THE "DUTY" TO BE A RATIONAL SHAREHOLDER

David A. Hoffman[†]

> "[I]n evaluating disclosure, as we must here, we continue to assume rationality and that all participants approach the situation thinking as Economic Man, within Adam Smith's definition, seeking to follow the lead of Smith's 'Invisible Hand.'" Chock Full O'Nuts Corp. v. Finkelstein, 548 F. Supp. 212, 219 (S.D.N.Y. 1982) (Brieant, J.)

American public shareholders are uniquely blessed by the freedom to do what they will with their capital. Unlike other stakeholders, shareholders owe the corporation no legal duties.[1] Shareholders provide cash, and, in exchange, receive management's fiduciary fealty and limited voting and distribution rights.[2] This framework respects the difficulties that shareholders face in contracting to protect their rights, and is conventionally summarized by a simple moral: "The *only* promise that makes sense in

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[†] Assistant Professor of Law, The James E. Beasley School of Law, Temple University. J.D., Harvard Law School, B.A. Yale College. I am grateful to James Degnan, of Temple University's Office of Measurement and Research, who donated his time and expertise to generate the statistical analysis which supports my conclusions throughout. I am also grateful to Daniel M. Filler, R. Craig Green, Richard Greenstein, Duncan B. Hollis, Katrina Fisher Kuh, Dan Markel, and Kaimipono D. Wenger for providing helpful commentary at various stages in the completion of this project. I presented some of the ideas contained in this paper to a faculty workshop at Temple University, and received very useful feedback. Olga Yevglevskaya-Wayne and Bernice Melamud provided research assistance. Ms. Yevglevskaya-Wayne in particular provided invaluable and thoughtful help, including work on data-gathering and entry, while collecting a wide variety of sources. I also thank Dean Robert Reinstein of the Beasley School of Law, and John Necci of its library, who provided unstinting institutional assistance in the production of this article. The views presented are mine, as are any errors.

[1] *See* FLETCHER CYC CORP. § 5713 (Perm. Ed. 2000) ("Ordinarily, at least unless the shareholder is a majority shareholder or active in the management of the corporation, he has no well-defined duties.") (internal footnotes omitted); Paula J. Dalley, *The Misguided Doctrine of Stockholder Fiduciary Duties*, 33 HOF. L. REV. 175, 206-11 (2004) (discussing basic corporate law framework of shareholder rights and duties); s*ee also* Chiarella v. United States, 446 U.S. 222, 229 (1980) (purchasers of stock owe no duties to corporations or potential shareholders); *cf.* JAMES D. COX & THOMAS L. HAZEN, CORPORATIONS § 11.11(2nd Ed. 2003) (duties of majority shareholders); *id*. at § 10.1-10.19 (directors' and officers' duties of care and loyalty).
There are two minor exceptions to the no duty rule, apart from the major one identified in this article. *First*, shareholders wishing to file derivative actions have a duty first to make a demand on the board. *See generally* COX & HAZEN, *supra*, § 15.04.
Second, the statute of limitations may be seen as a duty to inquire about the underlying facts of a securities claim. *See, e.g.*, Newman v. Warnaco Group, Inc., 335 F.3d 187 (2d Cir. 2003).

[2] *See* Kent Greenfield, *Using Behavioral Economics to Show the Power and Efficiency of Corporate Law as Regulatory Tool*, 35 U.C. DAVIS L. REV. 581, 623 (2002).

such an open-ended relation is [for management] to work hard and honestly."[3] Indeed, the absence of bilateral duties is the unstated assumption and organizing principle of every discussion of corporate governance.[4]

Or so the story goes. In reality, courts require individual investors to investigate their purchases, to coldly process risk, to disregard oral statements of optimism, and generally to be *economically rational investors*. If investors fail to meet these expectations, judges deny them the protection of the securities laws. In this way, courts impose on public securities investors a special kind of legal duty, novel in scope and, I will argue, ungrounded in principle.

Surprisingly, although the makings of this duty have been present for almost thirty years, no study to date has considered the sheer scope of rationality's burden: courts require investors to act in ways that ordinary citizens do not, if they are to receive a government benefit – protection from fraud – nominally available to all.[5] Nor have commentators addressed the demographic and redistributive consequences of judicially

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[3] FRANK H. EASTERBROOK AND DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW 91 (1991) (articulating the dominant economic view of corporate governance) (emphasis added).

[4] We may know this to be true by conducting a thought experiment. Imagine that when you buy a share of stock, the law imposed a duty of loyalty to the corporation and its shareholders. You proceed to hedge your investment, choosing (foolishly) to short your own stock instead of a competitor's. The stock price falls. You decide to liquidate both positions, making a modest profit. Would the corporation, or your fellow shareholders, sue you for breach of the duty you owe them? Yes, as corporations would look like partnerships; under such circumstances, your liability would be limited only by your fealty and assets.

[5] Bainbridge and Gulati's recent work is the first, to my knowledge, that begins the task of a controlled empirical investigation of the materiality doctrine. *See* Stephen M. Bainbridge and G. Mitu Gulati, *How do Judges Maximize? (The Same Way Everybody Else Does – Boundedly): Rules of Thumb in Securities Fraud Opinions*, 51 EMORY L. J. 83, 116 n.94 (2002); *cf.* Donald C. Langevoort, Review Essay, *Are Judges Motivated to Create "Good" Securities Fraud Doctrine?* 51 EMORY L. J.309 (2002) (commenting on Bainbridge and Gulati's study). Unlike the present study, Bainbridge and Gulati do not analyze the rates at which courts apply the various immateriality techniques in the caselaw, relying instead on a behavioral explanation for why such techniques might be effective or attractive. Quantitative caselaw analysis of disclosure outside of the securities fraud context is just beginning, but has already produced one particularly interesting analysis of common law disclosure duties. See Kimberly D. Krawiec & Kathryn Zeiler, *Common Law Disclosure Duties and the Sin of Omission: Testing the Meta-theories*, UNC Leg. Stud. Research Paper No. 04-4, *available at* http:sssrn.com/abstract=614501 (analyzing 466 decisions, and testing results against the conventional theories explaining when disclosure is required).

privileging certain classes of investors, or the collateral effects of imposing new investor duties on the mainstream of corporate law. This article takes up these topics.

To recover under securities laws, such as the Securities Acts of 1933 and 1934,[6] private plaintiffs, or the Securities and Exchange Commission ("SEC")[7] must prove by a substantial likelihood that a suspect corporate disclosure omitted (or misrepresented) material facts,[8] *i.e.*, facts that a "reasonable investor" would have considered significant.[9] But who and what is a "reasonable investor"?[10] In tort and contract law, "reasonableness" has a subjective and an objective component: reasonable people act in ways that meet societal expectations, while remaining true to a subjective understanding of legal duties and rights.[11] The securities law standard is similar,[12] but courts choose an entirely objective approach.[13]

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[6] *See* LOUIS LOSS AND JOEL SELIGMAN, FUNDAMENTALS OF SECURITIES REGULATION IV 2074-75 (3d ed. 2000) (materiality precedent interchangeable in federal securities laws).

[7] *See* Yvonne Ching Ling Lee, *The Elusive Concept of "Materiality" Under the U.S. Federal Securities Laws*, 40 WILL. L. REV. 661, 663 (2004) (application of standard by SEC). The SEC rewords the traditional caselaw standard in its enforcement directions, to define a reasonable investor as one who "generally focuses on matters that have affected, or will affect, a company's profitability and financial otı look." Memorandum from David B.H. Martin, Director, Division of Corporation Finance, SEC, to Laura Unger, Acting Chair, SEC, at 2 (May 8, 2001) (describing the longstanding SEC position).

[8] *See* LOSS AND SELIGMAN, *supra* n. 6, at 2071.

[9] TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976); *see also* Basic, Inc. v. Levinson, 485 U.S. 224, 232 (1988) ("expressly adopt[ing] the TSC Industries standard of materiality for the 10(b) and Rule 10b-5 context").

[10] As some have observed, both "reasonable" and "investor" have multiple variants: rational, prudent, informed, lay and typical; shareholder, stockholder, businessman, man and person. Richard L. Epling and Terence W. Thompson, *Securities Disclosure in Bankruptcy*, 39 BUS. LAW. 855, 891-93 (1984).

[11] *See* ALLAN E. FARNSWORTH, CONTRACTS, §§ 7.9, 7.10 (4th Ed. Aspen Publishers, 2004); DAN B. DOBBS, THE LAW OF TORTS, §§ 117, 118 (West Group, 2000); *see also* Piambino v. Bailey, 610 F.2d 1306, 1320 (5th Cir. 1980) (analogizing reasonable investor to reasonable person standard in tort cases).

[12] Basic, 485 U.S. at 232. The "elusiveness" of the materiality standard creates an enormous degree of frustration among practitioners, and some academics. *See* Lee, *supra* n. 7, at 675-76; Joan MacLeon Heminway, *Materiality Guidance in the Context of Insider Trading: A Call for Action*, 2003 AM. U. L. REV. 1131, 1148-1168 (analogizing materiality standard to the Hogwort's sorting hat, and arguing that ambiguity in the standard creates problems for lawyers and clients in evaluating risk and benefits of disclosure).

[13] *See generally* Epling and Thompson, *supra* n. 10, at 894-5; Lee, *supra* n. 7, at 664. There are alternative stories. For example, Bainbridge and Gulati describe the emergence of presumed immateriality doctrine as a method for judges to quickly and easily deal with constraints on their time and resources. *See* Bainbridge and Gulati, *supra* n. 5, at 113-131; *cf.* Langevoort, *supra* n. 5, at 316-18 (concluding that a rapid embrace

Adjudicating securities cases under the "reasonable investor" standard, courts soon confronted a dissonance between what forces *they* believed would move markets (*i.e.*, disclosure of information affecting a firm's finances) and the relatively trivial disclosures that plaintiffs had claimed created market effects.[14] To resolve this tension, courts developed the doctrine of immateriality as a matter of law.[15] Applying this doctrine, courts began to dismiss plaintiffs' allegations that a corporation had made false or misleading disclosures because judges *presumed* a reasonable shareholder would have ignored the fraud. Immateriality as a matter of law is thus best seen as "presumed immateriality." It is the scope and nature of presumed immateriality that creates the duty to be a rational shareholder.

Conventional wisdom holds that courts rarely make findings of presumed immateriality. Courts say they are applying a standard that is self-consciously limited: the materiality judgment "requires delicate assessments of the inferences a reasonable shareholder would draw . . . and these assessments are peculiarly ones for the trier of fact."[16] Similarly, scholars, although applauding the courts' applications of presumptive immateriality,[17] conclude that materiality issues in securities cases are almost always left

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of the anti-rationality defenses represents "a shift in the ideology of the judiciary leading to a pro-defendant bias.") I comment on these stories *infra* at Part IV.

[14] Courts have rejected a truly objective, quantitative test, which would make market reaction necessary and sufficient to find materiality. *See* Lee, *supra* n. 7, at 664; but *cf.* Elkind v. Liggest & Myers, Inc., 635 F.2d 156, 166 (2d Cir. 1980) (discussing market reaction as relevant to materiality determination).

[15] *See* LOSS & SELIGMAN, FUNDAMENTALS, *supra* n. 6, at 2082-2105. Similarly, some disclosed information is presumptively material. *See* Note, *Should the SEC Expand Nonfinancial Disclosure Requirements?*, 115 HARV. L. REV. 1433 (2002) (fact of business operations in a foreign company under government sanction likely to be treated as material per se).

[16] TSC Indus., 426 U.S. at 450. The Court elsewhere rejected a less stringent standard, stating that materiality was not merely something a "reasonable shareholder *might* consider important. *Id*. at 446.

[17] *See, e.g.*, Elizabeth A. Nowicki, *A Response to Professor John Coffee: Analyst Liability Under Section 10(b) of the Securities Exchange Act of 1934*, 72 U. CIN. L. REV. 1305, 1325 (2004) (noting with approval a Second Circuit case upholding a finding of presumed immateriality so as to prevent disclosure of an "avalanche of trivial information.")

for jury resolution.[18] Only very recently have some academics begun to question this conventional account.[19]

In this paper, I demonstrate empirically that courts dismiss claims by presuming immateriality in *half of opinions considering materiality*.[20] This is a surprising, and significant, finding. Presumed immateriality's magnitude means that the doctrine channels a large set of claims and plaintiffs out of the securities fraud system; the mechanism of this channeling is a judicially created set of commitments and assumptions regarding how reasonable investors act. That is, presumed immateriality reflects a kind of judicial ideology concerning which investors are entitled to protection from securities fraud and which are not.

To understand this ideological choice, my empirical analysis turned to presumed immateriality's rationales. This paper shows that courts implicitly (and, as in Chock Full O'Nuts, sometimes explicitly) treat economic rationality as a synonym for

[18] *See, e.g.*, Paul Vizcarrondo et al., *Liability Under Sections 11, 12, 15 and 17 of the Securities Act of 1933 and Sections 10, 18 and 20 of the Securities Act of 1934*, 1443 PLI/CORP 1049, 1060 (2004) ("[Q]uestions of materiality are usually for the jury to decide . . ."); Epling and Thompson, *supra* n. 10, at 895 ("Accordingly, the inference of such an investor's actions is the responsibility of the trier of fact and normally is not susceptible to resolution on summary judgment."); Heminway, *supra* n. 12, at 1183 (linking the "ill-defined standard" to difficulty in resolving cases pre-trial); Terry Fleming, *Perspectives on Business Law: Telling the Truth Slant – Defending Insider Trading Claims Against Legal and Financial Professions*, 28 WM. MITCHELL L. REV. 1421, 1430 (2002) ("Motions for judgment on the pleadings and summary judgment are rarely granted"); Edward A. Fallone, *Section 10(b) and the Vagaries of Federal Common Law: The Merits of Codifying the Private Cause of Action Under a Structuralist Approach*, 1997 U. ILL. L. REV. 71, 100; Robert A. Rosenfeld and Clyde J. Wadsowrth, *Materiality After Basic, Inc. v. Levinson*, 378 PLI/LIT 275, 290 (1989) (questioning viability of summary judgment on materiality issues following Basic).

[19] Bainbridge and Gulati, analyzing a set of 100 randomly selected securities cases, note briefly that 91 were decided at the motion to dismiss stage, and over 70 percent of those involved materiality determinations in favor of defendants. *See* Bainbridge and Gulati, *supra* n. 5, at 116, n.94; *cf.* COX AND HAZEN, *supra* n. 1, at 296 (presumed immateriality determinations arise "with some regularity"); Donald C. Langevoort, *Seeking Sunlight in Santa Fe's Shadow: the SEC's Pursuit of Managerial Accountability*, 79 WASH. U. L.Q. 449, 479-80 (2001) (noting the "stunning willingness of judges to decide difficult materiality issues 'as a matter of law'").

[20] This finding applies to private plaintiff suits only. Overall, the blended rate is slightly less than 50%. *See infra* Part II.

reasonableness, and irrationality as a synonym for unreasonableness.[21] This ideological decision fundamentally misconceives how shareholders actually respond to information.

Shareholders' behavior deviates from economic rationality in both predictable and unpredictable ways; individuals "suffer" from a variety of cognitive biases, heuristics, and social norms. In law, these deviations from rational expectations have been described by a growing literature adapted from behavioral economics.[22] Part I of this article reviews recent behavioralism literature, with a special focus on the experimental results with which behavioralists have undermined traditional assumptions of shareholder rationality.

Part II analyzes 471 federal securities cases from the Second Circuit and its district courts to demonstrate those courts' willingness to require shareholders to act like economically rational actors, a fictional legal construct. As a part of my analysis, I ask three crucial questions: (1) what is the scope of the "presumed immateriality" doctrine?; (2) how has it changed over time?; (3) does party identity matter in determining if a disclosure is immaterial as a matter of law? These questions are significant to

[21] *See infra* Part III. Others have suggested that judges ought to correct for human irrationality through the common law. For example, Choi and Pritchard describe a model of "intermediate scrutiny" for judges' attempts to modulate investor irrationality through the common law. Stephen Choi and Adam Pritchard, *Behavioral Economics and the* SEC, 56 STAN. L. REV. 1, 47-50 (2003). Choi and Pritchard argue that courts, unlike regulators, are subject to market-like constraints on their ability and have already created a standard – materiality, that "reflect[s] the cognitive limitations facing investors." *Id*. at 48. However, Choi and Pritchard caution that courts may face their own biases, may be temped to shunt cases from their dockets by creating bright line rules, and may unthinkingly follow foolish precedent. *Id*. at 50.

[22] The corpus of behavioral law and economics literature is vast and still spawning. Traditional accounts situate its origin in the work of Robert Ellickson and Herbert Hovenkamp. *See* Robert C. Ellickson, *Bringing Culture and Human Frailty to Rational Actors: A Critique of Classical Law and Economics*, 65 CHI-KENT L. REV. 23 (1989); Herbert Hovenkamp, *The Limits of Preference-Based Legal Policy*, 89 N.Y. U. L. REV. 4, 76 (1994). A good place to begin looking at the scholarship is the anthology BEHAVIORAL LAW AND ECONOMICS (Cass R. Sunstein, ed., 2000).
Recent work also includes an important piece about the malleability of decision making: Jon D. Hanson and Douglas A. Kysar, *Taking Behavioralism Seriously (I): The Problem of Market Manipulation*, 74 N.Y.U. L. REV. 630 (1999).

understanding what courts are actually doing and why they are doing it, and mine is the first study to consider the answers in a systematic way.[23]

Part III discusses how courts' presumptions about reasonable investor behavior (manifest in the reasons they give for findings of immateriality) are in tension with the findings of social science research on human decision making (described in Part I). In particular, I focus on how courts' justifications for presumed immateriality have moved from fact-intensive investigations to bright-line tests based on the language contained in disclosures.

In Part IV, I build on my empirical analysis by describing how the presumed immateriality doctrine creates a common-law "duty of rationality."[24] I make predictions about the market effects of the duty of rationality, which (if true) would suggest that the application of the securities lawsmay have deep, and potentially unintended redistributive and demographic effects: they may be driving individual investors to mutual funds and redistributing wealth away from minorities and women towards white men.[25]

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[23] In the last few years, there have been several important empirical investigations of securities fraud cases. Mitu Gulati, Jeffrey J. Rachlinksi and Donald C. Langevoort, *Fraud by Hindsight*, 98 N.W. U. L. REV. 773, 803-804 (2004) (analyzing a database of cases discussing the "fraud by hindsight" doctrine); Bainbridge and Gulati, *supra* n. 5, at 88, n.12 (analyzing 100 randomly selected cases from 1996 through 2001, and reaching certain limited conclusions regarding plaintiff success rate in materiality analyses); Hillary A. Sale, *Judging Heuristics*, 35 U.C. DAVIS L. REV. 903 (2002) (describing change in percentages of complaints surviving dismissal post-PLSRA as arising from judicial heuristics); Theresa A. Gabaldon, *A Sense of Security: An Empirical Study*, 25 J. CORP. L. 307 (2000) (analyzing courts' treatment of the term "security"). This empirical work in part, confirms intuitions that some scholars had about the ways the securities laws were being applied. *See, e.g.*, Donald C. Langevoort, *Half-Truths: Protecting Mistaken Inferences by Investors and Others*, 52 STAN. L. REV. 87, 90 n.16 (1999) (impressions of the effects of procedure on securities law).

[24] As far as I can tell, I am the first to suggest that this duty positively accounts for some securities fraud doctrines. However, Donald Langevoort's commentary on prior empirical investigations questioned whether judges were projecting their own ideal of how they would act as investors – "prone to self-attributions that overweight the level of caution and skepticism that they bring to their decisionmaking and thus to their construal of reasonableness – to their decisions as adjudicators." *See* Langevoort, *Are Judges Motivated*, *supra* n. 5, at 317-18.

[25] *See infra* at text accompanying notes 261 through 270.

At its heart, when its scope is appreciated, presumed immateriality begins to look like a product of the courts' struggle to control the behavior of two very different kinds of participants in the system of securities regulation: investor-plaintiffs, and juries. Presumed immateriality, because it assumes – contrary to real world evidence – that investors act rationally, removes power from juries and transfers it to judges, while imposing formidable cognitive burdens on investors seeking to be protected from fraud. The entire construct (courts' presumptions, the scope of immateriality, and a resulting investor duty to be rational) seems in turn to be based on the courts' need to harmonize securities law with the foundational assumption of corporate law: that all parties to the corporate form act rationally. It is to this assumption, and the evidence that undermines it, that I now turn.

Part I: Behavioral Analysis of Public Shareholders

Traditionally, hornbook law and academic literature described common shareholders as rational actors,[26] and the assumption remains implicit "in the minds of all concerned with doing business under the corporate form."[27] Rational shareholders are "able to anticipate and consider all relevant factors in making choices and … they have unlimited computational capacities."[28]

Rational shareholders *know* what they want and select it in the most *efficient way available.*[29] Rational shareholders do not speculate (unless the risk/benefit calculation

[26] Patrick J. Ryan, *Rule 14a-8, Institutional Shareholder Proposals, and Corporate Democracy*, 23 GA. L. REV. 97, 178 (1988); Troy A. Paredes, *Blinded by the Light: Information Overload and its Consequences for Securities Regulation*, 81 WASH. U. L. Q. 417, 418 (2003); Chock Full O'Nuts, 548 F. Supp. at 219.
[27] Ryan, *supra* n. 26, at 178.
[28] Paredes, *supra* n. 26, at 434.
[29] *See* Richard A. Posner, *Rational Choice, Behavioral Economics and the Law*, 50 STAN. L. REV. 1551, 1551 (1998) (analogizing rational persons to rats which "are at least as rational as human beings when rationality is defined as achieving one's ends . . . at least cost"). Another way of describing the expected utility theory is to note its four principal decisionmaking principles: ordering (people "must prefer one

justifies speculation). They avoid market panics and calmly accept stock appreciation.[30] They do not buy stocks based on internet rumors.[31] Rational investors have one purpose in choosing what to do with their investments: make more money.[32]

Because rational shareholders make such predictable and good decisions, the rational shareholder model supports a powerful economically based critique of securities regulation. Some legal economists believe that shareholders should be permitted to accept contracts that opt out of the disclosure and fraud regime created by federal securities laws – so-called "contractarians."[33] Contractarians argue that investors should be permitted to contract away their rights to protection against fraud, although courts might protect particularly inexperienced investors.[34] Contractarian theory has found a

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[object to another] or be indifferent to both"); continuity ("if the odds are right, a person will always gamble"); independence ("A person's preferences between two objects should remain unchanged when the objects are substituted into identical lotteries"); and invariance (individuals should express the same preferences when different descriptions of the same outcome are presented). *See* Hanson and Kysar, *supra* n.22 , at 642.

[30] *Cf.* ROBERT J. SHILLER, IRRATIONAL EXUBERANCE (Princeton 2000) (arguing that individuals irrationally participated in the late-1990s market bubble).

[31] Robert Prentice, *Contract-Based Defenses in Securities Fraud Litigation: A Behavioral Analysis*, 2003 U. ILL. L. REV. 337, 369-71 (discussing case of a New Jersey teenager subject to a SEC enforcement action because of his postings on internet chat-boards).

[32] The most common thick version of the rational choice theory is wealth-maximization, which predicts that individuals will act to maximize they amount of money they have. Russell B. Korobkin and Thomas S. Ulen, *Law and Behavioral Sciences: Removing the Rationality Assumption from Law and Economics,* 88 CALIF. L. REV. 1051, 1066 (2000).

[33] Contractarianism also describes these scholars' view of the nature of corporate law generally. That is, contractarians believe that all players in the market for corporate control (*i.e.* shareholders, managers, directors, employees, etc.) should determine their mutual duties via contract law. *See generally* Stephen Choi, *Regulating Investors Not Issuers: A Market-Based Proposal*, 88 CAL. L. REV. 279 (2002) (arguing for deregulation of securities in favor of market based disclosure system); A. C. Pritchard, *Markets as Monitors: A Proposal to Replace Class Actions with Exchanges as Securities Fraud Enforcers,* 85 VA. L. REV. 925 (1999) (proposing that exchanges self-regulate); Paul G. Mahoney, *The Exchange as Regulator*, 83 VA. L. REV. 14553 (1997); Larry E. Ribenstein, *Market vs. Regulatory Responses to Corporate Fraud: A Critique of the Sarbanes-Oxley Act of 2002*, 28 U. IOWA J. CORP. L. 1, 47-61 (2002) (defending market and contractual approaches after considering insights from BLE literature); EASTERBROOK & FISCHEL, *supra* n. 3; Prentice, *supra* n. 31, at 344-350 (discussing contractarian scholarship and caselaw).

[34] *Compare* Choi, Regulating Investors, *supra* n. 33, at 284-326 *with* Robert A. Prentice, *Whither Securities Regulation?Some Behavioral Observations Regarding Proposals For Its Future,* 51 Duke L.J. 1387, 1489-90 (2002) (criticizing Choi's proposal as unrealistic and based on flawed assumptions).

fertile reception with some judges.[35] For example, in Carr v. Cigna Securities, Inc., Judge Richard Posner denied the securities fraud claims of an unsophisticated investor who had been told orally that certain investments were safe and conservative, but had received written warnings detailing their high risk.[36] Posner reasoned that written warnings should, as a matter of law, preclude the possibility of recovery based on oral falsehoods.[37]

Behavioral law and economics ("BLE") undermines the contractarian thesis by using data from psychology experiments to radically alter our view of how humans make choices.[38] BLE documents how individuals' choice-making behavior systematically diverges from the predictions of the rational-actor model of human behavior.

A second component of BLE research aims to develop and defend a theory of "bounded self interest."[39] Bounded self-interest theory attempts to explain the attractiveness of norms of fairness, sharing, reciprocity, and altruism in ways distinct from those traditionally relied on by economists.

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[35] *See* Douglas M. Branson, *Running the Gauntlet: A Description of the Arduous, and Now Often Fatal, Journey for Plaintiffs in Federal Securities Law Actions*, 65 U. CIN. L. REV. 3, 23 (1996) ("[C]ontract reigns uber alles…")

[36] 95 F.3d 544 (7th Cif. 1996).

[37] *Id*. *See also* Prentice, *supra* n. 31, at 345-6.

[38] *See generally* BEHAVIORAL LAW AND ECONOMICS *supra* n. 22 (collecting essays); Kent Greenfield and Peter C. Kostant, *An Experimental Test of Fairness Under Agency and Profit-Maximization Constraints (With Notes on Implications For Corporate Governance)*, 71 GEO. WASH. L. REV. 983, 984-85 (2003) (introducing experimental study aimed at undermining the traditional law and economic view of the value of the profit-maximization norm); Jennifer Arlen *et al*., *Endowment Effects Within Corporate Agency Relationships*, 31 J. LEGAL STUD. 1, 2-5 (2002) (discussing effect on BLE on received wisdom of corporate law scholarship); David A. Hoffman and Michael P. O'Shea, *Can Law and Economics Be Both Practical and Principled*, 53 ALA. L. REV. 335, 360-63 (2002) (describing how behavioral literature undermined classical law and economist normative research); Stephen M. Bainbridge, *Mandatory Disclosure: A Behavioral Analysis*, 68 U. CIN. L. REV. 1023, 1058-59 (2000) ("For corporate and securities law scholars, behavioral economics probably is the most exciting intellectual development of the last decade."); *cf.* Lynn A. Stout, *The Mechanisms of Market Inefficiency: An Introduction to the New Finance*, 28 J. CORP. LAW 636 (2003) (discussion BLE implications for the efficient capital markets hypothesis).

[39] *See* Christine Jolls, Cass R. Sunstein, & Richard H. Thaler, *A Behavioral Approach to Law and Economics*, *in* BEHAVIORAL LAW AND ECONOMICS, *supra* n. 22, at 16.

BLE is a controversial discipline thathas created an ever-expanding literature debating its political[40] and methodological roots.[41] And, because I situate my scholarship firmly within the BLE "camp," I am troubled by the perception that BLE research has been manipulated to serve the ends of certain private entities.[42]

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[40] BLE has traditionally been seen as a politically "liberal" movement because it emboldens the use of government intervention to solve legal policy choices. *See* Philip E. Tetlock & Barbara A. Mellers, *The Great Rationality Debate*, 13 PSYCHOL. SCI. 94, 97 (2002) (economists "on the left" are more likely to embrace BLE than economists "on the right"); Bainbridge, *Mandatory Disclosure*, *supra* n. 38, at 1027 ("[I]t seems probable that behavioral economics increasingly will be invoked by those who favor government intervention precisely because behavioral economics offers a new line of argument in favor of regulating private conduct"); *but cf.* Colin Camerer *et al*., *Regulation for Conservatives: Behavioral Economics and the Case for "Asymmetric Paternalism,"* 151 U. PA. L. REV. 1211 (2003) (articulating a theory of "asymmetric paternalism" which would protect irrational individuals while not harming rational ones). That "paternalism" serves a progressive agenda is debatable.

[41] Some argue that BLE experiments are flawed in design or execution. *See*, *e.g.*, Tanina Rostain, *Educating Homo Economicus: Cautionary Notes on the New Behavioral Law and Economics Movement*, 34 LAW & SOC'Y REV. 973 (2000) (discussing problems of laboratory research); Robert E. Scott, *The Limits of Behavioral Theories of Law and Social Norms*, 86 VA. L. REV. 1603 (2000) (describing problem of generalizing from limited experimental data). The most prominent of these critics argues that some experiments seemed designed to elicit nonrational responses, because of explicit or implicit cues to experimental subjects:

> Virtually all of the claims of the [BLE theorists are] . . . at most, linguistic hedges, such as the data "suggest" some effect or some effect "generally" occurs, but not outright admissions that legal decision theory is founded on generalizations that are shakily inferred from aggregated data in between- subjects experiments.

Gregory Mitchell, *Taking Behavioralism Too Seriously? The Unwarranted Pessimism of the New Behavioral Analysis of Law*, 43 WM. & MARY L. REV. 1907, 1977-84 (2002) (attacking methodology of BLE).

Robert Prentice has responded that Mitchell's claim amounts to an argument "about details", as Mitchell admits that the rational actor model does not "in any way approximate[] how people actually act." Robert A. Prentice, *Chicago Man, K-T Man, and the Future of Behavioral Law and Economics*, 56 VAND. L. REV. 1663, 1720 (2003) (defending BLE experiments against Mitchell's "withering attack").

[42] *See*, *e.g.*, Denise E. Antolini, *Punitive Damages in Rhetoric and Reality: An Integrated Empirical Analysis of Punitive Damages in Hawaii*, 1985-2001, 20 J.L. & POL. 143, 151-53 (2004) (discussing Exxon Corporation funding of jury experiments); Theodore Eisenberg, *Damage Awards in Perspective: Behind the Headline-Grabbing Awards in Exxon Valdez and Engle*, 36 WAKE. FORR. L. REV.1129, 1147-49 (2002) (discussing Exxon funding of anti-jury scholarship); Neil Vidmar, *Juries Don't Make Legal Decisions! And Other Problems: A Critique of Hastie et al. on Punitive Damages*, 23 LAW & HUM. BEHAV. 705, 713 (1999) (same); Richard Lempert, *Juries, Hindsight, and Punitive Damage Awards: Failures of a Social Science Case for Change*, 48 DEPAUL L. REV. 867, 871 n.16 (1999) ("[I]t appears that Exxon is making a concerted effort to build a social science case for reducing or taking away the jury's discretion in awarding punitive damages and that the Hastie and Viscusi study is a part of this effort. ... Indeed, Exxon has recently cited the above research in its appeal of the $5.3 billion Exxon Valdez award."). For a theoretical account of how Exxon's funding of BLE research might affect its conclusions, *see* Jon Hanson and David Yosifon, *The Situation: An Introduction to the Situational Character, Critical Realism, Power Economics, and Deep Capture*, 152 U. PA. L. REV. 129, 273-279 (2003) (discussing possible "deep capture" of legal academics by corporate funding).

But, even if private parties are using BLE to further their own ends, this does not substantially imperil BLE’s core message. BLE is a *critical empirical study* driven by observations of indeterminacy and manipulability of individual choices in reaction to stimuli.[43] Decision-makers act under the influence of several cognitive biases and heuristics that distort their ability to rationally make decisions, each of which "pushes" in a different direction. In the aggregate, it is difficult to predict what individuals will do.[44] As significantly, individuals’ perceptions of risk (which, in the rational actor model exists independently of the observer) turn out to be manipulable in practice, through the context and framing of its presentation.[45] On this understanding of BLE’s core message of manipulability, I embrace BLE’s experimental data with an appropriate amount of caution,[46] which I hope the reader will share.[47]

In the last two to three years, scholars have endeavored to bring additional coherence to BLE by creating models of brain activity that help explain BLE’s results. These scholars, developing a new strand of scholarship called "neuroeconomics," attempt

[43] *See generally* Hanson & Kysar, *supra* n. 22, at 722.
[44] *Id*.
[45] *Id*. at 724-743.
[46] I am particularly dubious of generalizing claims about perceptions of risk or use of information, because the central message of BLE (again) is the indeterminacy and manipulability of behavior. In parts of this paper, I make sweeping generalizations. When I do so, I am aware that such claims are susceptible to reversal if the question had been presented differently.
[47] A separate critique relates to BLE's need for a unifying theory. *See*, *e.g.*, Russell B. Korbkin and Thomas S. Ulen, *Law and Behavioral Sciences: Removing the Rationality Assumption from Law and Economics*, 88 CALIF. L. REV. 1051, 1057. 1071-72 (2000) (the BLE movement "lacks a single, coherent theory of behavior."). According to Korobkin and Ulen, the goal of BLE ought to be to allow scholars to predict "with reasonable success" the responses of citizens to applicable legal rules. *Id*. at 1072. Thus, BLE need not articulate a theoretical model to compete with the rational actor model, so long as its results are realistic. Korobkin and Ulen, *id.*, at 1058, 1071-73; Hanson & Kysar, *supra* n. 22, at 687-693 ("a complex model with realistic predictive capabilities is far preferable to a simplified model that bears little relationship to actual behavior.") Korobkin and Ulen analogize BLE's atheoretical core to the process of incomplete theorization in common law adjudication, citing to Cass Sunstein's work on incompletely theorized arguments. *See generally* CASS R. SUNSTEIN, LEGAL REASONING AND POLITICAL CONFLICT 35-61 (1996). Curiously, law and economics itself has often resorted to the contention that the best is the enemy of the good. *See*, *e.g.*, Hoffman & O'Shea, *supra* n. 38, at 344 (criticizing the "open-ended approach to moral and practical questions" common in law and economics literature, and discussing application of Sunstein's theory of incompleteness to legal movements).

to divine organic causes to explain BLE's experimental results.[48] Scientists collect data on how various stimulants effect brain activity by directly imaging the brain using MRI-like machines.[49] Specifically, scientists watch how blood flows to different regions of the brain when individuals are engaged in economic transactions, noting which parts of the brain are engaged by different choice behaviors.[50]

To make sense of BLE's application to the securities laws, the discussion below divides into three parts, corresponding to the three categorical ways that BLE undermines the contractarian thesis which still dominates academic discussion: Trouble With Probability; Trouble With Informational Processing; and Social Investing. The purpose of this organization (which I used to make sense of the bewildering array of social science results) is not to suggest that individuals are necessarily subject to discrete and self-contained biases that each distort "rationality," but rather to describe how BLE systematically undermines rationality's major premises. We begin with probability.

1. *Trouble with Probability*

Individuals are exceptionally poor at evaluating risk and uncertainty. This is old news– after all, the multi-billion dollar, enormously profitable gambling industry depends on a certain amount of willful blindness to the reality of expected losses. But, our trouble with risk goes beyond decisions to play against the house.[51] Rather, as this section

[48] *See, e.g.*, Terrence Chorvat *et al.*, *Law and Neuroeconomics* 45 (George Mason Univ. Sch. of Law, Law & Econ. Research Paper No. 04-07, 2004), http//ssrn.com/abstract= 501063; RICHARD RESTAK, THE NEW BRAIN 3 (2003); Colin F. Camerer, George F. Loewenstein, Drazen Prelec, *Neuroeconomics: How Neuroscience Can Inform Economics*, J. ECON. LIT., (forthcoming) (manuscript at 1), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=590965; William J. Gehring & Adrian R. Willoughby, *The Medial Frontal Cortex and the Rapid Processing of Monetary Gains and Losses*, 295 SCI. 2279, 2279-81 (2002).
[49] *See Chorvat et al.*, *supra* n.*48* at 14-15.
[50] *Id.* at 15.
[51] Gambling may be thought of rational because it is "fun." But, presumably, whatever "fun" individuals achieve while losing money in a casino because they misjudge the odds of winning in Craps is distinct from

explores, our approaches to risks and rewards are bafflingly inconsistent, and often (in the aggregate) self-defeating.

a. *Hindsight Bias*

"Hindsight bias" is a dressed-up term for our belief in destiny: that which has happened was likely to have happened all along.[52] This bias follows from individuals' consistent overstatements of "what they could have been predicted after events have unfolded."[53] Hindsight bias results from the (common sense) tendency of our brains to incorporate new information into existing information automatically.[54] Indeed, some hypothesize that the brain prefers "simple inference strategies that require little information" to complicated strategies that hinge on a lot of information.[55]

To situate our understanding of how the hindsight bias might affect the capital markets, imagine that a corporation is considering, at time T_0, whether to disclose the existence of a risk of a strike that will close one of its factories, and (if it occurs) create a very modest downturn in profits. The risk of the strike at timeT_0 is miniscule – a

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the experience of losing your life savings in the stock market because you are unable to assess the risk of an investment. This reduces to an intuition that while gambling is primarily experienced as an entertaining spectacle, capital investing is not.

[52] *See generally* Jeffrey J. Rachlinksi, *A Positive Psychological Theory of Judging in Hindsight*, *in* BEHAVIORAL LAW AND ECONOMICS, *supra* n. 22, at 95 (describing cognitive and motivational factors creating the bias); Jeffrey J. Rachlinski, *Heuristics and Biases in the Courts: Ignorance or Adaptation?*, 79 OR. L. REV. 61, 67-70 (2000) (discussing bias); Korobkin and Ulen, *supra* n. 32, at 1095-100. In one example, two groups of individuals were confronted with a problem involving a railroad accident. The first group was to assume that they were regulators, tasked to determine whether a corporation should make repairs pursuant to regulation to avoid a railroad accident. Others were asked to assume they were jurors, after the accident had occurred, and asked about the necessity of punitive damages. Thirty-eight percent (38%) of the regulators recommended the repairs, while (subject to hindsight bias) sixty-seven percent (67%) of jurors recommended punitive damages. CASS R. SUNSTEIN ET AL., PUNITIVE DAMAGES: HOW JURIES DECIDE 100-108 (2002). The experimenters noted that the problem of hindsight bias is an "almost inevitable" result of citizen control over legal decisions. Id. at 108.

[53] Gulati*et al.*, *supra* n. 23, at 773. In this important recent article, Gulati *et al.* test two hypothesis which could explain why courts have advanced the theory of fraud by hindsight: to debias limitations on human judgment like hindsight bias; or, alternatively, to dispose of troublesome and complicated cases. They conclude that the latter hypothesis finds more support. *Id*. at 818.

[54] Scott A. Hawkins & Reid Hastie, *Hindsight: Biased Judgments of Past Events After Outcomes Are Known*, 107 PSYCHOL. BULL. 311, 311-14 (1990).

[55] Beth Azar, *Blinded By Hindsight*, 31 MON. PSYCH. 5 (May 2000).

contemporaneous email between managers puts the risk at 1%. Given the risk discounted cost,[56] the corporation decides to hide the possibility of the strike from its investors.

The strike occurs at time T_1, with the expected, minor, effect on profitability. The corporation's stock falls (T_2),[57] and the corporation is sued by disgruntled shareholders for failing to disclose the risk (T_3).

Should a jury, considering the corporation's potential liability for this omission at T_4, consider as *important to the decision of an investor at T_0*, the strike's occurrence at T_1? No.[58] The fact that a later event comes to pass makes no difference to the investing decision at the time of disclosure, just as my hitting a red six while playing roulette does not make that number the "smart" choice before the fact. That is, if a "reasonable investor" means "an investor who thinks without bias about risk," the legal system would want to find a way to prevent plaintiffs from successfully asserting this kind of claim in a securities suit. BLE, however, seems to demonstrate that juries are usually unable to reject this kind of thinking: we are all subject to hindsight bias regarding materiality. The question then becomes – as I address below – should judges prohibit the hindsight inference by taking the case away from the jury by applying the doctrine of presumed immateriality?[59]

b. Representativeness Heuristic

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[56] That is, the probability of loss times the magnitude of harm resulting from loss is small compared to the burden of disclosure (whether measured in incremental terms or even in lost negotiating leverage with the union).
[57] Or, it doesn't. *See infra* Part III (discussing the (im)materiality of price change).
[58] Gulati *et al., supra* n. 23, at 789.
[59] A question is why judges would be any better than juries at avoiding the effects of hindsight. *See* W. Kip Viscusi, *Juries, Judges, and the Mistreatment of Risk by the Courts*, 30 J. LEG. STUD. 107 (2001) (discussing problems judges have in evaluating risk).

BLE teaches that individuals also have a great deal of trouble shedding the effects of the "representiveness heuristic" by which they overestimate the relationship between what things are and what they appear to be.[60]

A famous experiment demonstrating this effect presented subjects with a description of a woman with "feminist characteristics." Experimenters then asked the subjects a relatively odd question: is the woman more likely to be (a) a bank teller; or (b) a feminist bank teller. Logically, (a) must be more common than (b) (because of base rate – there must be more bank tellers than political bank tellers, and more political bank tellers than feminist ones). Nevertheless, because respondents were unable to shed the effect of what they had already known about the woman, 90% of them chose answer (b).[61]

The representativeness heuristic appears to hold even when investors discover or have reason to know that information is unreliable.[62] Thus, despite facts suggesting fraud, investors will act on the representations of a broker who they know (or have reason to know) has a motive to lie to them, because that broker had previously demonstrated some characteristics of a reliable source.[63] Similarly, investors will trade on gossip from internet chat rooms, if the gossiping source displays some characteristics of being a corporate insider (such as, for example, purported knowledge of corporate trivia "inside

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[60] *See* Amos Tversky & Daniel Kahneman, *Judgments of and by Representativeness*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 84 (Daniel Kahneman et al. eds., 1982); *See also* Hanson & Kysar, *supra* n. 22, at 664-669.

[61] *Id*. at 92-93.

[62] *See* Daniel Kahneman & Amos Tversky, *Subjective Probability: A Judgment of Representativeness*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* n. 60, at 7-11 (people make the same predictions about future events irregardless of how much they trust the information that founds their conclusions).

[63] *See* Prentice, *supra* n. 31, at 368-9.

baseball" discussions of politics within the company). Needless to say, academics have questioned whether rational investors could possibly have found such hype credible.[64]

To illustratehow this heuristic work s in the capital markets, suppose a shareholder is told by her broker to invest in a particular stock. The shareholder has had experiences with that broker, and believes him to be a truth-telling, upstanding professional. Along with his recommendation, the broker passes her a prospectus containing written warnings about the stock's performance, together with financials that (had the shareholder read them) would have cast doubt on the broker's representations.

Economically rational investors should pass on the recommendation. However, the representative heuristic suggests that most investors will invest based on their previous dealings with the broker, unable to shed old illusions in the face of contrary new information.

c. Risk Tolerance

Individuals are risk-seeking in avoidingcurrent losses.[65] Loss aversion is a common (and depressingly familiar) phenomenon. We hold "under water" stocks for longer that we ought, in the hope of reversing the tide.[66] Readers who do not participate in the stock market may be familiar with the phenomenon in other settings: deciding to "press your luck" by returning to the ATM machine when down while gambling; being unable to imagine (that is, being unwilling to confront the risk of) unlikely future

[64] *See* Donald C. Langevoort, *Taming the Animal Spirits of the Stock Markets: A Behavioral Approach to Securities Regulation*, 97 NW. U. L. REV. 135, 157 (2002).
[65] *See*, *e.g.*, Prentice, *supra* n. 31, at 364; *See also* Terrance Odean, *Volume, Volatility and Profit When All Traders Are Above Average*, 1887 J. FIN. 934 (1998) (discussing tendency of individual investors to buy the same number of winning and losing stocks, but to sell winning stocks at a higher rate).
[66] *See* Choi and Pritchard, *supra* n. 21, at13.

catastrophic losses;[67] or refusing to sell your house for years longer than necessary in the hope/expectation that of eventually getting "your money" back.

BLE tells us a different story with respect to gains: individuals are risk averse when confronting a choice between certain property and potential gains. Thus, while a rational shareholder would be equally happy to accept either of a dividend stream with a present value of $100, or a potential rise in stock resulting in present value gains of either 0 or $200, real individuals actually prefer the certain gain.[68]

Loss aversion may be related to the endowment effect.[69] The endowment effect describes the higher value we place on things we own than on those we do not. The classic experiment involves coffee mugs. Experimenters gave a group of experimental subjects (the "buyers") money; a second group (the "sellers") plain coffee mugs.[70] Experiments asked the sellers to name the minimum price they would demand to sell their mugs, and the buyers the maximum they would pay. Both groups were told that if market prices were established, trades would occur. But when the results were in, no trades were possible because the buyers who "owned" the mugs were willing to pay, on average, only half the amount demanded by the sellers.[71] This result contravenes one

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[67] *See* Michael I. Meyerson, *The Reunification of Contract Law: The Objective Theory of Consumer Form Contracts*, 47 U. MIA. L. REV. 1263, 1301 (1993). An interesting corollary to this principle is that individuals, because they discount the likelihood of future losses, will be less sensitive to warnings about such losses. *See also* Choi and Pritchard, *supra* n. 21at 12 (availability heuristic); Prentice, *supra* n. 31, at 364.

[68] *See* Jeffrey J. Rachlinski, *Gains, Losses, and the Psychology of Litigation*, 70 S. CAL. L. REV. 113, 124 (1996). I assume away the tax implications of the choice.

[69] Also, as some have noted, there may be times when the principle of loss aversion and the endowment effect are in tension with each other (in a sharply falling market, for example, the endowment effect would counsel retaining stocks while the need to avoid losses would suggest selling). *See* Hanson and Kysar, *supra* n. 22, at 690.

[70] There was no coffee in the mugs. Had there been, one might fairly understand the result of the experiment given the expected utility accompanying a full cup of coffee.

[71] *See* Daniel Kahneman *et al*., *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. POL. ECON. 1325 (1990).

predicted by the rational choice model – that both groups will value the mugs identically.[72]

To appreciate the interaction of these principles, imagine a few disclosures by a corporation thathas r ecently had a run of very bad luck. It states that "things are looking up"; that "we have no reason to expect that current bad trends will continue"; and "the future is bright." While rational shareholders would ignore such meaningless boasts, real shareholders might not because they are subject to loss aversion. By contrast, shareholders whose holdings have recently appreciated may overreact to relatively innocuous earnings warnings, seeking to "take" sure gains instead of facing the risk of losing them.

d. *Overconfidence*.

Have you ever made (to yourself, in the privacy of your home) one of the following statements: I am a better driver than average;[73] I am a better cook than average; I am a better dancer than average.[74] Join the club. Most citizens (90% of drivers) believe they possess better skills than the norm.[75] Similarly, most investors think they will beat the market. Most people are mistaken.[76] BLE teaches that investors believe that "good things are more likely than average to happen to [their stock] and bad things are less likely than average to happen to [it]."[77]

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[72] *See* Korobkin and Ulen, *supra* n. 32, at 1108,n.235.
[73] But I am!
[74] In the face of persuasive anecdotal (or statistical) evidence to the contrary.
[75] *See* Robert H. Frank, *Why Is Cost-Benefit Analysis So Controversial?*, 29 J. LEGAL STUD. 913, 929 (2000).
[76] Assuming that the capital markets are efficient over the long term, no investor can regularly exceed market returns. To the extent that markets are inefficient over the short term, fully rational or especially savvy investors may take profits. But, by definition, not all investors can be fully rational or especially savvy.
[77] Korobkin and Ulen, *supra* n. 32, at 1091; *See also* Lynn Stout, *The Investor Confidence Game*, 68 BROOK. L. REV. 407, 420-26 (2002) (discussing investor overconfidence as a function of trust).

Investors in particular put too much weight on "privately acquired information" and are unable to fairly judge their ability to exceed the market.[78] A classic example of investor overconfidence is the prevalence of so-called "day-traders" in the late 1990s' market bubble.[79] These traders were known for their short patience with holding stock and high trading volume. Day traders, disproportionately young men, achieved notoriously low returns relative to the broader market indexes.[80]

Applying this bias is easy. Assume that every corporation in a segment of the farming industry announces on the same day a possible investigation by the FTC into a price fixing conspiracy. Each company proclaims its innocence. An investor holds stock in Corporation GiantFarm, one of the companies named by the FTC, and must decide whether to sell her stock. Overoptimistic thinking leads to the following internal conversation: "Each company asserts its innocence. But good things are more likely to happen to me and the corporations I own than to others and the corporations they own. Therefore, GiantFarm is not as likely to be crooked as others in the farming industry. I will hold on to my stock for a while yet."

e. *Experiential Thinking*

These problems with risk analysis appear to be without a unifying theme. However, they may be harmonized when we consider the emotional content of risk perception. BLE teaches that individuals make decisions through two distinct methods: a

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[78] *See* Langevoort, *supra* n. 64, at 146.
[79] Choi and Pritchard, *supra* n. 21, at 11; Denis J. Hilton, *Psychology and the Financial Markets: Applications to Understanding and Remedying Irrational Decision-Making, in* THE PSYCHOLOGY OF ECONOMIC DECISIONS VOLUME I: RATIONALITY AND WELL BEING 276 (Brocas and Carrillo eds. 2003) (discussing day trading and overconfidence generally).
[80] *See* Choi and Pritchard, *supra* n. 21, at 12.

"rational system"; and an "emotionally driven experiential system."[81] The former decisions are "logical, deliberate and abstract."[82]

Because the "rational system" is so complex and demands cognitive resources from other tasks, individuals "typically rely" on a more emotional method of decision making associated with "intuitive judgments, emotional responses, and other subtle, nonconscious reactions to stimuli."[83] Using "experiential thinking," individuals process risk using an "affect" consisting of that individual's preexisting emotional construct.

For example, a feeling of "dread" may be associated with certain technologies (like genetic manipulation), and individuals' perceptions of risks of that technology are accordingly increased.[84] On the other hand, if individuals have a preexisting emotional positive feeling about a technology (like, for example, miniature computers), then the risks associated with further developments in that technological area may be perceived to be smaller than they really are (*e.g.*, risks of nanotechnology.) The "affect" associated with risk judgment is strongly influenced by demographic factors.[85] Risk perception is culturally dependant.[86]

Thus, when a corporation discloses a risk, individuals may perceive it as either vastly more important than it "objectively" is, or much less important, depending on its accompanying affect.[87] Individual shareholders are bad scientists. Risks that may seem

[81] Hanson & Kysar, *supra* n. 22, at 669-672.
[82] *Id*. at 669.
[83] *Id*. at 669.
[84] *Id*. at 670; *See also* Hilton, *supra* n. 79, at 284 (collecting studies).
[85] *See infra* Part IV.
[86] PAUL SLOVIC, THE PERCEPTION OF RISK, RISK SOCIETY AND POLICY SERIES (Earthscan, 2000).
[87] A third option, that emotional affect has no corresponding effect is also plausible.

"trivial" to courts in the cold light of day can be accompanied by a large emotional heft for shareholders at the time of disclosure.[88]

2. Trouble with Information Processing

A second category of BLE research deals with individuals' inabilities to process information in rational ways. This research questions how humans try to differentiate relevant from irrelevant information and prioritize what to focus on. Some examples follow.

a. *Source Blindness.*

BLE research has disclosed that even when individuals are convinced of the veracity of contrary information, they change their views slowly in the face of persuasive evidence; that is, new information is processed against the background of what came before.[89]

As we saw before, investors are particularly likely to believe analyst reports when those reports are affected by the representativeness heuristic.[90] However, where investors look at analyst reports absent a personal connection with the broker, they are still unable to discount the potential biases and ignorance of the analysts, despite reasons to believe such problems are severe.[91] Nevertheless, scholars often assert that reliance on analyst reports is irrational.[92]

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[88] In other areas of the law, judges apply this insight, recalling, for example, that "[d]etached reflection cannot be demanded in the presence of an uplifted knife." Brown v. U.S., 256 U.S. 335, 343 (1921).
[89] Langevoort, *supra* n. 64, at 144.
[90] *See supra* Section I(1)b
[91] *See* Nowicki, *supra* n. 17, at 1327 n.78; Hilton, *supra* n. 79at 278 (collecting literature).
[92] John C. Coffee, Jr., *Security Analyst Litigation*, N.Y.L.J., Sept. 20, 2001, at 5; Nowicki, *supra* n. 17, at 1327 (discussing arguments).

Individuals also consistently overweigh the importance of oral information (a heuristic which is especially problematic in the securities context).[93] Therefore, investors who hear about a stock through a report on television will be more influenced to buy (or sell) than those who merely read a prospectus.[94] Similarly, investors who listen to "analyst calls" will be affected disproportionately: oral representations have "significantly more persuasive impact than written disclaimers contained in a subsequently signed contract."[95]

b. The Framing Effect

Significantly, perceptions of risks and benefits are subject to manipulation by corporations because of the existence of the so-called "framing effect." The classic experiment with respect to framing presented subjects with a very hard problem:they were asked to select between treatment programs for a disease otherwise marked by a 100% mortality rate (with a 600 person population infected).[96] There were four programs:

- Program A: 200 people will be saved.
- Program B: 33.3% chance that the entire population will be saved; 66.6% chance that none of the population will be saved.[97]
- Program C: 400 people will die.
- Program D: 33.3% chance that none of the population will die; 66.6% chance that the entire population will die.

[93] Prentice, *supra* n. 31, at 348-9; 369-371.
[94] STEVEN R. DROZDECK & KARL F. GRETZ, THE BROKER'S EDGE: HOW TO SELL SECURITIES IN ANY MARKET 222 (1995) (letter delivers 7 percent of the message conveyed in a face-to-face presentation), *cited in* Prentice, *supra* n. 31, at 370.
[95] Prentice, *supra* n. 31, at 370.
[96] Daniel Kahneman & Amos Tversky, *Choices, Values, and Frames*, 39 AM. PSYCHOL. 341, 343 (1984).
[97] Amoes Tversky & Daniel Kahneman, *Rational Choice and the Framing of Decisions*, 59 J. BUS. § 251, § 255 (1986).

Rational actors, seeking to maximize lives saved, would be indifferent between these choices, as they result in the same predicted outcome: 200 lives saved, 400 lives lost.[98] However, when one group of subjects was asked to choose between programs A and B, 72% chose A; when a second group was asked to choose between C and D, 78% chose D.[99] Why? Because of "framing effects." A is preferable to B because it guarantees lives saved (recall the preference for guaranteed gains discussed above); C is less attractive than D because it guarantees lives lost (recall the risk-seeking preferences of individuals with respect to avoiding future losses).[100]

Some researchers suggest that a "cognitive-affective tradeoff" produces the framing effect.[101] Experiments have shown that a person expends more cognitive effort when "choosing a guaranteed gain" than when "selecting a risky gain."[102] In general, people expend both little cognitive and affective efforts when confronted with a guaranteed gain.[103] Consequently, they tend to prefer a guaranteed gain over a risky one. This choice suggests that people seek to avoid "the cognitive cost involved in evaluating a gain and the emotions involved in imagining an uncertain reward."[104] On the other hand, a person expends an equal amount of cognitive effort

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[98] Hanson & Kysar, *supra* n. 22, at 644.
[99] Kahneman and Tversky, *Choices*, *supra* n. 96, at 343.
[100] Hanson & Kysar, *supra* n. 22, at 644-45. In another experiment, investors were presented with two retirement funds with different risk profiles: bonds (relatively safe) and stocks (relatively risky). The employees were shown the historical data on the returns of each fund (and thus should have been able to confirm the expected outcomes and risk profiles). However, the data was framed differently. One group of employees only received one-year returns, the other group was shown a simulated 30-year distribution. Almost all the employees seeing the longer distribution invested in more risky return, and visa versa. Jolls, Sunstein & Thaler, *supra* n. 39, at 1534.
[101] Cleotilde Gonzales, Jason Dana, Hideya Koshino, and Marcel Just, *The Framing Effect and Risky Decisions: Examining Cognitive Functions with fMRI*, 26 Journal of Economic Psychology, 1, 4 (2005).
[102] *Id*. at 13.
[103] *Id*. at 15.
[104] *Id*.

when selecting a "guaranteed loss" as she does when selecting a "risky loss, "[105] suggesting an organic cause for risk seeking in the face of losses.

Frames are obviously quite significant when thinking about corporate disclosure in the securities fraud context.[106] Information about losses will be discounted if framed as a mere future probability; information about gains will be overemphasized when presented as a certain near term result.[107]

c. Information Overload

Rational shareholders are presumptively able to evaluate the thousandth page in a prospectus just as wellas the first. However, BLE experimental results teach us that as a decision maker is given more information, decision quality increases up to a point, but eventually declines.[108]

This result is predicted by the theory of bounded rationality: rationality bounded on the one hand by the context and content of the task we are facing and on the other by our own cognitive limitations.[109] As a result of information overload, shareholders may rely on heuristics to permit them to make better decisions, such as choosing a fund based on its managers instead of its fundamentals.[110]

3. Social Investing

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[105] *Id*.

[106] *See, e.g.,* Hilton, *supra* n. 79, at 288-293 (discussing psychological insights for financial products marketing efforts).

[107] Thus, corporations are rewarded by the market for engaging in accounting techniques that maximize short term gains. *See* Henry T.C. Hu, *Corporate Governance: Buffet, Corporate Objectives, and the Nature of Sheep*, 19 CARD. L. REV. 379, 386 (1997).

[108] Paredes, *supra* n. 26, at 441;*but see* David M. Grether *et al.*, *The Irrelevance of Information Overload: An Analysis of Search and Disclosure*, 59 S. CAL. L. REV. 277, 278-294 (1986) (arguing that information overload is irrelevant because people adopt simplified decisionmaking procedures to cope with increased information); Korobkin and Ulen, *supra* n. 32, at 1078 (describing experiments where subjects were less likely to maximize their utility when purchasing a house as the number of its attributes increased beyond ten).

[109] Paredes, *supra* n. 26, at 435.

[110] Choi and Pritchard, *supra* n. 21, at 13 (noting that such a heuristic may be rational, as managing underwriters with particular experience might be better at avoiding fraud).

Thus far, I have discussed investing and irrational investors as if they acted in a vacuum, making (bad) decisions from the comfort of their study, isolated from other people. But, this picture of investing is highly unrealistic. Investors run in herds.

Indeed, "[w]hat explains fads like Beanie Babies and Pokemon?"[111] Why do laugh tracks work; why does a commercial telling us that a detergent is "best selling" cause us to buy it? Why did investors participate in the Dutch Tulip market bubble? These questions can be answered, in part, by analyzing investor "herd behavior," whereby each investor devolves to another the decision to invest in the market, resulting in stampedes as market followers follow market leaders.[112]

There is evidence of herd behavior in capital markets: investors following others into popular portfolios, conventional stocks, and suboptimal bond issues.[113] However, the actual mechanism for such movement is quite obscure.[114] There is also evidence that herd behavior decreases as market sophistication increases.[115] As some scholars have noted, the prevalence of herd behavior may be explained in terms of network externalities – some products and stocks become more valuable as more people use them (the common example is a personal computer,[116] but a more relevant example for readers may be the BARBRI exam review course).[117]

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[111] Bainbridge, *supra* n. 38, at 1037-38.
[112] Prentice, *supra* n. 31, at 373.
[113] Bainbridge, *supra* n. 38, at 1038.
[114] Langevoort, *supra* n. 64, at 159.
[115] Bainbridge, *supra* n. 38, at 1039-40; Zohar Gosher and Gideon Parchomovsky, *The Essential Role of Securities Regulation*, Working Paper No. 259, The Columbia Law School Center for Law and Economic Studies, *available at* http://ssrn.com/abstract=600709, at 16 (arguing that one group of market participants, "noise traders" engage in herd behavior and are competitively disadvantaged *vis a vis* more sophisticated investors).
[116] Bainbridge, *supra* n. 38, at 1041.
[117] That is, as more students use BARBRI, its usefulness in helping students pass the Bar, a curved exam, increases. The reason is that if the majority of students believe that X is the answer to a given question (when it is not) failure to know that answer will not hurt a student's chances to pass. The interesting thing

Some explain the case of Jonathan Lebed, a New Jersey teenager who allegedly bought stock in small companies and then hyped those companies on the internet, as a story of herd behavior.[118] The SEC prosecuted Lebed on the theory that shareholders had relied on his false hype in purchasing shares, but reached a settlement.[119] Is this an example of individual investors following others in investing in penny stocks without thought? Perhaps so, but it also demonstrates the pernicious effects of the representativeness heuristic and source blindness, as explained above.

In sum, BLE teaches that individual investors are unlikely to respond rationally to corporate disclosures: their behavior depends heavily on the context and presentation of disclosures.

Part II: Empirical Analysis of Materiality

The materiality element in securities law requires the decision maker to reach conclusions about the way investors behave in response to corporate action. The "reasonable" part of the standard's definition suggests that the decision maker need not be a jury, because some behaviors will be so "unreasonable" as to be resolvable as a matter of law. Materiality, then, creates a need for courts to articulate and defend a series of commitments and assumptions about how investors act.

My thesis is that courts, in analyzing *securities law*, generally adhere to the foundational assumption of *corporate law*: investors act rationally.[120] Presumed immateriality functions as a channeling doctrine to exclude from the universe of

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about this claim is that it proves too much: if all students took BARBRI, the BARBRI-effect would disappear.

118 *See* generally Richard Walker & David Levine, *You've Got Jail: Current Trends in Internet Securities Fraud*, 38 AM. CRIM. L. REV. 405 (2001) (extensive discussion of Lebed case).

119 Langevoort, *supra* n. 64, at 156.

120 *See infra* text accompanying notes 26 through 37.

meritorious cases those in which plaintiffs' behavior, if proven, would be different from the behavior predicted by the rational investor model. But as I just discussed, BLE teaches us that individuals do *not* process disclosures rationally; courts' equation of reasonableness with rationality is essentially a normative move.

This policy choice can be brought to light through empirical analysis of a large sample of federal securities law cases. Empiricism is particularly helpful here because courts' words are so at odds with their words. When courts first introduced presumed immateriality, they argued it would protect investors against managers' overreacting to liability concerns and "bury[ing] the shareholders in an avalanche of trivial information – a result that is hardly conducive to informed decisionmaking."[121] That is, presumed immateriality was said to be an attempt to set appropriate corporate disclosure *activity* levels: too much activity overly burdens corporations without a corresponding increased benefit to investors.

If the cases followed the language of courts' opinions, and managing corporate activity was courts' actual goal, several empirical results wouldfollow.

- Presumed immateriality would be rare, as courts say that it is.
- Presumed immateriality would vary with changes in political control (more enforcement, less presumed immateriality) as courts work to smooth effects on corporate activity.
- Presumed immateriality would be sensitive to procedure, because to *accurately* change activity levels, courts ought to letplaint iffs' allegations of reliance on false disclosures proceed to trial unless *persuasive evidence* is submitted to the contrary.[122] Therefore, there should be relatively fewer findings of presumed immateriality earlier in the life of a lawsuit (*i.e.*

[121] TSC Indus., 426 U.S. at 448.
[122] Overuse of presumed immateriality results in insufficient enforcement (and, therefore, under-disclosure); under use of presumed immateriality has the opposite effect.

fewer such decisions on motions to dismiss and more on motions for summary judgment).[123]

- There would be no significant difference between government and private plaintiff win rates on the materiality issue. To understand this claim, recall that both the government and private plaintiffs need to satisfy the identical *objective test*: would a *reasonable shareholder* have been moved by the allegedly misleading disclosure. Government suits should, presumably, have similar effects on corporate activity levels as private plaintiff suits.[124] Therefore, the rate at which courts dismiss any disclosure as immaterial (among many offered in each suit) should be unaffected by a plaintiff's identity.

As we will see, each of these predictions turns out to be false, suggesting that courts' applications of presumed immateriality are doing something other than merely affecting corporate behavior. Indeed, the data leads me to conclude that use of this doctrine results in incentives that are profoundly in tension with BLE, thus rewarding individuals for acting in ways inconsistent with ordinary intuitions.

I began my empirical project by first defining the universe: federal courts applying the "reasonable shareholder" standard over the past thirty years, after the Supreme Court issued TSC Industries.[125] Because the number of cases was

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[123] Some might object that this hypothesis ignores the effects of settlement. Obviously, most securities cases settle. Private plaintiff suits were represented in my dataset as follows: 44% resolved motions to dismiss stage; 23% motions for summary judgment; and 17% appeals. The remainder of cases had mixed procedural postures, were post-trial motions, or were cases seeking injunctive relief. This data suggests that around half of cases disappear at each of the two major stages in the life of a securities lawsuit: after motion to dismiss, and after summary judgment. These disappearing cases are either being settled or dismissed outright.

One way the settlement effect could play out is that cases later in the life of a lawsuit are relatively more likely to be weaker (because "stronger" cases will settle earlier). But this seems too simple an analysis. There are many factors influencing the likelihood of settlement: the amount at stake; plaintiffs' counsel resources; defendants' resources; the involvement of the court with settlement discussions; the tolerance of the defendant for publicity. There is no reason, in the aggregate, to believe that the fact most cases settle should distort judge's findings of immateriality. *Cf.* Krawiec & Zeiler, *supra* n. 5, at 43 (discussing effect of settlement in common law disclosure context).

[124] For a further discussion of this issue, *See infra* at text accompanying notes 215 through 219.

[125] I ran the following search on the Westlaw databases for the Second Circuit, the Southern District of New York, the Eastern District of New York, the Western District of New York, the Northern District of New York, the District of Connecticut, and the District of Vermont: "'108 S.Ct. 978' or '426 U.S. 438' or '485 U.S. 224' or '96 S.Ct. 2126' and rational! reasonable! lay ordinary intelligen! average /1 shareholder stockholder investor." This search thus tests for citations to either TSC Industries or Basic when courts *also* analyze any of the possible variants on the materiality standard. I used the citations because different

overwhelmingly large, I limited my analysis to cases arising in the Second Circuit and its district courts.[126] The resulting data set, from 1976 through the end of November 2004,[127] was 471 cases.[128] In 88 cases, there was no actual finding that any disclosure was material, possibly material, or immaterial.[129] I then coded (by marking information on a separate page)[130] the remaining 383 cases.[131] It is important to note that this dataset is not entirely complete and sampling issues may have skewed my results.[132]

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courts might use distinct abbreviations and bluebook forms for case names. Undoubtedly, there are some cases even within the Second Circuit which treat the subject of materiality, but do not cite either TSC Indus. or Basic. *See*, *e.g*., Luce v. Edelstein, 802 F.2d 49 (2d Cir.1986) (analyzing materiality, announcing the "bespeaks caution" doctrine, but not citing either TSC or Basic). I can think of no reason why cases citing the Supreme Court standard are more likely to find disclosures material or immaterial. The sample should be fairly representative.

[126] This limitation makes sense for three reasons. First, the Second Circuit and its Southern District are widely recognized as uniquely expert in securities law cases. *See* Bainbridge and Gulati, *supra* n. 5, at 85 n.6. Second, the sample provided the largest subset of any of the federal circuits. The next closest sample, the Ninth Circuit and its attendant courts, would have yielded under two hundred cases. An "Allfeds" search of the same terms yields 1,628 results; the Second Circuit sample provides approximately one-fourth of the total universe of cases. Third, because the Second Circuit is smaller (in terms of number of appellate judges and appellate decisions) than the Ninth, district courts are more constrained in their interpretation of the materiality standard, removing or reducing a variable (possible inconsistency within a given time period due to appellate incoherence) which I would otherwise have needed to account for.

[127] The same search would produce more cases today. From December 2004 through January 2005, four more cases would have been added to the database.

[128] Because courts are more likely to write opinions when granting summary judgment or a motion to dismiss, Westlaw does not (yet) catalogue orders, and because the older cases in the database are likely to comprise mostly "published" cases, my sample overrepresents the absolute percentage of determinations of presumed immateriality in securities cases. However, insofar as securities law cases are more likely to result in opinions than other causes of action (because of the length and complexity of the pleadings, and the repeat-player advocates), this concern may be overstated.

[129] Such cases fall into many categories. For example, courts routinely analogize TSC Industries and Basic in deciding the materiality of contract or common law fraud claims. Courts also routinely cite the materiality standard, but then proceed to decide a securities fraud case on difference grounds – *e.g.*, no duty to disclose, no standing, statute of limitations, failure to satisfy the "in connection with" requirement, etc.

[130] For each case, I marked on a separate coding sheet: (1) the date; (2) if the decision was published or unpublished; (3) jurisdiction; (4) procedural posture; (5) if there was a finding that any of the disclosures considered should be dismissed pursuant to presumed immateriality; (6) the number of disclosures at issue in the materiality analysis; (7) if any such disclosures remained for later materiality determination; and (8) the kinds of techniques used to find disclosures immaterial as a matter of law.

[131] I undertook the initial coding. I skimmed each case (there were approximately 12,000 pages in the dataset) until I found the discussion of materiality, and then read that section with some care. My research assistant, Ms. Yevglevskaya-Wayne, entered the data I had written onto the coding sheet into an excel spreadsheet. I asked her to read independently each case in which I had marked a finding of presumed immateriality. When she disagreed with my initial coding, we discussed the case and reached a consensus about a proper treatment. This method resulted in discussion of approximately 100 cases. I made the final determination as to the proper coding of every case.

I was particularly interested in exploring the reasons courts gave for applying the presumed immateriality doctrine, because the reasons for decisions help us understand the model of human behavior courts apply when determining which investors are "reasonable" and which are not. Drawing from some recent scholarship,[133] and developing new categories of my own, I divided such reasons into eight general doctrinal techniques.

The discussion in this part, then, is organized into two sets of findings. *First*, I observe the scope of the doctrine at a general level, dividing that section into four sub-parts: effect of time on presumed immateriality; effect of party identity; regression of

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After the initial run of coding, I made an additional run through of the data set to locate cases resolving preliminary injunctions before trial, a procedural posture I had originally not coded for. The original data collection sheets are in my possession, and are available on request, as is an appendix containing my coding of each of the cases.

[132] There are three categories of problems.

First, there is the sampling problem. Only dispositions with written opinions are represented on Westlaw; Westlaw collected fewer opinions in the past than today. Courts denying summary judgment or a motion to dismiss are less likely to write an opinion (because of the minimal likelihood of interlocutory appeal). *See generally* Michael J. Davidson, *A Modest Proposal: Permit Interlocutory Appeals of Summary Judgment Denials*, 147 MIL. L. REV. 145, 149 n.23 (1995) (denial of summary judgment not generally subject to immediate appeal). Because findings of presumed immateriality are positively correlated with grants of summary judgment or a motion to dismiss, my results contain a higher proportion of "presumed immateriality" findings than actually exist, although the effect will be more pronounced for recent cases. There may be a further wrinkle, in that motions to dismiss may be relatively more likely to result in an opinion in a securities case than a motion for summary judgment. *See* Bainbridge and Gulati, *supra* n. 5, at 116 n.94 (concluding that securities decisions on motions to dismiss are likely to be published). Motions for summary judgment, unlike motions to dismiss, if denied, will often be denied by order (because the court knows that a trial will follow, resulting in post-trial motions and a need to write what would be a repetitive opinion). Thus, as compared to a universe containing all dispositions, I should find a higher percentage of findings of presumed immateriality on summary judgment versus motions to dismiss. *See also* Krawiec & Zeiler, *supra* n. n.5 , at 41-43 (discussing problems with collection of opinions on Westlaw.) Given the increased prevalence of electronic dockets in the federal courts, it should be possible to construct an error index comparing the rates of opinions on Westlaw to every disposition made by the court.

Second, there is a search problem. I only looked for cases that cited to Basic and/or TSC Industries. There are cases analyzing materiality which did not cite these landmark decisions (just as there are cases analyzing summary judgment that do not cite the Supreme Court's Celotex trilogy). But I can think of no reason why citing to these decisions would make a court more or less likely to make a finding of presumed immateriality. Moreover, failing to cite these seminal cases suggests a certain degree of haste, and would have potentially made it harder to discern a court's reasoning.

Third, some cases appeared at multiple places in my dataset. I coded for each decision as a separate event. Although I hoped to have a separate analysis of just the repeated cases, there proved to be too few to support any statistically relevant conclusions.

[133] Bainbridge and Gulati, *supra* n. 5, at 119-125.

variables; and effect of procedure. *Second*, I discuss the relationship between presumed immateriality techniques, and their scope and change over time.

1. General Findings

a. Presumed immateriality over Time

I first tested the changes in frequency of court findings of presumed immateriality over time.[134] I divided the cases in my dataset into six time periods, with the effect of segregating cases that had been decided under distinct legal frameworks (*e.g.*, cases before and after the Supreme Court's seminal decision in Basic v. Levinson and before and after the 1995 Private Securities Litigation Reform Act). Each time period contained a roughly similar number of cases. [135] The relationship between time and findings of immateriality follows in Figure 1.

[134] Krawiec & Zeiler's paper on common law disclosure duties also tested for the relationship between disclosure and time. *See* Krawiec & Zeiler, *supra* n. n. 5, at 77-78. As in this paper, they grouped decisions into periods of several years.

[135] The number of cases in each period are displayed below:

Years in Period	Number of Cases
1976-1980	60
1981-1986	66
1987-1991	63
1992-1995	49
1995-1999	70
2000-2004	75

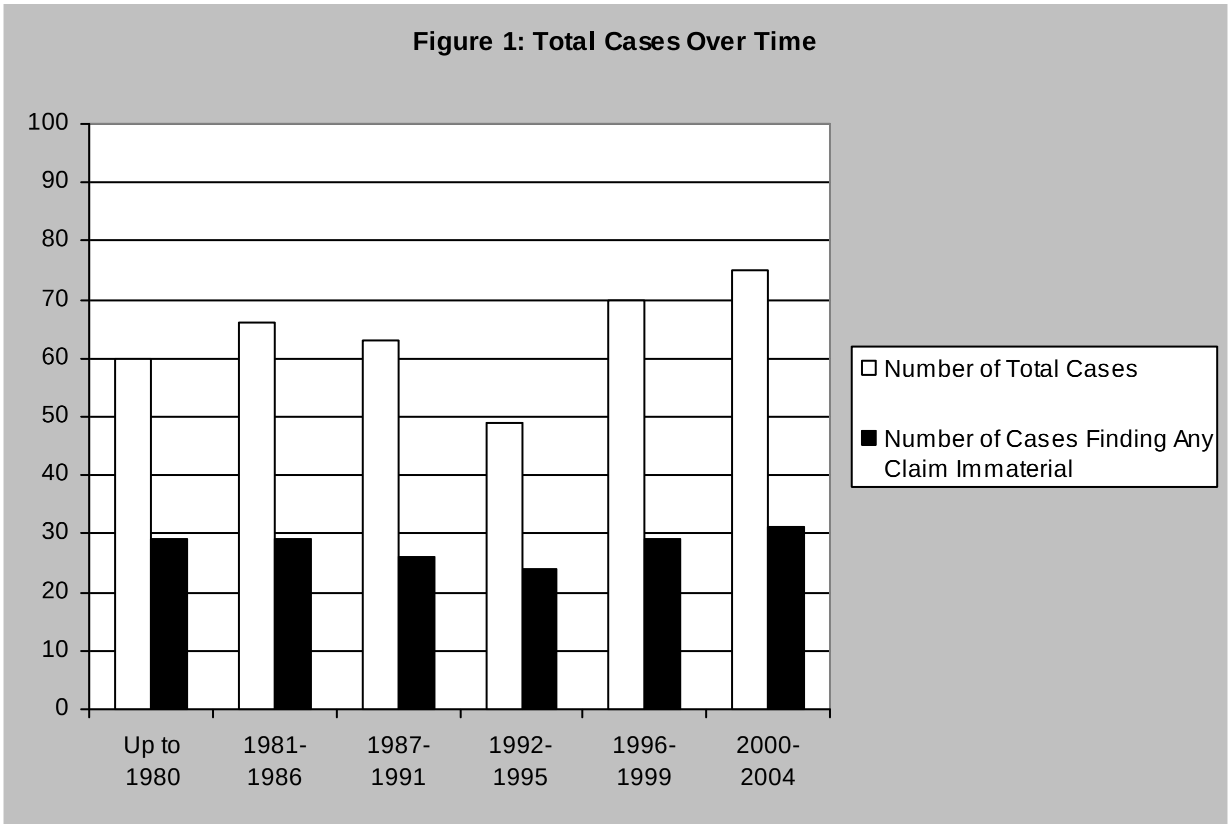
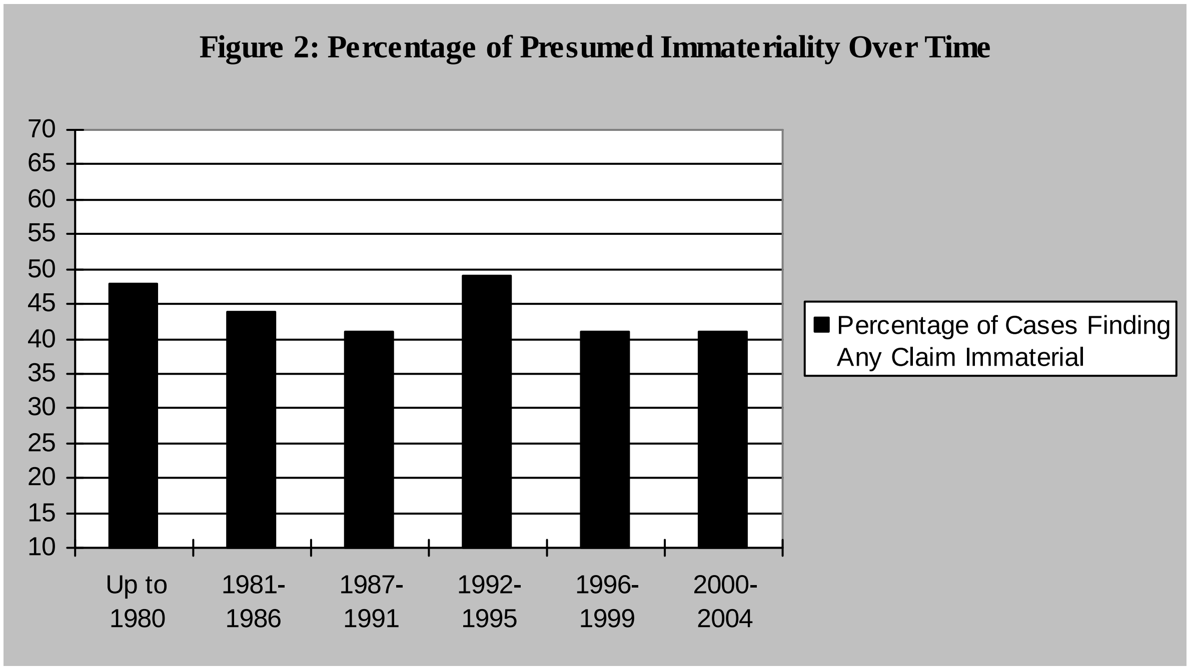


Figure 1 demonstrates that presumed immateriality has increased in frequency in recent years. However, a percentage breakdown (Figure 2) tells a different story:



As Figure 2 demonstrates, findings of presumed immateriality were especially high in the first years following TSC Industries (in 1976). Findings of presumed immateriality decreased from 1986 through 1991[136] to a low of 41%, and then rose to a high of 49% from 1992 through 1995, before flat-lining in recent years.[137] Overall, in the studied period, 44% of cases contained at least one finding of presumed immateriality. This

[136] An explanation for this decrease is that it coincides with the years after the Supreme Court issued Basic, which self-consciously rejected bright-line tests for materiality which (presumably) were increasingly the likelihood that courts found disclosures immaterial as a matter of law.

[137] Why? There are many possibilities. The one that is most tempting is that there were a higher percentage of especially "weak" securities fraud claims in the years before 1995, leading courts to throw higher percentages of cases out of court. Legislative reaction, in the form of the 1995 Private Securities Litigation Reform Act ("PSLRA"), resulted in a consolidation in the securities fraud counsel industry, and, possibly, a smaller percentage of cases that contained nonmeritorious claims**.** *See* Bruce H. Kobayashi & Larry E. Ribstein, *Class Action Lawyers as Lawmakers*, 46 ARIZ. L. REV. 733 (2004) (regarding growth in class action firms). Therefore, courts' role in shaping securities fraud became less exigent, and the percentage of cases finding presumed immateriality dropped to the 1980s levels. But, in the absence of a statistically significant change, all such explanations appear premature.

figure is significantly higher than the cautionary language of TSC and Basic would lead us to expect.[138]

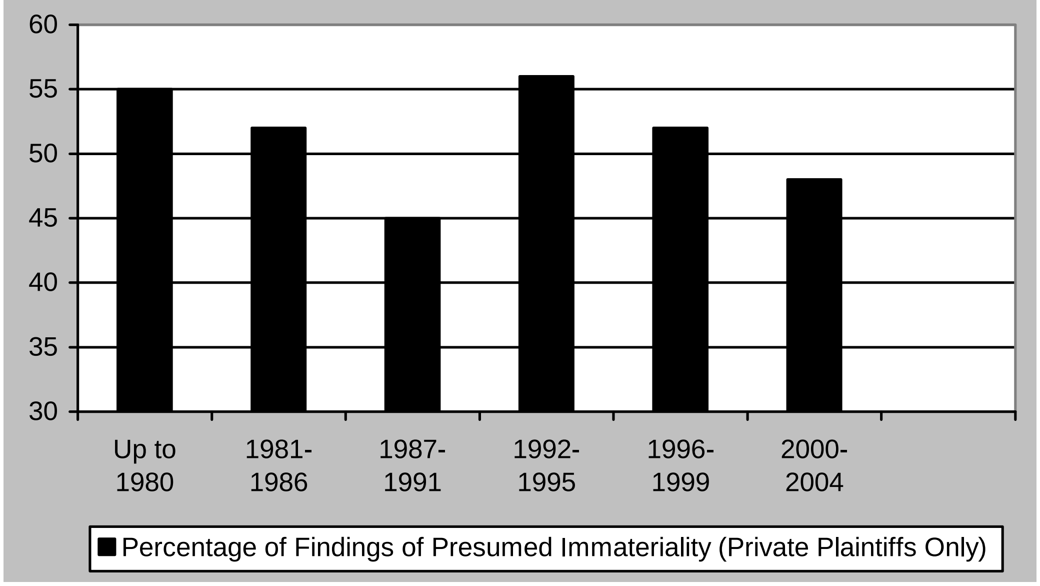
However, on further examination of this variance in findings of presumed immateriality,[139] there was no statistically significant relationship between presumed immateriality and time.[140] That is, although changes in courts' applications of presumed immateriality may be practically important, we cannot attribute them to factors other than chance.[141]

b. Effect of Party Identity

While coding cases, I quickly noticed the important effect of party identity on judicial findings of presumed immateriality. The United States brought 61 of the 383 cases resulting in a decision on materiality.[142] In only four of these cases (7%) did courts presume immateriality. Government plaintiffs prevailed on this issue much more often than private plaintiffs: 93% versus 49%. This difference was strongly statistically significant.[143] I display private plaintiff presumed immateriality rates in Figure 3:

[138] Although it is somewhat lower than the percentages found in one recent study. *See* Bainbridge and Gulati,*supra* n. 5, at 116, n.94 (63% of cases finding presumed immateriality).
[139] I performed a one-way analysis of variance test, where a finding of presumed immateriality was the dependant variable, and the number of claims was 383. The P values described below are the probability "of observing any outcome as extreme or more extreme than the observed outcomes." Krawiec & Zeiler, *supra* n. n. 5, at 54,n.149. P values below 5% are traditionally required to create statistical significance. *Id.*
[140] P=.9098. Although, as I discuss below, some of the specific presumed immateriality techniques do demonstrate statistically significant correlations with the passage of time.
[141] For a lucid discussion of the difference between practical and statistical significance, *see* DAVID W. BARNES, STATISTICS AS PROOF: FUNDAMENTALS OF QUANTITATIVE EVIDENCE 143-44 (1983).
[142] For the purposes of my analysis, I did not distinguish between civil and criminal enforcement actions.
[143] $P<.001$.

Figure 3: Private Party Presumed Immateriality



c. Regression Analysis

I next used a stepwise regression analysis to determine which variables most contributed most to findings of presumed immateriality. I tested five variables:

jurisdiction,[144] procedure,[145] number of disclosures plaintiffs claimed were material,[146] whether the government was a party, and whether the decision had been published.[147]

This analysis confirmed that the most significant variable in predicting presumptive immateriality is whether the government is a party to the suit.[148] Controlling for party identity, the number of disclosures at issue also predicts the doctrine in a statistically significant way.[149] And, controlling for party identity and the number of disclosures, the only remaining variable that seemed to predict findings of presumed immateriality is procedure.[150]

In view of this result, I tested the remaining data *excluding cases where the government was a party* to avoid having the government's success rate overwhelm the more subtle variables I was examining.[151] That is, I wanted to determine whether there

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[144] There should be a higher rate of findings of presumed immateriality at the appellate level than at the district court level, for two reasons. *First*, many have suggested that increased attention to securities claims should result in lower "win" percentages for plaintiffs (as judges carefully sort through the kinds of claims that are and are not actionable). In a sense, this is the theory of the PSLRA. *See generally* Joseph T. Phillips, *A New Pleading Standard Under The Private Securities Litigation Reform Act?*, 69 U. CIN. L. REV. 969 (2001). *Second*, given that district courts are bound by appellate courts, and appellate courts frequently caution district courts not to make findings of presumed immateriality, there should be, as a rule, more findings of presumed immateriality at the appellate level.
In the dataset, judges analyzing claims of presumed immateriality agreed with defendants 60% of the time, while at the district court level, defendants' success rate was 49%. However, as noted in the text above, this difference was not statistically significant. (P=.13)

[145] I collected data on five different procedural possibilities: motion to dismiss or other preanswer pleading; summary judgment; a ruling on a motion for equitable relief; post-trial opinion; and a decision resulting from an appeal. However, for the purpose of the stepwise regression analysis, I only tested the subset of opinions resulting from motions to dismiss or motions for summary judgment.

[146] I summarized this variable as (1) one, (2) two, or (3) three or more claims.

[147] Federal Appellate courts decide that some cases should have precedential effect, "publishing" them. Publication, in the district courts occurs in two ways: by court's election (communicated to Westlaw), or by Westlaw's independent selection. *See* Rod Borlase, *West's New* Reporter, http://www.rodborlase.com/Guides/West's%20Federal% 20Appendix.html (accessed Feb. 12, 2005). A hypothesis is that courts are more likely to consider significant decisions that deny claims of presumed immateriality (if, as Gulati and others have argued, the decision to find a case immaterial represents an attempt to shuck securities fraud cases from the docket). Thus, published decisions should have lower rates of presumed immateriality than unpublished decisions.

[148] In this part of the analysis, T is significant at the .001 level.

[149] At a .05 level.

[150] At a .05 level.

[151] Excluding government plaintiffs, the distribution of cases is:

1976-1980	49

were any statistically interesting characteristics in that part of the dataset (consisting of 322 cases) where the plaintiff was a private party.

d. Effect of Procedure and Number of Claims

The number of claims plaintiffs assert ought to have a positive relationship with the findings of immateriality: the more claims, the more judicial bites at the apple. And, as expected, the number of claims has a statistically significant relationship to findings of immateriality.[152]

However, the story of procedure is more complicated. I was primarily interested in looking at the difference between courts' applications of the materiality doctrine on motions to dismiss versus summary judgment. The numbers follow in Table 1:

Table 1: Presumed immateriality by Procedure (Private Plaintiffs Only)

	Presumed Immateriality (# Cases)	Presumed Immateriality (% Cases)
Motions to Dismiss	140	49
Summary Judgment	74	45

Surprisingly, there are comparatively higher findings of presumed immateriality on motions to dismiss than on summary judgment. However, when I tested if this result was statistically significant, I found that standing alone, the difference between the findings of presumed immateriality on summary judgment and motion to dismiss was statistically insignificant.[153] When I expanded the universe tested to include post-trial

1981-1986	54
1987-1991	56
1992-1995	43
1996-1999	56
2000-2004	64

[152] P=.05. Courts considering one or two claims found presumed immateriality 46% of the time; courts considering three or more claims found presumed immateriality 61% of the time.
[153] P=.52

motions, appeals, and motions for equitable relief, the result did not change.[154] That is, procedure simplydoes not have a statistically significant effect on presumed immateriality.[155]

2. Presumed Immateriality Techniques

When deciding to channel certain kinds of disclosures out of securities fraud litigations, courts apply distinctive reasoning. Just as in, for example, the "fruit of the poisonous tree" doctrine in criminal law, or "res ipsa loquitor" in tort, courts apply shorthand labels to findings of presumed immateriality. Scholars have identified four common techniques in recent works: (1) puffery; (2) bespeaks caution;[156] (3) zero price change; and (4) triviality.[157] Four additional labels for courts' decisions are present in the cases: (5) failure to read; (6) fraud by hindsight;[158] (7) truth on the market; and (8) failure to understand consequences.

a. Four Traditional Materiality Techniques

First, courts dismiss certain types of statements as "mere puffery" thata reasonable investor would ignore.[159] Puffery is a "vague statement of corporate

[154] P=.36

[155] As the regression analysis demonstrates, procedure does have some residual effect on the doctrine when controlling for party identity and number of claims. This result may be understood as a consequence of a "suppression effect," whereby a variable in a regression which is not correlated with the independent variable, but is highly correlated (either negatively or positively) with the other dependant variables will appear to be significant. Here, procedure has a statistically significant relationship with each of the other dependant variables. That is, the effect of procedure uncovered by the regression analysis is an artifact, not a reflection of an actual predictive relationship between procedure and presumed immateriality.

[156] I am only addressing common law bespeaks caution techniques, and not application of the PSLRA Safe Harbor. 15 U.S.C. § 78u-5 (2005). The Safe Harbor is not an immateriality technique, but rather a statutorily created immunity.

[157] *See* Bainbridge and Gulati, *supra* n. 5, at 119-24.

[158] Bainbridge and Gulati identify fraud by hindsight as a determination which affects scienter, which it surely does. *See* Bainbridge and Gulati, *supra* n. 5, at 127. However, as Gulati and others elsewhere have hypothesized, fraud by hindsight might be applied by courts in determining materiality as well. Gulati *et al.*, *supra* n. 23, 788 91. To the extent courts stated they were determining disclosures were immaterial as a matter of law because to hold otherwise would sanction fraud by hindsight, I coded accordingly, even if this determination is logically not related to a "true" materiality determination.

[159] Bainbridge and Gulati, *supra* n. 5, at 94.

optimism"[160] that is "so obviously unimportant to a reasonable investor that reasonable minds could not differ."[161] As Judge Learned Hand described: "[t] here are some kinds of talk which no sensible man takes seriously, and if he does he suffers from credulity."[162] In a sense, puffery acts to excuse corporate overoptimism: "[p]eople in charge of an enterprise are not required to take a gloomy, fearful or defeatist view of the future …."[163]

For the purposes of this article, I coded for the puffery technique whenever the court explicitly used the word in dismissing statements as presumptively immaterial. I also marked the technique as present when courts found statements to be presumptively immaterial because of their vagueness, general optimism, or lack of specificity, even if they did not use the word "puff" or "puffery." Examples include:

- A statement by the attorney for the fighting promoter Don King, facing a possible indictment, "that he did not expect any problems for King" was "like the claims of campaign managers before election . . . designed to allay the suspicion which would attend their absence than to be understood as having any relation to the objective truth."[164]

- A statement by an IBM executive during a conference call that "we're not – despite your anxiety – concerned about being able to cover the dividend for quite a foreseeable time" was "plainly an expression of optimism that [was] too indefinite to be actionable."[165]

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[160] *See* Jennifer O'Hare, *The Resurrection of the Dodo: The Unfortunate Re-Emergence of the Puffery Defense in Private Securities Fraud Actions*, 59 OHIO ST. L. J. 1697, 1697 (1998); *See generally* COX AND HAZEN, *supra* n. 1, at 297.
[161] Ganino v. Citizens Utilities Co., 228 F.3d 154, 162 (2nd Cir. 2000) (internal quotations omitted).
[162] Vulcan Metals Co. v. Simmons Mfg. Co., 248 F. 853, 856 (2d Cir. 1918).
[163] Shields v. Citytrust Bancorp, Inc., 25 F.3d 1124, 1129-30 (2d Cir.1994).
[164] World Series of Casino Gamb., Inc. v. King, 1986 WL 12525, at *5 (S.D.N.Y. 1986)
[165] In re IBM Sec. Lit., 163 F.3d 102, 108 (S.D.N.Y. 1998).

As recently as 1991, the conventional wisdom held that the puffery defense was moribund and had "all but gone the way of the dodo,"[166] although recent publications argue that it has come back to life.[167] Based on this account, I expected the puffery doctrine would be relatively rare, and more common in the present than in the past.

Second, courts apply the so-called "bespeaks caution" doctrine, which holds that fraud claims based on allegedly misleading predictions are cured by later cautionary statements.[168] Unlike puffery, bespeaks caution relies on the presence of later warnings to dismiss earlier forecasts (whether specific or vague).

In my analysis, I coded for the bespeaks caution technique when courts explicitly used the term, and when courts used cautionary or risk sharing statements in one part of a disclosure to negate the importance of other disclosures, even in the absence of the words "bespeaks caution." Examples include:

- Investors in a limited partnership designed to produce income from oil and gas properties alleged that the brokers had told them the investment was "low" or "no" risk; a written brochure also stated that the partnership would feature "regular cash distributions," "no exploration risk," and that the investments would "meet the needs of income-oriented investors."[169] The brochure, however, incorporated a Prospectus, which warned that "there is a risk that estimates of future prices or costs . . . may prove to be inaccurate," that the organizers had limited experience in assessing oil and gas properties, and that all estimates (of risk and return) in the prospectus were "to some degree

[166] LOSS & SELIGMAN, SECURITIES REGULATION 3434 (3d ed. 1991);
[167] O'Hare, *supra* n. 160, at 1709-11 (relying on anecdotal evidence to question that account).
[168] Jennifer O'Hare, *Good Faith and the Bespeaks Caution Doctrine: It's Not Just a State of Mind,* 58 U. PITT. L. REV. 619 (1997) (discussing doctrine); *see also* Donald C. Langevoort, *Disclosures That "Bespeak Caution,"* 49 BUS. LAW. 481 (1994).
[169] Brown v. E.F. Hutton Group, 735 F. Supp. 1196, 1198 (S.D.N.Y. 1990).

speculative."[170] Under the bespeaks caution doctrine, any investing based on the oral or written representations promising low risks was "clearly unreasonable."[171]

- Purchasers of stock in the Donna Karan International initial public offering alleged fraud based (in part) on statements regarding the corporation's beauty division, such as "the success of the Company's fragrance products is evidenced by the continued annual sales growth of each such product since its launch." These statements were made when the division was losing money and posed a significant operational problem for the corporation as a whole.[172] However, the prospectus also bespoke caution: the division had "never made money," was "not expected to make money in 1996," and was planning the "inherently risky and expensive launch of a new fragrance."[173] The earlier statements were found by the court to be presumptively immaterial.

Scholars have observed that the bespeaks caution technique "enjoys wide acceptance among the courts"[174] and is one of the three most important developments in securities law in the last fifteen years.[175] Bespeaks caution is supposed to have originated in 1986.[176] Based on this history, I expected the bespeaks caution doctrine to increase sharply in use in recent years.

A *third* technique is the Zero Price Change. In rare cases, in the absence of market effects from a given price change, courts determine disclosures were immaterial

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170 *Id*. at 1201.
171 *Id*. at 1202.
172 In re Donna Karan Intern. Sec. Lit., No. 97-cv-2011, 1998 WL 637547, at *6-8 (E.D.N.Y. Aug. 14, 1998).
173 *Id*. at * 13
174 R. Gregory Roussel, *Securities Fraud or Mere Puffery: Refinement of the Corporate Puffery Defense*, 51 VAND. L. REV. 1049, 1053 (1998)
175 Langevoort, *supra* n. 19, at 479.
176 Langevoort, *supra* n. 168, at 481.

as a matter of law.[177] Courts infer from the absence of price movement that the disclosure was presumptively immaterial to a reasonable investor. Surprisingly, the presumption is unilateral.[178] This technique is intertwined with the causation requirement in some securities cases (that is, plaintiffs must prove causation-in-fact; in the absence of market movement, plaintiffs' presumption of causation are rebutted).[179] I coded for application of this technique either when the court applied a market test, or when it noted evidence that investors did not sell their holdings in reaction to disclosure.[180] Although it would seem the technique ought to be applied only following a price analysis which corrected for the effects of market movement generally, and industry effects in particular, courts seemed to be unconcerned with such niceties.[181] Given the structure of the materiality analysis, I predicted that zero price change should be a rare technique, because the insights behind zero price change are really directed to the distinct loss causation issue.

Fourth is the "trivial matters" technique, with which courts hold presumptively immaterial nondisclosures relating to small percentages of total sales or revenues.[182] I coded for the application of the trivial matters technique whenever a court found that information was too numerically or financially unimportant to be material, including

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[177] *See* Bainbridge and Gulati, *supra* n. 5, at 123-4.
[178] *Id*. at 124.
[179] *See, e.g.*, Sand. Chef of Texas Inc. v. Reliance Natn'l Indem. Ins., 319 F.3d 205 (5th Cir. 2003) (equating cause-in-fact requirement with actual reliance on alleged fraudulent misrepresentation); Powers v. British Vita, P.L.C., 57 F.3d 176 (2nd Cir. 1995) (cause-in-fact of violation of securities laws is a prerequisite for standing to sue for a RICO violation).
[180] *Compare* Elkind v. Ligget & Myers, Inc., 635 F.2d 156, 166-7 (2d Cir. 1980) (failure of institutional investors to sell stock) *with* Ganino v. Citizens Utils. Co., 56 F. Supp.2d 222, 227 (D. Conn. 1999) (court examined NYSE trading information following disclosure and found there "was no movement in the Citizens stock following the announcement and within days thereafter, the price of the stock increased.")
[181] *See, e.g.* Ganino, 56 F. Supp.2d at 227; Leventhal v. Tow, 48 F. Supp.2d 104, 116 (D. Conn. 1999) (price increase within several days of disclosure "belies claims of a 'stunning' negative disclosure of a material nature").
[182] Bainbridge and Gulati, *supra* n. 5, at 125.

evaluations of the (un)likelihood of a future event (such as a merger). Note that while trivial matters may look like puffery in the case of puffery, a company's overoptimistic statements of fact or optimism are deemed immaterial because the of the content of the words used; here, they are immaterial based on an economic conclusion about their relationship to the financial status of the company as a whole. Some examples follow:

- Inflation of revenues of $217 million due to "round-trip" trading of an energy firm represented only .3% of total revenues in the relevant time period, and, on a motion to dismiss was therefore "immaterial as a matter of law," despite evidence of price decline when the round-tripping allegations became public.[183]

- In a suit for failure to disclose merger negotiations in a registration statement issued pursuant to a debt offering, plaintiffs alleged that two large corporations began merger negotiations in April, 1993, had signed confidentiality agreements, and had agreed in principal on the ratio of shares to be exchanged and the management of a combined company, before the negotiations broke down. At the time of the nondisclosure, the companies "remained in contact," but were not actually negotiating. Subsequently, the merger discussions resumed and were consummated. The possibility of a merger was held to be too trivial to be material and thus triggering the need to disclose. The court found that even if "one stretches the concept of preliminary negotiations as far as it can go, remaining in contact with someone after one has broken off formal negotiations does not seem to be included. Stated another way, to call this state of affairs material would make just about anything at all material."[184]

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[183] In re Duke Energy Corp. Sec. Lit., 282 F. Supp.2d 158, 161 (S.D.N.Y. 2003).
[184] Nelson v. Paramount Comm., Inc., 872 F. Supp. 1242, 1246 (S.D.N.Y. 1994).

I had no expectations about the scope of this doctrine before beginning my analysis.

b. The Second Set of Techniques

Fifth, courts regularly describe a failure to read a prospectus as "reckless."[185] I coded for this technique in two contexts. First, courts sometimes contrast oral statements (alleged to be material) with written disclaimers, holding that the written disclaimer "trumped" the oral one, making it presumptively immaterial.[186] Second, and more commonly, courts state that investors should read all parts of a given disclosure (or related disclosures) together, and that no one statement can be evaluated in isolation.[187] This technique differs from bespeaks caution in that it applies in all circumstances where one part of the disclosure contradicts (or helps to contextualize) another part, and also in the context of tension between oral and written statements.

I hypothesized that the failure to read technique would appear relatively commonly in my dataset, as courts dismissed claims by investors who alleged fraud based on oral misrepresentations.

Sixth, courts deny plaintiffs the ability to prove "fraud by hindsight."[188] Courts insist that plaintiffs plead more than simply bad outcomes, but rather that they produce information that would have led objective parties to believe the actors had knowledge of

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[185] *See* Carr v. CIGNA Sec., Inc., 95 F.3d 544, 548 (7th Cir. 1996). *But see* Donald C. Langevoort, *Selling Hope, Selling Risk: Some Lessons for Law and Economics About Stockbrokers and Sophisticated Customers*, 84 CAL. L. REV. 627, 682-83 (1996) ("Ready characterization of a failure to read a dense and detailed prospectus as "reckless" is troublesome on a number of levels. Most obviously, there is the empirical problem. It is awkward to use the term reckless to describe behavior that is quite normal and expected..") The SEC appears to reject the "reckless approach" of the Carr court. *See* In re Robert A. Foster, 51 S.E.C. 1211, 1213 (1994) ("Those who sell securities by means of representations inconsistent with [written disclosures] do so at their peril.")
[186] *See*, *e.g.*, Brown v. E.F. Hutton Group, 735 F. Supp. 1196 (S.D.N.Y. 1990).
[187] Ferber v. The Travelers Corp., 802 F. Supp. 698, 705-06 (D.Conn. 1992)
[188] Bainbridge and Gulati, *supra* n. 5, at 126 (fraud by hindsight goes to scienter); Gulati *et al*., *supra* n. 23, at 816-18.

fraud at the time of the nondisclosure.[189] Therefore, pleadings thatdepend on an inference that because a bad event has occurred it was more likely all along, are said to be attempting to prove "fraud by hindsight."[190] I coded for presence of fraud by hindsight even in the absence of these magic words. [191]

Previous work on this doctrine found that only 2% of cases, a "handful," analyzing the fraud by hindsight technique involved materiality determinations.[192] My coding was more permissive with respect to finding fraud by hindsight as a materiality technique,[193] but I still expected the doctrine to appear relatively rarely in the dataset.

The *seventh* technique used in finding presumed immateriality was the so-called "truth on the market" doctrine.[194] Courts apply the truth on the market technique to find presumptively immaterial disclosures which would have provided the investor with no information he or she could not have obtained from another publicly available source.[195] For example, the Second Circuit concluded that failure to disclose a potential director's

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[189] Gulati *et al.*, *supra* n. 23, at 781.

[190] Judge Friendly's treatment of this issue is paradigmatic: Denny v. Barber, 576 F.2d 465, 470 (2d Cir. 1978)

[191] *Cf.* In re Union Carbide Sec. Lit., 648 F. Supp. 1322, 1327 (S.D.N.Y. 1986) (to "permit these omissions to constitute a securities action would allow future plaintiffs to walk into court with a 'materiality through hindsight' cause of action.").

[192] Gulati *et al., supra* n. 23, at 807-09 (noting that a first round of coding had produced a significantly higher numbers of cases).

[193] I generally coded for applications of a given technique based on what the court itself said it was doing (*i.e.*, if a determination is made in the "materiality" section, it was a materiality determination). If a court said it was making a materiality determination, while clearly making a determination about the non-existence of a duty to disclose, my coding reflected it as a nondetermination of materiality. Gulati, Rachlinski and Langevoort similarly "scrutinized" the text to attempt to discern the real reasons for a court's decision, and changed an initial determination of 30% to 2%. *Id*. at 807. Because of structural advantages embedded in the Gulati paper (experience, acumen and numbers of researchers) it is probably fair to assume that their "corrections" of materiality determinations are more "accurate" in some objective sense than mine. However, there are two points to note. First, it is relatively astonishing that the courts in the Gulati sample were apparently so confused about the intersection between materiality and fraud by hindsight. *See id.* at 822-23 (explaining courts' confusion about securities doctrine and fraud by hindsight). Second, my sample should have contained a greater number of fraud by hindsight cases in general, because I coded for that doctrine whether or not it was specifically so identified.

[194] Ganino, 228 F.3d at 167.

[195] *See generally* COX AND HAZEN, *supra* n. 1, at 297 (discussing truth on the market doctrine).

problems with organized labor, which might otherwise be a material omission, was presumptively immaterial because "the difficulties were reported countrywide in the press and on radio and television, were discussed in Congress, and were analyzed in published administrative and judicial opinions."[196]

The Second Circuit has cautioned that the "truth-on-the-market defense is intensely fact-specific and is rarely an appropriate basis for dismissing a § 10(b) complaint for failure to plead materiality."[197] I expected the technique to appear exceedingly rarely.

Eighth, courts routinely assume that disclosures are not misleading simply because they do not explain the economic, financial, and legal consequences of the information actually disclosed.[198] In the Second Circuit at least, the "understand consequences" technique is best expressed by the axiom that "corporations 'are not required to address their stockholders as if they were children in kindergarten.'"[199] Courts presume that reasonable investors are able, in essence, to add 2 + 2: given these preconditions, 4 is not a material fact to be disclosed.[200] In the financial context, adding 2 + 2 is analogous to the following types of skills, among others:[201]

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[196] Seibert v. Sperry Rand Corp., 586 F.2d 949, 952 (2d Cir. 1978) ("A party's reasonable belief that the other party already has access to the facts should excuse him from new disclosures which reasonably appear to be repetitive . . . . We agree with the district court that reasonable minds could not differ as to the immateriality of the omissions.") (internal citations and quotations omitted.)

[197] Ganino, 228 F.3d at 167.

[198] This technique, which I identified from the caselaw, inverts the "buried facts doctrine." Under that doctrine a filing may be deemed materially misleading, despite having disclosed all material information, if the information is not properly highlighted. *See*, *e.g*., Gould v. Am. -Haw. Steam. Co., 535 F.2d 761 (3d Cir. 1976); Smallwood v. Pearl Brew. Co., 489 F.2d 579, 603 (5th Cir. 1974).

[199] Richland v. Crandall, 262 F. Supp. 538, 554 (S.D.N.Y.1967).

[200] Beaumont v. Am. Can Co., 621 F. Supp. 484, 496 (S.D.N.Y. 1985).

[201] Other examples include:

- Understanding the idea of opportunity costs of real estate investments. Kahn v. Wien, 842 F. Supp. 667, 675-76 (E.D.N.Y. 1994).
- Understanding the nature and scope of interest necessary for a change in corporate control. Samjens Partners I v. Burlington Indus., Inc., 663 F. Supp. 614, 622 (S.D.N.Y. 1987).

- Understanding that if both "variable annuities and tax qualified retirement plans are tax deferrable," disclosing that using variable annuities for tax reasons is not necessary.[202]

- Understanding that shares may be valued using different methodologies and appreciating the differences based on relevant underlying facts.[203]

- Understanding that corporate managers are self-interested and wish to retain control.[204]

- Understanding basic accounting treatment.[205]

I had no expectations about this technique before analyzing the data.

My analysis also coded for "obscure" decisions (for which I could not determine why a finding of presumed immateriality had been made) and for an "other" category (where I could determine why the court had found disclosures or omissions immaterial, but the reason did not fit one of the eight named techniques).

Table 2 describes, for each of the technique, the total number of cases applying the techniques, the percentage of cases applying the technique, and the percentage of these cases finding any claim presumptively immaterial.

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[202] Donovan v. Am. Skandia Life Ass. Corp., No 02-9859, 2003 WL 21757260, at *2 (S.D.N.Y. July 31, 2003).
[203] In re United Brands Co. Sec. Lit., No. 85-5445, 1988 WL 67413, at *3-4 (S.D.N.Y. June 20, 1988).
[204] Allyn Corp. v. Hartford Nat. Corp., No 81-912, 1982 WL 1301, at *24 (D. Conn. Mar. 30, 1982).
[205] Rubin v. Long Island Lighting Co., 576 F. Supp. 608, 613 (S.D.N.Y. 1984).

Table 2: Presumed Immateriality Techniques

	Total Cases Featuring Technique	Percentage of Total Cases	Prevalence in Cases Finding Presumed Immateriality[206]
Understand Consequences	56	17.4%	34.1%
Trivial	54	16.8%	32.9%
Other	35	10.9%	21.3%
Bespeaks Caution	34	10.6%	20.7%
Truth on the Market	24	7.5%	14.6%
Puffery	23	7.1%	14.0%
Failure to Read	18	5.6%	11.0%
Fraud by Hindsight	15	4.7%	9.2%
Obscure	13	4.0%	7.9%
Zero Price Change	6	1.9%	3.7%

c. Statistical Analysis of Techniques

For the five most common of the named techniques (ignoring the "other" category) I performed two additional tests, asking: *first*, if the prevalence of the technique as a means to finding presumed immateriality changed over time; and *second*, if the techniques were positively correlated with others (*i.e.*, were there particularly common pairings of techniques).

(1) Effect of Time

Figure 4 shows the effect of time on the techniques of understand consequences, triviality, bespeaks caution, truth on the market, and puffery. It compares the relative use of these five techniques to find a disclosure presumptive immaterial:

[206] Because multiple techniques could be present in each case, some percentages will exceed 100%

Figure 4: Five Common Presumed Immateriality Techniques Over Time

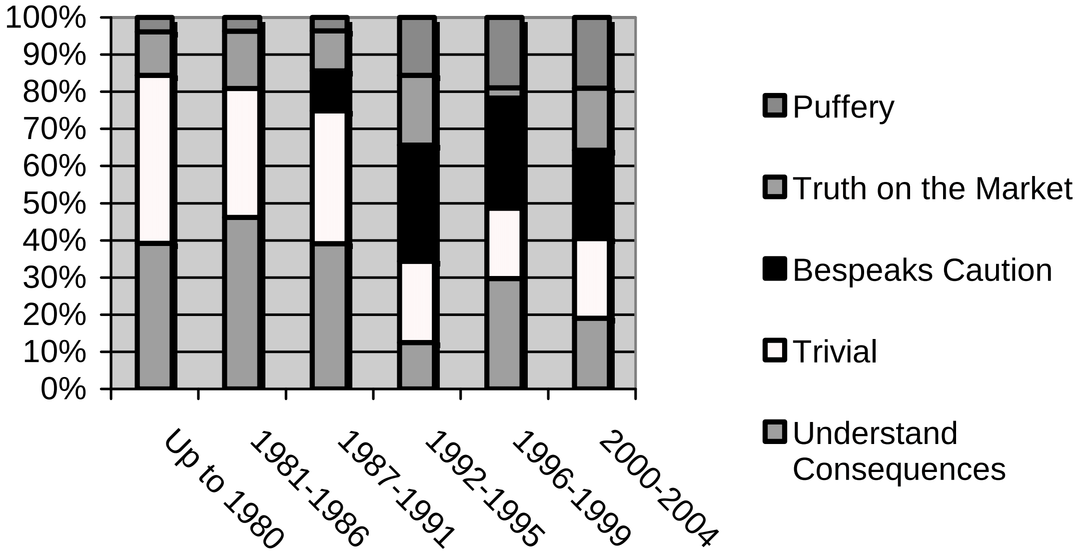

Figure 4 suggests that two techniques are growing over time (puffery and bespeaks caution) and two are shrinking (triviality and understand consequences) while one (truth on the market) has remained relatively constant. That is, while before 1980, courts applied puffery in only 2% of all cases, in the last five years they did so 12.5% of the time. I replicate Figure 4 in the margin in tabular form.[207]

As presumed immateriality as a whole is not itself changing (at least in a statistically significant way) over time, this effect is relative. Puffery and bespeaks caution are taking "market share" from triviality and understanding consequences. But,

[207] In the following chart, the numbers represent the percentage of total private plaintiff cases (322 total cases) in which the technique appears as a reason supporting a finding of presumed immateriality.

	'76-'80	'81-'86	'87-'91	'92-'95	'96-'99	'00-'04
UC	20.4	22.2	19.6	9.3	19.6	12.5
Trivial	23.5	16.7	17.9	16.3	12.5	14.1
BC	0	0	5.4	23.3	19.6	15.6
Truth/Market	6.1	7.4	5.4	14	1.8	11
Puffery	2	1.8	1.8	11.6	12.5	12.5

of these five common techniques, only the growth in the bespeaks caution and puffery doctrines is statistically significant.[208]

(2) Correlation Between Immateriality Techniques.

Next, I tested for the correlation between techniques. Table 3 displays the results of a statistical test asking the following question: if a court uses a given presumed immateriality technique, are any other techniques also likely to appear (or not to appear).[209] This is a correlation coefficient test, and, on Table 3, Y denotes positively correlated[210] and YY denotes strongly positively correlated techniques;[211] N denotes negatively correlated, and NN denotes strongly negatively correlated techniques.

Table 3: Correlation between Presumed Immateriality Coefficients

	BC	**FH**	**TR**	**TOM**	**PUFF**	**ZPC**	**FTR**	**UC**
BC	---		NN	Y	YY		YY	NN
FH		---						
TR	NN		---					
TOM	Y			---				
PUFF	YY				---			
ZPC						---		
FTR	YY						---	
UC	NN							---

As Table 3 shows, the only technique correlating positively or negatively with other techniques is the bespeaks caution doctrine.

208 In a one-way analysis of variance of each variable against time. Bespeaks caution: P<.001; Puffery<.05.
209 *See generally* BARNES, supra n. 141, at 265 (describing correlation coefficients).
210 At a .05 level.
211 At a .01 level.

Courts applying the bespeaks caution doctrine to a given set of disclosures are also very likely to use the techniques of puffery and investors' failure to read, and somewhat likely to apply the truth on the market technique. One way to explain this data is that these three techniques apply to similar sorts of claims – courts seeking to dismiss allegations turn to the same analytical toolbox and bring out three similarly useful tools.

On the other hand, courts applying bespeaks caution are less likely to use the triviality and understand consequences techniques at the same time. The negative correlation between bespeaks caution and the triviality and understanding consequences techniques, together with the growth in the bespeaks caution technique itself, supports the theory that bespeaks caution increasingly has *replaced those doctrines* in the arsenal of courts seeking to find a way to dismiss claims as immaterial.

Part III: BLE and the Presumed Immateriality Techniques

As Part II demonstrated, findings of presumed immateriality have been *common* and *stable* over the last thirty years. Since 1976, surveyed courts considering the materiality standard have found at least one claim per case immaterial 44% of the time, while those courts considering the standard in private actions dismiss claims as immaterial 51% of the time. Presumed immateriality thus creates a commonly re-occurring problem for courts: to articulate and defend theories of investor behavior that justify dismissal of securities lawsuits. The aggregate result of courts' attempt to solve this problem are surprising.

First, the materiality standard's diverse effect on private and public plaintiffs suggests that materiality functions to limit securities fraud recoveries to certain kinds of private investors (*i.e.*, ones that do not rely on information courts presume is immaterial).

Because plaintiff identity predicts the doctrine more than any other tested variable[212] we may infer that presumed immateriality's primary role is to change the behavior of ordinary investors.[213]

Some differences in private and public success rates in securities cases may be explained by better "screening" of the kinds of cases the government brings,[214] and better lawyering throughout the process.[215] But for this claim to explain *all* of the differences I observed in government and civil success rates, we would have to assume that civil plaintiffs benefit by bringing claims that fail around half the time. This claim, in turn relies on a presumption about civil lawyers' beliefs in the "docket management" hypothesis: a certain number of claims are cut from each complaint at each stage in litigation,[216] and therefore a case should contain more than merely meritorious claims.[217] Whether this hypothesis is plausible given the securities acts' sanctions regime (imposed on frivolous claims), I found no evidence in the bar literature that civil lawyers actually believe they need to bring cases overstuffed with claims.[218]

Another variant on this screening claim is to assume that because government

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[212] *See infra* at Part II.1.c. (regression of variables). I have not tested for the effect of defendant size nor did I test for the effect of defendant form (individual, partnership or corporation).
[213] Unless there was a claim that civil suits are significantly stronger medicine than government initiated actions. The empirics of such a claim are complicated, and worth exploring in another forum.
[214] Government lawyers must acquire permission at multiple bureaucratic levels before instituting a suit, and select which cases to litigate based on many factors, including: (1) potential public impact; (2) precendential value; (3) consistency with previous litigation positions; and (4) need to set standards of generally applicable behavior.
[215] *Cf.* Matthew C. Stephenson, *Mixed Signals: Reconsidering the Political Economy of Judicial Deference to Administrative Agencies*, 56 ADMIN. L. REV. 675 (2004) (discussing the practice of judicial deference to agencies); Michael Herz & Neal Devins, *Recent Developments in Federal Agency Focus: the Department of Justice: The Consequences of DOJ Control of Litigation on Agencies' Programs*, 52 ADMIN. L. REV. 1345, 1346 (2000) ("DOJ's status is justified on the grounds that a single, highly talented 'law firm' will ensure quality representation, consistency, efficiency....").
[216] *See infra* at text accompanying notes 222 through 226.
[217] As Krawiec & Zeiler observe, where plaintiffs intermingle a few strong claims with a number of weaker claims based on the same fact pattern (as in most securities fraud cases) "the marginal cost of adding an additional weak claim to the suit is essentially zero." Krawiec & Zeiler, *supra* n. n. 5, at 87.
[218] *But cf.* Michael D. Finnegan, *Survey: Consumer Financial Services*, 41 BUS. LAW. 997 (1986) ("Tactically, overpleading is extraordinarily useful to the plaintiff in the demurrer context in California.").

litigation is so deadly for corporations, only particularly bad actors with self-dealing boards allow cases to proceed to any decision on the merits. This argument is plausible given that many SEC investigations are settled before filing of a complaint. But, there was no statistical difference in presumed immateriality determinations based on procedural posture,[219] so this theory lacks strongsupport as well .

To code for a finding of presumed immateriality, I asked if*any* claim was presumptively immaterial. The government's ability to pass this extremely high bar 93% of the time is remarkable. No structural explanation alone explains the enormous gap between government success and private plaintiff failure on the materiality issue. Rather, the difference is likely due to a combination of the above factors with: (1) judicial deference to the SEC and the United States in their roles as securities" cops"; and (2) lack of deference to private plaintiffs, who are seen to be under the control of counsel (filing "strike suits" for easy settlements).

Second, while courts should be less likely to find claims immaterial earlier in lawsuits, the reverse is true, and procedure generally has no significant impact on presumed immateriality findings. Neither have judges' applications of the doctrine been statistically different over time, even though the personnel and ideology of the federal courts has allegedly shifted toward judges hostile to securities law claims.[220]

These results strongly suggest that something strange is going on with the presumed immateriality doctrine. It cannot be, as courts assert, that presumed immateriality is *simply* a way to govern corporate activity levels (as courts assert)[221] if it

[219] The same set of government cases is too small to separate out such plaintiffs for a distinct examination.
[220] *See* Langevoort, *supra* n. 5, at 316-18; *see also infra* at n. 253 (analysis of appointments of judges in the data set).
[221] *See supra* text accompanying note 121.

were, civil and public litigants would achieve similar successes. Nor are courts merely protecting investors from the perils of overdisclosure. What is really happening?

As some have argued,[222] presumed immateriality may be a docket pruning technique. As we have seen, courts are pruning a relatively stable percentage of securities fraud cases from their dockets *at every procedural stage in a lawsuit.*[223] In this model, presumed immateriality permits courts to slash 40-60% of issues from a lawsuit at every opportunity.[224]

This docket pruning hypothesis is unsatisfactory on two levels. Most damaging is presumed immateriality's stability over time. In the last thirty years, there have been significant shifts in how federal courts perceive their role: mechanisms for docket management have become more favored, and summary judgment in particular has gained in legitimacy as a judicial tool.[225] Moreover, private party securities suits themselves have cycled in political popularity, from a nadir in the early-1990s (leading to the PSLRA in 1995), to the highs following the collapse of Enron and the passage of Sarbanes-Oxley. But presumed immateriality is *insensitive to time*; it has neither grown nor shifted in a way we can attributable to factors other than chance. This finding seriously undermines the explanatory power of the docket pruning hypothesis.

Even if it did not, docket pruning assumes the methods of presumed immateriality

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[222] *See generally* Bainbridge and Gulati, *supra* n. 5.
[223] Although, in practical effect, courts are pruning at a higher rate at later procedural stages. *See supra* n. 144.
[224] In one sense, this docket pruning model is related to a model of litigation that assumes only close cases are brought to litigation (others being settled before suit) and therefore "the formal structure of the law [will] appear indeterminate to any scientific, empirical method of observing judicial decisions." George L. Priest and Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEG. STUD. 1, 6 (1984), *cited in* Krawiec & Zeiler, *supra* n. n. 5, at 85-86. I, like Krawiec and Zeiler, conclude that there is reason to doubt the predictive value of this theory in the context of analyzing *one element* in a larger claim. *Id.* at 87.
[225] See generally Martin B. Louis, *Intercepting and Discouraging Doubtful Litigation, A Golden Anniversary View of Pleading, Summary Judgment, and Rule 11 Sanctions Under the Federal Rules of Civil Procedure*, 67 N.C. L. REV. 1023 (1989).

are not significant. But, if the *reasons* for presumed immateriality decisions have undergone a noticeable shift over time, such shifting rationales would suggest a degree of intellectual coherence (at any given moment in time) the docket pruning model eschews.[226] To make sense of presumed immateriality, then, we need to consider why courts say they are finding claims presumptively immaterial. As discussed above, *puffery* and *bespeaks caution* appear to be displacing *understand consequences* and *triviality* as the most common reasons court cite to find claims immaterial. To determine if this change is consequential, we can now analyze each of these doctrines from a BLE perspective.

1. *Puffery and Bespeaks Caution: Investor States of Mind*

When disclosures or omissions are found to be immaterial based on the puffery doctrine, courts make an assumption about investor reaction to disclosure: reasonable investors do not invest capital based on optimism, but instead based on facts. Is this true?

No. Under many circumstances, BLE would predict the reverse.[227] The puffery doctrine ignores the powerful effects of loss aversion; investors whose stock has lost value are risk seeking (and more likely to act on positive disclosures with weak informational content).[228] Similarly, puffery ignores the perversion of rationality that accompanies our powerful overoptimism bias: when a corporation states that market conditions are "likely to improve," and we already own some of its stock, we are likely to think to ourselves: "of course my stock will do better than average."[229] Arguing that

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[226] This is not to say that the two models are mutually exclusive. Judges may be using presumed immateriality techniques to prune their dockets even as they impose a model of investor behavior.
[227] Bainbridge and Gulati, *supra* n. 5, at 120 ("Anecdotally, it does not take much time watching investment programs on television to notice that even vague statements of optimism by corporate managers are considered important by the investment news media.")
[228] *See supra* text accompanying notes 65 through 69.
[229] *See supra* text accompanying notes 73 through 80.

puffing statements will not be relied on also ignores possible endowment effects, experiential thinking,[230] information overload,[231] source blindness, and herd behavior.[232]

Use of the bespeaks caution technique also contradicts BLE insights. Not surprisingly, only rarely did courtsapply the bespeaks caution doctrine based on an empirical analysis of whether shareholders actually reacted to disclosures which were subject to cautions.[233] Thus, courts' increased use of the doctrine represents a mere assumption that cautionary statements obviate the reasonableness of reliance by reasonable investors on earlier forecasts (either positive or negative).

Not only do individuals have the problems of risk processing (discussed above respecting puffery), endowment, experiential thinking, and information overload, they are also unable to make (as courts applying the bespeaks caution doctrine require them) the subtle adjustment with respect to informational source. Courts assume that individuals can hear a source saying two things: "I express the following beliefs about the future"; and "Don't rely on anything I just said," and make a rational decision about which of those statements is worthy of credence. This is nonsense.

Puffery and bespeaks caution are alike in another way: they attempt to create bright line rules to differentiate reasonable from unreasonable reliance. Both doctrines are easy to apply (they require merely the presence or absence of certain magic words),

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[230] To the extent that our assessment of risk is colored by our emotional assessment of the target, generally positive statements may drape the investment with a penumbra of positive feeling, leading us to discount later specific information to the contrary. *See supra* text accompanying notes 81 through 88.

[231] For investors confronted with a large disclosure, early puffery (such as, "our business model remains strong") may be incorporated into the investing decision, while later financial disclosures in dense footnotes would be ignored. I would provide a citation from a case here, but I sense the reader might be overwhelmed by the detail.

[232] When puffery is in a press release or made through a corporate spokesman, it seems likely that investors will respond to social cues and trust the corporate manager's clear statements of vague optimism, especially if others in the market do so.

[233] *Cf.* Bainbridge and Gulati, *supra* n. 5, at 123 (criticizing courts for ignoring context when analyzing statements allegedly protected by the bespeaks caution doctrine).

and easy to create from the perspective of the disclosing entity. That is, disclosing entities can shelter information from fraud by making it part of optimistic predictions or pairing it with cautions. Notably, both doctrines create incentives for corporations to use words that they hope will induce reliance, but which are legally irrelevant: they are bright line rules that enable fraud.

2. *Understand Consequences and Triviality*

Let us compare puffery and bespeaks caution with their common predecessors: understanding consequences and triviality. Both of these techniques are focused on the nature of the disclosure (and not on magic words). For understanding consequences, courts focused on the underlying *facts* disclosed, not the language of the offering document, and the relationship between those facts and either (a) the real world; or (b) a hypothesized skill-set investors deemed to possess.

Neither of these techniques is without flaws. The consequences doctrine supports Langevoort's view that judges in securities cases are subject to "lawyers' biases,"[234] which make them overconfident with respect to their ability to understand how the world "really works," complete with a sneer toward "laypeople" who do not understand the game.[235] Empathy for investor incompetence is hard for judges who always analyze disclosures in hindsight armed with briefs which explain financial, accounting, and legal

[234] Langevoort, *supra* n. 5, at 318.

[235] I am reminded of Duncan Kennedy's criticism of legal education, in which he argued:

> The final hierarchy that concerns us is the general social arrangement in which lawyers are treated . . . as among the elite of the nation. Partly this is simply a reflection of the fact that many lawyers come from the upper middle class to start with . . . . At each level of the class system, lawyers are granted a measure of power altogether disproportionate to their objective merit. In their group activities, but *also* in their individual social lives, they tend to exploit this deference and to accentuate it by emphasizing the arcane character of what they know and do.

DUNCAN KENNEDY, LEGAL EDUCATION AND THE REPRODUCTION OF HIERARCHY: A POLEMIC AGAINST THE SYSTEM 57 (NYU 2004).

concepts in concise, readable ways.[236] Moreover, courts regularly assume individuals will be able to rationally understand the likelihood of potential future gains, or unlikely future legal problems, despite humans' inability to rationally calculate the effect of unlikely, but catastrophic, events.

The triviality doctrine also contrasts with evidence from BLE. It boils down to an intuition that "trivial bits of information do not play a role in the investment decisions of reasonable investors because they relate to a small aspect of the business."[237] But, as BLE teaches, investors are poor at making this type of comparison.

Ultimately, the shift I have noted is a shift between a standard-based model of materiality and a model based on bright line rules, in which courts spend less time considering the actual potential effects of the disclosure, and more time applying a mechanistic set of rules ("If cautioned, then immaterial") to the words of the disclosure itself. This is a troublesome development, for reasons discuss ed in Part IV.

3. *Other Doctrines*

Although the four techniques we have just discussed are the "headlines" of my results, it is worth thinking briefly about the relationship between the other doctrines in the arsenals of courts and BLE. As we will see, each of the remaining four classic techniques relies on assumptions about human behavior which are sometimes, if not always, untrue.

a. Zero Price Change

The zero price change doctrine relies on the same assumption of market efficiency

[236] Sometimes. Lawyers' briefs are more likely to clearly explain a disclosure than a corporation's 10-K statement.
[237] Bainbridge and Gulati, *supra* n. 5, at 125.

that permits securities claims to proceed without proof of actual reliance.[238] That is, courts assume that markets will react to any price relevant information. [239]

This intuition is the same as that which would conclude that framing effects ought to have no relationship to outcomes; that saving two of six people is the same as killing four out of six. Failure to react to information may be a result of BLE heuristics and biases, instead of anything internal to the importance of the disclosure itself.

It may be interesting to consider zero price change in the context of the Sherlock Holmes story of the dog that did not bark in the nighttime.[240] While Holmes concluded that silence is necessarily consequential, the empirics of this claim are dubious.[241] Indeed, use of non-market impact to establish materiality at the time of the investing decision is a decision infected with hindsight bias (although such impact would be ameliorated if courts allowed evidence of actual market effects to mean materiality as a matter of law).

Courts appear reluctant to apply the zero price change technique: in less than four percent of cases finding any claim presumptively immaterial did they do so. However, my sense of the caselaw is that defendants make "zero price change" arguments often. It is interesting, and worth further study, to think about why courts are able to resist the

[238] *See* Bainbridge and Gulati, *supra* n. 5, at 123-24.

[239] Of course, markets may be rational even when individual participants are not. *See, e.g.*, Hilton, *supra* n. 79, at 273 (discussing political futures markets)**.**

[240] "'Is there any point to which you would wish to draw my attention?'
'To the curious incident of the dog in the night-time.'
'The dog did nothing in the night-time.'
'That was the curious incident,' remarked Sherlock Holmes."
Arthur Conan Doyle, *Silver Blaze*, *in* MEMOIRS OF SHERLOCK HOLMES (1901), available at http://etext.library.adelaide.edu.au/d/doyle/arthur_conan/d75me/silver.blaze.html.

[241] Intuitions about the importance of silence are common in the legal academy, especially when thinking about statutory interpretation. *See, e.g.*, Michael D. Shumsky, *Severability, Inserverability, and the Rule of Law*, 41 HARV. J. ON LEGIS. 227, 270,n.207 (2004). I have not seen a theoretical, unified approach to silence (by legislatures, courts, individuals, etc.) For the beginning of such a work, *see* Daniel M. Filler, *Silence and the Racial Dimension of Megan's Law*, 89 IOWA L. REV. 1535, 1576-94 (2004) (discussing causes and remedies for silence in discussing race with respect to community notification laws).

conclusion that market silence should speak loudly.

b. Fraud by Hindsight

Fraud by hindsight appears to be a direct application of the doctrine of presumed immateriality to correct for a bias (hindsight) which results in an inappropriate finding of materiality.[242] Only a small number of securities cases apply the doctrine (exclusively) to materiality rather than scienter determinations,[243] although around ten percent of cases finding a claim immaterial cited fraud by hindsight as one of the reasons supporting their decision.

c. Failure to Read

Courts' criticism of investors who fail to read a large universe of information, and who rely on oral, rather than written, materials, is understandable. The failure to read doctrine serves the same ends as most formalities.[244] Courts concerned about the prevalence of securities suits do well to insist on the primacy of written material. Thus, the failure to read technique acts as a common law statute of frauds in securities cases.

The technique has grown in scope over time, but the growth is not statistically significant.[245] Even today, courts apply the failure to read technique rarely. When they do so, they also commonly apply the bespeaks caution doctrine. This correlation suggests a kind of "analytical toolbox" for the problem of fraud alleged to have occurred through misleading, inconsistent disclosure.

d. Truth on the Market

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[242] Rachlinski, *supra* n. 53, at 108.
[243] *See also* Gulati *et al*., *supra* n. 23, at 807.
[244] *See generally* Lon L. Fuller, *Consideration and Form*, 41 COLUM. L. REV. 799 (1941) (consideration, channeling and evidentiary functions).
[245] The results might be different in a jurisdiction like the Seventh Circuit that endorses the Carr v. Cigna doctrine.

The truth on the market technique imposes search costs on investors, and ignores evidence that more information may not improve the quality of investing decisions. For courts applying this technique, the idea that an omission cannot be material if it replicates publicly available information makes a great deal of sense. Nevertheless, increased use of this technique makes investors responsible for understanding and processing a bewildering array of information. Whether allinvestors are equally capable of making this kind of search and analysis is questionable.

Nonetheless, the truth on the market technique is relatively prevalent, appearing in 7.5% of the total dataset, and in 14.6% of cases finding any claim immaterial.

In Table 4, I summarize the preceding discussion by connecting each of the eight named techniques with the BLE observations that the technique potentially ignores:

Table 4: Relationship of BLE to Presumed Immateriality

		Doctrinal Technique							
		Puffery	Bespeaks Caution	Fraud by Hindsight	Zero Price Change	Trivial Matters	Failure to Read	Understand Consequences	Truth on the Market
BLE Experimental Observation	**Trouble with Probability**								
	Hindsight Bias			X					
	Representativeness Heuristic	X			X	X		X	
	Risk Seeking (Mitigate Current Losses)	X	X		X	X		X	
	Risk Aversion (Gains)		X		X	X		X	
	Endowment Effect	X	X		X	X		X	
	Overconfidence	X	X		X	X		X	X
	Experiential Thinking	X	X		X	X	X	X	X
	Information Processing								
	Source Blindness	X	X		X		X		X
	Overweighing Oral Disclosures		X			X	X		X
	Framing Effect		X		X		X	X	
	Information Overload	X	X		X	X	X	X	X
	Social Investing								
	Herd Behavior	X	X		X	X	X	X	
	Percentage of Cases Finding Presumed Immateriality That Applied Technique (Average)								
		14	20.7	9.2	3.7	32.9	11	34.1	14.6

In considering the implications of the results displayed in Table 4, we can see that all of the techniques, to one degree or another, make assumptions about behavior which are fundamentally in tension with how BLE predicts investors will sometimes behave. We also see that puffery, for example, is a doctrine that most obviously affects individuals' trouble with probabilistic assessments, while the failure to read heuristic is primarily in tension with individuals' inabilities to process information rationally. The relationship between BLE's insights and courts' blindness to how investors behave gives rise to the "duty to be a rational shareholder."

IV. The "Duty" to Be a Rational Shareholder

The shift in the rationale for findings of presumed immateriality over time from standards-based to bright-line based reasoning suggests that materiality is evolving toward a formal rule: behave in a certain way, or suffer the consequences. Courts applying a standards-based model (represented by the trivial matters and understanding consequences doctrines), provide little guidance for investors to know before injury if they were reacting to material or immaterial information. Under the puffery and bespeaks caution doctrines, by contrast, allinvestors should be able to anticipate legal rules and conform their conduct accordingly. If investors fail to comply with the bright line rules of the doctrine, they will not recover damages despite relying on disclosures or omissions that were fraudulent.

One way to understand the federal disclosure and liability regime is as a federally mandated and defined insurance against securities fraud,[246] conditioned on a

[246] *Cf.* David Tabak, *Loss Causation and Damages in Shareholder Class Actions: When it Takes Two Steps to Tango*, 1442 PLI/CORP 181, 195 (2004) (protection offered by securities laws exceeding expected yields absent the law "makes the securities fraud laws a form of insurance"). To be clear, this is just a metaphor: investors do not pay a special form of premium to obtain the protection of the securities laws. Although we

finding of materiality.[247] This benefit is generally available to all investors in federally registered securities, and "pays out" if and when an investor has been harmed by fraud and files suit. There are then two narratives explaining how the law distributes this benefit:

1. To get the benefit of securities insurance, you should invest rationally in response to disclosure; or
2. All investors will receive the benefit of securities insurance, unless they act irrationally in response to disclosure.

The second formulation, which suggests a *punishment* for failure to comply with a generally applicable *standard*, better captures the caselaw's evolving emphasis on the undesirability of protecting irrational investors and the increased emphasis on bright-line, enforceable rules. This narrative also has an important connotation: we should see presumed immateriality as an attempt by courts to shape the *ordinary relationship* between corporations and investors, not merely the contours of recovery in litigation. That is, we should see presumed immateriality as a way of creating a *legal duty to be a rational shareholder*.[248]

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might consider federal income taxes to be a kind of premium, that argument would seem to prove too much.

[247] William S. Feinstein, Note, *Securities Fraud: Pleading Fraud with Particularity-Federal Rule of Civil Procedure 9(b) in the Rule 10b-5 Context: Koval v. M.C.I. Communications Corp.*, 63 GEO. WASH. L. REV. 851, 855 n.32 (1996) (securities fraud is not a form of insurance because of materiality limitations, among others). To state that securities fraud recovery provides a form of insurance to investors is not to claim that the insurance is the same as, say, as car insurance. However, all insurance excludes certain kinds of injuries (*i.e*. drunk driving) and privileges certain behaviors (*i.e*., a certain number of accident free years) or demographics (*i.e*., insurance is more expensive the very young and very old). *See generally* Robert H. Jerry II & Kyle Mansfield, *Justifying Unisex Insurance, Another Perspective*, 34 AM. U.L. REV. 329 (1985) ("Insurers will continue to classify insured persons into distinct groups as long as the cost of measuring the differentiating factor is less than the premium reduction the insurer can offer the members of a differentiated, better-risk group. ...").

[248] Some will object that it is never appropriate to refer to a defense in litigation – a bar to liability or damages – as a legal "duty." Such skepticism toward "duty talk" is prominent in analogous defenses like the "duty to mitigate" contract and tort damages, the "duty to preserve evidence," and the duty to be non-negligent (in comparative

Presumed immateriality judges investor behavior before injury (that is, change in share price) has occurred: every individual buying stock risks losing the benefit of securities insurance if she is not "rational."[249] As a result, the presumed immateriality affects all investors in the capital markets. It conditions the availability of a legal benefit on compliance with a generally applicable standard of conduct, imposing on shareholders onerous affirmative – and conduct shaping – expectations.[250]

It is worth reiterating why judges seem drawn to rationality as a way to choose between reasonable and unreasonable investors. As alluded to earlier in this paper, there are three competing theories that explain the evolution of materiality in the securities law. The first two are essentially based on BLE insights, and the third is ideological:

- *First*, judges may be using these techniques as a quick and easy way (a cognitively limited way) to get rid of (boring) cases that they do not particularly want to spend time on.[251] We can think of this as the "lazy judges" hypothesis.

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negligence states). *See, e.g.*, Howard C. Eglit, *Damages Mitigation Doctrine in the Statutory Anti-Discrimination Context: Mitigating Its Negative Impact*, 69 U. CIN. L. REV. 7, 9, n.3 (2000) ("failure to mitigate does not expose the failing party to any liability, as would the failure to satisfy a duty"); Roy Ryden Anderson, *Incidental and Consequential Damages*, 7 J.L. & COM. 327, 376 (1987) ("duty to mitigate is a "misnomer, because the aggrieved party incurs no actual liability for his failure to mitigate"); Allan Farnsworth, *Legal Remedies for Breach of Contract*, 70 COLUM. L. REV. 1145, 1184 (1970) (criticizing application of the term "duty" to the duty to mitigate contract damages). Even though these duties may give rise to important affirmative obligations they arise after the cause of action has accrued. Charles J. Goetz and Robert E. Scott, *The Mitigation Principle: Toward a General Theory of Contractual Obligation*, 69 VA. L. REV. 967, 974 (1983). Similarly, the duty to preserve evidence at trial arises after a party has notice of the possibility of a suit. *See* Townsend v. Am. Insul. Panel Co., 174 F.R.D. 1, 13-14 (D. Mass. 1997).

[249] In this way, it is distinct from "false duties" like the duty to mitigate. *See id.*

[250] For those who have difficulty imagining how impairment of rights in litigation may be conceived as duty at all, my colleague, Craig Green, suggests that we imagine that the Federal Government has created a program that distributes benefits to foster parents. The Government imposes certain conditions on the receipt of funds (*i.e.*, keeping the home in a certain condition, maintaining a stable home, making the home available for inspection); failure to observe the conditions will lead to a denial of funds. It seems relatively uncontroversial to imagine these conditions as "duties" imposed by the federal government on foster parents. However, they are likely to be enforced only when a foster parent is denied the benefits, and sues, at which time the government will assert that the parent has failed his duty, and is not entitled to benefits.

[251] *See* Bainbridge and Gulati, *supra* n. 5, at 111-13.

- *Second*, judges may be presuming immateriality because they are subject to "lawyer's biases" that render them overconfident in their abilities to themselves avoid the biases affecting investors.[252] We can think of this as an "arrogant judges" hypothesis.
- *Third*, judges may be reflecting and encouraging a general "pro-defendant" bias resulting from a shift in the personnel on the federal courts.[253] We can think of this final theory as the "conservative judges" hypothesis.

The evidence I collected does not support the "conservative" hypothesis, as presumed immateriality has not grown noticeably in scope over time, nor has it shifted with changes in the securities laws.[254] My evidence also undermines both behavioral explanations. The "lazy" and "arrogant" stories of judicial behavior fail to account for the shift from standards-based to bright-line rules of decision.

I therefore offer a *fourth* explanation for the presumed immateriality doctrine: courts analyze investors' claims of reasonableness based on a model of behavior they import from their experiences with corporate law. For courts, public shareholders ought to act like all other participants in the corporate governance system: motivated by an easily comprehendible set of monetary incentives, and subject to a clear set of bright lines

[252] Langevoort, *supra* n. 5, at 314-16.
[253] *Id.* at 316-18. While that trend my be apparent nationwide, the composition of the judges of the Second Circuit and its district courts has remained relatively stable. In 1976, of 66 judges sitting on the courts that made up my sample, 39 (or 59%) were appointed by Republican Presidents. In 2004, of 110 judges, 63 (or 57%) were appointed by Republican Presidents. *See* Federal Judicial Center, Search Engine, *available at* http://www.fjc.gov/history/home.nsf (last visited Feb. 22, 2005).
[254] Another perspective on the stability of the doctrine would begin by positing that cases filed have actually gotten *stronger* (or, better pled) over time, and that, therefore, the lack of change in findings of presumed immateriality does reflect a negative change in judicial ideology. This claim would probably turn on an analysis of the effects of the PSLRA on pleading practice post-1995 (*i.e.*, with law firm consolidation post-1995, pleadings got better), and would not explain stability before that date. It is difficult, in reading the caselaw, to develop a way to measure the objective strength of a lawsuit apart from its court ordered disposition. *See also supra* n. 137 (discussing a variant on the "strength of lawsuit" hypothesis).

to ensure the smooth functioning of the corporate form.[255] Indeed, rational public shareholders are the foundation of the corporate governance system: take them away, and the entire edifice may crumble. As judges have become more aware of human irrationality – through increased awareness of BLE and increased publicity about challenges to the efficient capital market hypothesis – perhaps they have reacted strongly to protect the model of human rationality. Thus, courts are comfortable imposing a duty to be rational, thereby requiring investors in the securities context to behave like other actors in the corporate governance model.

But, in doing so courts put the securities laws in tension with the fundamental principle of corporate governance introducing this paper: shareholders owe no duties. That is, courts seeking to harmonize securities and corporate law may have put the two systems in conflict with each other. Which will give?

Before engaging in what might become a very large thought project, we should consider how we might measure the actual, real world effects of the duty that this article has uncovered.

1. *The Duty to Be Rational: Some Empirical Predictions*

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[255] Corporate law generally assumes and provides incentives for shareholder profit maximizing behavior. Greenfield, *supra* n. 2, at 646-6 (noting examples).
The ultimatum game, a well-known BLE experiment, provides a different perspective on this result. An experiment provides one of two people (the "chooser") a pot of money. The chooser must decide on an allocation between himself and another individual (the "accepting party"). The chooser may describe any allocation he wishes; the accepting party may only accept or refuse the bargain. In the absence of acceptance, neither party takes any money. *See generally* Greenfield and Kostand, *supra* n. 38, at 988-92 (discussing variants of the ultimatum game and its application in legal scholarship). Economic theory predicts the accepting party will accept any non-zero proposal. However, it is quite common for the accepting party to reject offers of less than twenty percent of the total available. And, surprisingly, the choosing party usually offers between forty and fifty percent of the total.
In a related experimental series, BLE practitioners analyzed individuals' reactions to corporate cost benefit analysis ("CBA"). In CBA, corporations decide between alternatives by applying the profit maximization norm to the costs and benefits of action and inaction. A robust body of literature suggests that individuals dislike CBA, especially when the decision involves possible loss of human life. This result holds even when experimental subjects understand the benefits of efficiency and profit maximization. *See generally* David A. Hoffman, Review Essay, *How Relevant is Jury Rationality?* 2003 U. Ill. L. Rev. 507, 524-25.

Usually, enforcement of duties depends on the understanding that "ought implies can."[256] But, it is very hard for individual shareholders to react rationally in response to information. Many of the deviations from the model of rationality endorsed by the duty are unconscious products of the ways our brain is wired to make decisions.[257] Individuals can no more control the way they react to risk, the argument would go, than they can stop themselves from hiccupping, from feeling an adrenaline rush in face of danger, or from feeling love for a child.

It is because irrationality is somewhat fixed that the effects of this duty I would otherwise describe – that it has a positive effect on real world behavior – must fail. Even though the duty to be rational is increasingly specific and publicized, it would be very surprising if in the years post-TSC Industries there was less real-world price movement in reaction to disclosures that the law excludes as nonactionable. Such a correlation would be evidence that the duty was effective, and that individuals had been able to somehow modify their behaviors so as to regain the protection of securities insurance.

Some – relying on the understanding consequences technique – would conclude that while full rationality (*i.e*. risk processing rationality) is unlikely, investors are generally intelligent and able to process the idea of the rationality duty. Picture a somewhat ambitious investor, conscious of her limitations, but intelligent enough to want to do something about them. The best solution for her is to invest in mutual funds.

Mutual funds and other institutional investors are probably less likely to behave irrationally in response to disclosure, are more likely to have lawyers and economists on

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[256] John Hasnas, *Equal Opportunity, Affirmative Action, and the Anti-Discrimination Principle: The Full Philosophical Basis for the Legal Prohibition of Discrimination*, 71 FORD. L. REV. 423, 506 (2002) (*citing* IMMANUEL KANT, CRITIQUE OF PURE REASON 307-08 (J.M.D. Meiklejohn trans., 1990) (1787)).
[257] *See supra* text accompanying notes 48 through 50.

staff to understand "prospectus-speak," will know and have recorded all price relevant market information, and will be less likely to be swayed into following herds into investments.[258] Approximately 1/3 of holdings in the U.S. stock market today are institutional (having grown from a quarter thirty years ago).[259] Informed investors should join this tide and commit themselves to a course of rationality before making a potentially harmful decision.[260]

Thus, as investors learn of the duties imposed by presumed immateriality doctrine, I predict that mutual funds should experience higher than expected capital infusions. This will be especially true in years after particularly important growths in one of the duty's constituent techniques (for example, the bespeaks caution doctrine's arrival in the mid-1980s).

Coincident with the effects of presumed immateriality on shareholders, we should also see effects on corporations. As businesses realize the protections which the doctrine offers them, they should feel more secure in making certain kinds of disclosures. Thus, I predict that corporations should increasingly seek to shelter disclosure by coupling financial predictions with cautionary statements and encouraging investment by making proportionately more statements of corporate optimism.

Now, we must complicate the analysis which had previously assumed that all investors are alike. Some BLE researchers seek to demonstrate how "rationality" is a cultural construction that is more likely to appeal to white men than other demographic

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[258]Institutional investors have "extensive trading expertise" and "actively seek information about new issues as well as current holdings." *See* Ryan, *supra* n. 26, at 149.
[259] *Id*. at 147.
[260] We may analogize these kind of decisions to a driver who, knowing that he is particularly likely to make foolish turns at intersections, proceeds to rip the steering wheel from his car when he sees the intersection approaching, and throws it out the window, and thereby committing himself to a straight course. The most significant problem with such decision making is the presence of other committed drivers.

groups. This literature is complex, and I can only offer a small taste of it here.[261] Some BLE researchers have attempted to document the ways in which sex, culture, and race affect reactions to risk, uncertainty, and information. One basic and well-established conclusion is that men and women perceive risk differently.[262] Many studies have found that on average, men are more comfortable with higher levels of risk (particularly environmental risks) than women.[263] Women thus exhibit higher rates of loss-aversion than men in evaluating financial investments.[264] Some have argued that this effect results from women's relative lack of socioeconomic power,[265] others attribute differences to biology.[266]

Class and race also play significantly into perceptions of risk.[267] In the literature, this is known as the "white male effect."[268] As a group, white men are significantly less likely to be concerned about higher levels of risk (even with respect to presently held gains), and tolerate higher losses than minorities.[269] This effect too is said to be related to feelings of vulnerability and disempowerment: "because [minorities] benefit less from many of [the world's] technologies and institutions, and because they have less power and

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[261] *See generally* Paul Slovic *et al.*, *Trust, Emotion, Sex, Politics and Science: Surveying the Risk-Assessment Battlefield*, *in* THE PERCEPTION OF RISK 390-412 (Paul Slovic ed., 2000).
[262] *See generally* Jan L. Hitchcock, *Gender Differences in Risk Perception: Broadening the Contexts*, 12 RISK: HEALTH SAFETY & ENV'T 179, 182-190 (2001) (summarizing multiple studies).
[263] Paul Slovic, *Trust, Emotion, Sex, Politics, and Science: Surveying the Risk-Assessment Battlefield*, 19 RISK ANALYSIS 689, 692 (1999) ("Several dozen studies have documented the finding that men tend to judge risks as smaller and less problematic than do women.").
[264] *See* Renate Schubert *et al.*, *Financial Decision Making: Are Women Really More Risk Averse?*, 89 AM. ECON. REV. 381 (1999).
[265] Slovic, *supra* n. 263, at 692.
[266] Hitchcock, *supra* n. 262, at 195-8 (discussing development research).
[267] *See generally* Melissa L. Finucane *et al.*, *Gender, Race, and Perceived Risk: The 'White Male' Effect*, 2 HEALTH, RISK & SOC'Y 159, 159 (2000) (noting that relationship between race and risk perception is complex and disclaiming causal connection).
[268] *See id*; *see also* Cass R. Sunstein, Book Review, *The Perceptions of Risk*, 115 HARV. L. REV. 1119, 1157-60 (2000) (discussing and critiquing data supporting effect).
[269] *See* Kathy Bunting, *Risk Assessment and Environmental Justice: A Critique of the Current Legal Framework and Suggestions for the Future*, 3 BUFF. ENVTL. L.J 129, 139-40 (1995) (discussing data).

control over what happens in their communities and their lives." [270]

This discussion leads to a final prediction: shares of recoveries in securities class actions (and settlements) will be distinct from the demographic characteristics of the all participants in the capital markets.[271] Women and minorities will recover at lower rates than institutional investors, especially to the extent that materiality moves toward doctrines that particularly disfavor experiential thinking.[272]

2. *The Duty to Be A Rational Shareholder: Some Corporate Law Complications*

The discussion so far has sought to provide metrics with which to evaluate the practical effects of changes in judge-made securities doctrines on participants in the capital markets. However, this doctrinal evolution should also cause corporate law scholars to explore whether some well-accepted truths about corporate governance are ripe for reevaluation. The following section begins this task by considering the irony that presumed immateriality doctrine effectively increases government regulation of the corporate form to serve a model of investor behavior (market-based, wealth-maximizing,

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[270] James Flynn *et al.*, *Gender, Race, and Perception of Environmental Health Risks*, 14 RISK ANAL. 1101, 1107 (1994); *see also* Bunting, *supra* n. 269, at 141.

[271] Studies of class action settlement practice in other contexts suggest this result. *See, e.g.*, Gail Hillebrand & Daniel Torrence, *Claims Procedures in Large Consumer Class Actions and Equitable Distribution of Benefits*, 28 SANTA CLARA L. REV. 747, 760-61 (1988) (lower income and less educated claimants recover at disproportionately low rates).

[272] The problem with this prediction is that it will be difficult to separate out the "rationality effect" from the general trend of increasing participation of institutional investors in securities fraud cases. *See* Jeffrey Mamorsky, *Empty Nest Eggs; Directors Get the Blame for Bankrupt Pension Plans*, D AND O ADVISOR September 4, 2004. Dan Markel, a reader of this paper in draft, suggests that women and minorities may be likely to participate in mutual funds at higher rates than white men, and that the demographic consequences I discuss in the text above may be overdrawn. However, there is evidence that investors in mutual funds are "older, wealthier, and better educated then the average American," and also more likely to be men than women. Gordon J. Alexander, Jonathan D. Jones and Peter J. Nigro, *Mutual Funds Shareholders: Characteristics, Investor Knowledge, and Sources of Information*, 7 Fin. Serv. Rev. 301, 315 (1998) (analyzying demographic characteristics of participants in mutual funds), *available at* http://www.rmi.gsu.edu/FSR/abstracts/Vol_07/ Volume%207%20Number%204/V7-4%20A6.pdf (last visited Feb. 21, 2005).

rationality) that supposedly supports the edifice of privately ordered corporate law in the first instance.

I began this article by emphasizing that a basic principle of corporate law is that investors buy assets under a "no duty" default rule. This rule has three bases, the first grounded in the basic framework of corporate law, the second in an intuition about the relationship between law and markets, and the third based on enforcement concerns. Understanding that the presumed immateriality standard has created a duty affecting all investors requires us to think about how courts are undermining or changing each of these foundational assumptions.

First, the law presumes investors are passive, delegating their control rights to the board and management of the asset they are purchasing.[273]

Second, the law presumes that the best way to encourage economic growth is to encourage market transactions in assets. Encumbering assets with duties may reduce the value of such assets, discouraging transactions, and thus reducing the ability of markets to generate capital for participating businesses.[274]

Third, the law imposes no duties on common investors because it is difficult to imagine to whom such duties should run. Courts, regulating the corporate form, generally reject the idea of (public) duties owed to individuals in society at large with (merely) potential reliance interests.

The scope of presumed immateriality requires us to reconsider whether courts in the securities context are adhering to these assumptions. In particular, courts seem to be increasingly willing to apply a "public duty" to participants in the corporate enterprise.

[273] *See generally* COX & HAZEN, *supra* n. 1, at § 2.04 (Separation of Corporate Ownership from Control).
[274] Dalley, *supra* n. 1, at 221-222 (discussing effects of fiduciary duties on controlling shareholders).

In our legal system, creating duties usually entails creating correlative rights.[275] However, in some circumstances, new duties (such as the duty not to harm endangered species) do not give rise to a right to a cause of action.[276] We can conceptualize such duties as essentially self-regarding, and enforceable, if at all, by society at large.[277] Another way to think about this problem was suggested by John Austin, who thought of duties as correlative not to rights, but to commands:

> Being liable to evil from you if I comply not with a wish which you signify, I am *bound* or *obliged* by your commands, or I lie under a duty to obey it. If, in spite of that evil in prospect, I comply not with the wish which you signify, I am said to disobey your command, or to violate the duty which it imposes.[278]

Thus, we can think of the "duty to be a rational shareholder" as an obligation enforced by the "evil" of a loss of the benefit of securities insurance. It is an obligation which benefits society (or the market, or the corporation) but which runs to no one.

Thus, while ordinarily breach of a duty in the corporate context creates a right to sue,[279] the duty to be a rational shareholder creates merely a "right" to a defense in a given securities litigation. In this way, presumed immateriality moves corporate law towards a regime that embraces the idea of public solutions for market failures, instead of solutions anchored in the private sector. It supports (in a way) an expanded regime of government power and regulation, and reduced enforcement through private parties.

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[275] WESLEY NEWCOMB HOHFELD, FUNDAMENTAL LEGAL CONCEPTIONS AS APPLIED IN JUDICIAL REASONING 36 (Walter Wheeler Cook ed., 1919) (discussion of jural relationships); c*f.* Richard A. Epstein, *In Defense of the "Old" Public Health*, 69 BROOK. L. REV. 1421, 1469 (2004) ("The economic principles of scarcity have as their legal offshoot the principle of correlative rights and duties. No new rights can be created unless new duties are imposed.")

[276] Earl Duke, Note, *Giving Species the Benefit of the Doubt*, 83 B.U. L. REV. 209, 230-33 (2003) (discussing limitation of principle that duties confer rights).

[277] J.E. PENNER, THE IDEA OF PROPERTY IN LAW 120 (1997).

[278] JOHN AUSTIN, THE PROVINCE OF JURISPRUDENCE DETERMINED AND THE USES OF THE STUDY OF JURISPRUDENCE 14 (Weidenfeld & Nicholson Ed., repub. 1998).

[279] *See generally* DOBBS, *supra* n.11 , §§ 314-315 (The General Rules of Non-Action), 316-321 (General Duties to Act Affirmatively).

And so what? This question deserves further thought and study. But it seems to me that if we are to take seriously the idea of privileging investor rationality, then it is just as easy to picture a regime where we affirmatively *punish* investors that exhibit especially egregious "irrational" behaviors. (Such as prohibiting day traders from buying or selling stock.) If such proposals are too draconian for our tastes, why do we accept presumed immateriality which creates substantially similar economic effects?

Once we realize that the duty to be rational is an ideological choice based on courts' model of corporate governance, we should also question if this model is a good fit for the special purposes and goals of securities law. That is, is the duty to be rational a natural outgrowth of the 1933 or 1934 securities acts, which seek to protect functioning (and presumably efficient) markets? Perhaps so, but it is hard to square *reduced* civil enforcement with an evolving congressional policy to increase access by individual investors to the capital markets.

These questions about the nature of the duty, and the source of the right, suggest only some of the difficulties posed by courts' creation of new shareholder obligations. That courts are so willing to dismiss so many claims based on an failure to behave rationally is troubling; that courts have not made the duty clear is worse.

V. Conclusion

The materiality standard's development as a proxy for economic rationality parallels related movements in areas of the law less commonly associated with wealth creation. The issue in some parts of private law adjudication (particularly, in common-law torts) iswheth er to allow juries to substitute their ideas of reasonableness and retribution for what scholars believe should determine reasonableness, *i.e.*, efficiency.[280] In evaluating procedural reforms, some argue we should transfer the jury's role to bureaucrats, able to rationally assess societal risks and benefits.[281]

Inevitably, such paternalistic solutions appear an attractive remedy to the malleability and incoherence of human decisionmaking. Indeed, as observed earlier in this paper, many have suggested that BLE appears to foster proposals which remove power from citizens, to delegitimate decisions which are not related to rational ends. BLE appears to be evolving into a technocratic legal discipline.

The doctrine of presumed immateriality provides an opportunity to reflect on this trend. Courts, ignoring BLE insights, are nonetheless doing precisely what some BLE scholars would have them do: deferring reflexively to the government (when it sues), and thus empowering government regulators. At the same time, by shifting from a legal regime that focuses on the specific facts of each corporation's financial state to the mere language contained in the disclosure, courts help wealthy defendants at the expense of "less rational," and often poorer plaintiffs And, as I have explored, the duty to be a rational shareholder may create demographic and redistributive effects that courts have not contemplated. Finally, presumed immateriality appears to permit corporations to intentionally make disclosures they hope and expect will engender detrimental reliance while avoiding the consequences the securities laws intended to impose. Thus, current doctrine should satisfy no one.

And, there is a possibility that presumed immateriality will have increased consequences in the near future. Recent proposals would "privatize" social security by

[280] *See generally* Kaimipono David Wenger and David A. Hoffman, *Nullificatory Juries*, 2003 Wisc. L. Rev. 1115, 1122-28.
[281] SUNSTEIN ET AL., *supra* n. 52, at 242, 245-48.

creating individual retirement accounts.[282] Under proposals that truly create individual accounts, presumed immateriality might, because it undermines securities insurance for irrational investors (that is, most of us, most of the time), endanger the retirement funds of millions of Americans.[283]

What, then, to do? Some have argued that courts ought to equate materiality with market effects: when stock prices react to disclosures, we should presume that the disclosure was material to a reasonable investor.[284] Such proposals would make it substantially more difficult for courts to impose any given ideology.[285] It might also create proper incentives for corporations to present information in as clear a way as possible. However, the market-materiality proposal appears to assume that Congress intended the securities laws to be a form of insurance, as I have proposed, and not a mechanism to protect the market itself, as many believe.[286] Market-materiality, moreover, could result in politically controversial suits proceeding further in litigation than current doctrine permits. In short, if this is the solution to the problems this article has uncovered, it may be a utopian one.

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[282] President Bush's Social Security Reform Proposal, *available at* http://www.whitehouse.gov/infocus/social-security/ (accessed Feb. 12, 2005).

[283] That courts are deferring to the SEC, thus increasing its power, would seem to be reassuring. And, needless to say, Congress or the SEC may remedy problems created by the duty to be rational by appropriate legislation or regulation.

[284] Langevoort, *supra* n. 64, at 157.

[285] A good objection to this proposal is to wonder why juries will do better than judges at evaluating investor behavior in ways that are not in tension with BLE. I offer three responses. *First*, juries, unlike judges, can evaluate materiality along a spectrum, because their ability to compromise on damages allows them to calibrate their findings of materiality to their determinations of injury. *Second*, because juries need not explain their decision making, they may be less likely to "rationalize" materiality (*i.e.*, forcing judges to discuss what materiality means makes them more likely to find disclosures immaterial). *Third*, juries are not subject to the problem of docket management, and are instead one-off decision makers for whom the institutional pressures of time and appellate review are missing. *But cf.* Dan Markel, *Against Mercy*, 88 MINN. L. REV. 1421, 1426 n.16 (2004) (noting that juries' "one-off" membership renders them "immune from the carrots and sticks" approach which legal policymakers generally use to prevent bad decisions.)

[286] *See, e.g.*, Troy A. Paredes, *After the Sarbanes-Oxley Act: The Future of the Mandatory Disclosure System*, 81 WASH. U. L.Q. 229, 233-34 (2003) ("The goal of the mandatory disclosure regime of the federal securities laws is to promote capital market integrity and the efficient allocation of capital by ensuring that investors have the information they need to make informed investment decisions.")

Fixing the doctrine is only a small part in the larger story, which relates to how courts ought to rethink their traditional approaches to the construct of the "reasonable person." In the past, courts used three basic methods to evaluate reasonableness: (1) divine a standard from first principles or previously existing operative law; (2) leave the decision of reasonableness to a jury; or (3) intuit reasonableness using the judge's own experience a guide. This problem arose in many different areas of law, from traditional first-year subjects like contracts, torts and criminal law,[287] to regulatory topics like false advertising and employment discrimination. This paper has shown that – at least in the securities context – courts have used reasonableness as a proxy for a normative, behavior shaping, rationality standard. Empirical analysis of courts' treatment of reasonableness in other areas of law might result in similarly interesting results.

Whether certain behaviors are or are not ordinary and reasonable need not be resolved by informed judicial hunches. Courts have a fourth option: use of experimental evidence of human behavior to help guide the relevant decision makers to a better understanding of how individuals actually act. This option is to be preferred. Application of BLE should lead courts to a significantly more cautious approach toward presumed immateriality, or, at the very least, to more transparency about their ideological goals and the relationship between those goals and the purposes of the securities laws.

[287] *See, e.g.*, Ypsilanti v. General Motors, 201 Mich. App. 128 (1993) (considering if manufacturer's promises of continued employment in exchange for tax abatements were the kind of statements a reasonable person would rely on).