buyer would inflict upon the seller should the seller deviate from the posited equilibrium? And second, what criterion will the buyer employ for determining when to invoke this punishment scheme?

Regarding the first question, there is frequently no unique punishment scheme in the context of repeat play that implements a cooperative equilibrium. Many punishments may serve as equally or at least sufficiently effective implicit deterrents. Nevertheless, it seems natural to speculate that an effective scheme would be for the parties to revert to playing the one-shot equilibrium that punishes the deviating seller maximally while having minimal effect on the buyer. Such a scheme can be found in the so-called lemons equilibrium, in which only the low-type seller participates.¹⁵⁹

In addition, an endogenous account of norms requires one to specify precisely under what conditions this punishment scheme would be invoked. This is also a difficult question to answer in the disclosure context, since the buyer is unable to discern with certainty whether the seller has misrepresented her type during negotiations. Thus, any cooperative equilibrium will have to entail the use of an indirect informational proxy by which the buyer “detects” deviations from truth-telling. Once again, a number of candidate criteria are possible, but perhaps the most natural one is what is commonly known as a “trigger strategy”: under such a strategy, the buyer would invoke the punishment scheme whenever an asset that the seller has disclosed as having high quality turns out to be worthless.

In simpler repeat settings in which “defection” is publicly observable, the buyer’s invocation of a punishment scheme always follows a known deviation by the seller from the applicable norm. In this case, however, the seller’s underlying truthfulness can never be

¹⁵⁸ Other than this probability of continuation, assume that there is no other form of discounting for future payoffs.

¹⁵⁹ Further, in order to make this punishment scheme as imposing as possible, suppose that in those instances in which *B* and *S* do transact (that is, when the seller has a low-quality asset), the buyer receives all the gains from trade.

completely verified; and thus, an unpleasant (if unavoidable) characteristic of trigger strategies is that they may invoke a punishment scheme accidentally, even when the seller has truthfully represented her high quality. Because of the risk of such false positives, then, the most efficient punishment schemes will require reversion to the lemons equilibrium for only a fixed number of periods (which I shall denote by N) after which the parties could return to cooperative play. The most efficient scheme, then, is the one that minimizes the total length of this punishment phase.

It turns out that, without any law, the cooperative behavior described above simply cannot be supported as a long-term equilibrium in the repeated game between B and S . More precisely, the only way that the posited trigger strategy punishment scheme could deter dishonesty by the seller would be by setting $N = \infty$. Even if a seller began by revealing her type honestly, the trigger strategy would eventually be invoked by accident, causing a reversion to the lemons equilibrium that would last forever. In other words, in the absence of law, the only plausible sort of equilibrium play (at least in the long term) is a repeat interaction of the one-shot lemons equilibrium.

If one introduces even a little law, however, these disappointing conclusions need not persist. For example, suppose that the underlying legal rule imposed a one-time sanction of \$30 on a seller who discloses a high-quality signal but whose asset turns out to be worthless. Importantly, this damages amount, while certainly non-trivial, is still too small to induce truthful revelation in the one-shot game.¹⁶⁰ Nevertheless, the combined effects of both the legal sanction and the anticipated extralegal punishment are sufficient to induce sellers to disclose perfectly, so long as the punishment period lasts at least 10 periods.¹⁶¹ In other words, even moderate legal liability—insufficient alone to induce truthful disclosures—can catalyze the development of extralegal disclosure norms that would not have been possible in the absence of the legal sanctions.

The reason for this complementarity is relatively simple. Although extralegal norms are a potentially powerful deterrent, they ultimately must be self-enforcing. This requirement places a natural limit on both the sanctions that nonculpable parties can extract from

¹⁶⁰ In order to induce truth-telling in the one-shot game, the applicable damages would have to equal approximately \$34.

¹⁶¹ The proof of this claim is somewhat technical and is available from the author.

putative wrongdoers, and on the willingness of buyers and sellers alike to invoke a relatively unattractive punishment scheme. Legal sanctions, even relatively mild ones, add to the credibility of such punishment schemes by imposing an additional transfer payment that is both attractive to nonculpable parties and unattractive to culpable ones. The net effect is that such legal sanctions complement the power and plausibility of extralegal sanctions, even though neither is sufficient alone to induce honest behavior.

To be sure, the foregoing extension is relatively tentative and illustrative. There are a number of considerations that, in the interests of time and space, it neglects to analyze.¹⁶² Nevertheless, if nothing else, the analysis above demonstrates that the complementarity between law and norms need not evaporate when one expands the analysis to consider norms as endogenous strategies emerging from repeat play. On the contrary, the existence of at least some law may be a critical precondition to the existence and stability of certain types of extralegal norms.

CONCLUSION

In this Article, I have attempted to scrutinize formally the common assertion that legal rules and extralegal norms tend to be policy substitutes for one another. In so doing, I have focused explicitly on information disclosure contexts that commonly implicate areas of corporate practice. My analysis suggests a substantially more nuanced and tenuous relationship between law and norms than the common wisdom generally implies. While norms very well may substitute for certain functions of law (such as the imposition of sanctions), they simultaneously may encourage the aggressive expansion of other functions (such as triggers of liability). Consequently, I have argued that law and norms can just as plausibly operate as policy complements of one another as they can as policy substitutes. These conclusions are important, both for those interested in determining where extralegal norms play important practical roles and for reform-minded scholars seeking to craft legal rules with an eye towards the effects of norms.

As is true with many arguments about norms, my analysis may

¹⁶² For example, the analysis above does not introduce legal error into the analysis, an omission that probably biases the outcome in favor of complementarity between law and endogenous norms. Nevertheless, so long as courts are not wholly incompetent, I conjecture, the basic intuitions would persist.

have raised just as many questions as it has answered, all of which I leave for future endeavors. For example, it has left relatively unexplored a number of legal applications in which problems of private information loom large, both within and without corporate law. Nor has it ventured very far into predicting the sources of norm-like behavior or specifying the precise conditions under which norms and law are more prone to act as substitutes or complements.

Nevertheless, the foregoing analysis helps to underscore an emerging realization among norms scholars:¹⁶³ in spite of the natural attraction that the concept holds for academics and policymakers, and in spite of the numerous law review articles and books dedicated to the topic, norms remain a complex and elusive phenomenon. We are still, unfortunately, extremely far from formulating a general, predictive and falsifiable theory of norms. The absence of such a theory somewhat undercuts our current ability to formulate with much confidence legal policy recommendations based on norms. More optimistically, however, these complexities virtually ensure that norms research will (and should) remain near the forefront of our collective agendas for some time to come.

¹⁶³ See, e.g., Rachlinski, *supra* note 10, at 571-72 (discussing the "hindsight bias" and its effects on legal and social norms); Scott, *supra* note 20, at 1607 (noting that although scholarship about social norms has "come a long way," we lack even a "basic consensus on the proper definition of a social norm").