The No-Reading Problem in Consumer Contract Law

Alan Schwartz

Ian Ayres

Follow this and additional works at: https://digitalcommons.law.yale.edu/fss_papers

Part of the Law Commons

Recommended Citation

Schwartz, Alan and Ayres, Ian, "The No-Reading Problem in Consumer Contract Law" (2014). Faculty Scholarship Series. 5323.
https://digitalcommons.law.yale.edu/fss_papers/5323

This Article is brought to you for free and open access by the Yale Law School Faculty Scholarship at Yale Law School Legal Scholarship Repository. It has been accepted for inclusion in Faculty Scholarship Series by an authorized administrator of Yale Law School Legal Scholarship Repository. For more information, please contact julian.aiken@yale.edu.
THE NO-READING PROBLEM IN CONSUMER CONTRACT LAW

Ian Ayres* & Alan Schwartz**

Instead of promoting informed consumer assent through quixotic attempts to have consumers read ever-expanding disclosures, this Article argues that consumer protection law should focus on "term optimism"—situations in which consumers expect more favorable terms than they actually receive. We propose a system under which mass-market sellers are required periodically to engage in a process of "term substantiation" through which sellers would learn whether their consumers held accurate beliefs about the terms of their agreement. Terms that meet or exceed the median consumer's expectation would be enforceable even if buried or only available on request. But sellers could enforce unexpected, unfavorable terms only if they are disclosed in a "warning box" that has a government-provided standard border. To prevent overuse of the box, sellers would need (i) to exclude terms from the box that meet or exceed consumer expectations and (ii) to order terms in the box in descending order of consumer importance. Such a system of term substantiation coupled with targeted warnings about unexpected terms jettisons as unworkable the duty to read ideal. It instead economizes on consumers' scarce attention by increasing the salience of those terms that are most likely to inhibit informed consent. Term substantiation lets the representative consumer determine what sellers disclose and thus democratizes the content of form contracts.

We report the results of an original term-substantiation field experiment documenting user expectations concerning unread Facebook end-user license agreement provisions. Consistent with our analysis, we find that users can correctly evaluate many of these provisions. Importantly, we find that term optimism

* William K. Townsend Professor, Yale Law School.
** Sterling Professor, Yale Law School; Professor, Yale School of Management. This Article benefited from comments made at a Yale Law School faculty workshop, a Conference on Empirical Legal Studies presentation, and economics workshops at the University of Chicago and ETH Zurich. It further benefited from comments by Oren Bar-Gill, Robert Bartlett, Ryan Bubb, Zev Eigen, Abbe Gluck, Alvin Klevorick, Florencia Marotta-Wurgler, Noah Messing, Lior Strahilevitz, and Abe Wickelgren. Special thanks to Patrick Hayden for extraordinary assistance both in research and in implementing the Facebook testing presented in this Article. The authors are also grateful for the Oscar M. Ruebhausen Fund's generous funding of the field study discussed in this Article.
INTRODUCTION

Consumers seldom read the form contracts that firms offer. This failure is said to cause two problems. First, the consumer cannot be taken actually to consent to the legal relationship the form contract creates if the consumer is ignorant of that relationship. Second, competition cannot cause firms to improve contract quality because consumers cannot shop comparatively for terms of whose existence they are unaware. We focus here on the consent aspect of the “no-reading problem.”

Consumers’ failure to read occurs not only when consumers are understandably rushed, as at the rental car counter, but also when there is time. People rarely read the forest of trees that are harvested and mailed in the form of credit card and cell phone contracts, insurance policies, gym membership agreements, or mutual fund prospectuses. The data also suggest that people do not read important parts of one-time contracts such as home mortgage agree-
THE NO-READING PROBLEM

ments. More recently, evidence suggests that consumers seldom read Internet contracts, which contain many controversial provisions. Apple's iBook author end-user license agreement (EULA), for example, initially included a provision requiring any book created with its software to be sold through Apple. Google Chrome's original EULA granted Google virtually all rights to display and distribute content transmitted through its browser—"a perpetual, irrevocable, worldwide, royalty-free, and nonexclusive license to reproduce, adapt, modify, translate, publish, publicly perform, publicly display and distribute any Content which you submit, post or display on or through, the Services." As a dramatic example, PC Pitstop included a provision in its EULA that awarded "[a] special consideration which may include financial compensation...to a limited number of authorize licensee [sic] to read this section of the license agreement and contact PC Pitstop." Four months passed before a user noticed the clause and claimed the $1000 prize.

Turning to data, Florencia Marotta-Wurgler has detailed across a series of empirical studies the miniscule proportion of Internet contractors who read the terms of their contracts. In one study tracking the Internet browsing behavior


2. See John P. Mello Jr., Apple Scraps Controversial Terms in iBook Author EULA Agreement, TECHHIVE (Feb. 3, 2012, 5:29 PM), http://www.pcworld.com/article/249303/apple_scraps_controversial_terms_in_ibook_author_eula_agreement.html. Apple responded to the controversy surrounding its EULA with a modified version only requiring users to sell books created in the iBooks file format through Apple—a meager concession since this is the only format in which a book may be sold through Apple's iBooks Store. See id.


5. Id. Similarly, as an April Fools' Day prank in 2010, Gamestation put up spoof terms and conditions committing its United Kingdom consumers to sell their souls: "Should we wish to exercise this option, you agree to surrender your immortal soul, and any claim you may have on it, within 5 (five) working days of receiving written notification from gamestation.co.uk or one of its duly authorised minions." Lucy Kellaway, Pointless Conditions Should Not Apply: The Soporic Legalese of Online Transactions, FIN. TIMES (Jan. 23, 2011, 8:24 PM), http://www.ft.com/cms/s/0/7158c690-2596-11e0-8258-00144feab49a.html#axzz1zPmBwtyM (internal quotation marks omitted). Over 7000 consumers made a purchase from the site that day, all checking a box saying they understood the conditions, and "no one noticed a thing." Id.

of 45,091 households on sixty-six online software sites, Yannis Bakos, Florencia Marotta-Wurgler, and David Trossen found that “only one or two out of every thousand retail software shoppers chooses to access the license agreement, and those few that do spend too little time, on average, to have read more than a small portion of the license text.” Moreover, Marotta-Wurgler has found that enhanced disclosure of terms via “clickwrap” contracting (which requires buyers to click “I agree” near a hyperlink to the underlying terms) increases reading by only 0.36% more than “browsewrap” contracting (which allows buyers to purchase without seeing a prominent hyperlink to the underlying terms).

Contract law addresses the no-reading problem with the duty to read doctrine. Under this doctrine, parties are taken to agree to terms that they had the opportunity to read before signing. The doctrine “creates a conclusive presumption, except as against fraud, that the signer read, understood, and assented

---


7. Bakos et al., supra note 6, at 1.


9. For an exposition of the duty to read doctrine, see John D. Calamari, Duty to Read—A Changing Concept, 43 FORDHAM L. REV. 341 (1974). Courts have routinely relied upon the duty to read doctrine in enforcing contracts. See, e.g., Upton v. Tribilcock, 91 U.S. 45, 50 (1875) (“It will not do for a man to enter into a contract, and, when called upon to respond to its obligations, to say that he did not read it when he signed it, or did not know what it contained. . . . A contractor must stand by the words of his contract; and, if he will not read what he signs, he alone is responsible for his omission.”); see also John Hancock Mut. Life Ins. Co. v. Yates, 299 U.S. 178, 180 (1936) (“[W]hen the insured receives a policy, it is his duty to read it or have it read . . . .”); Brown v. E.F. Hutton Grp., Inc., 991 F.2d 1020, 1033 (2d Cir. 1993) (holding that allegedly unsophisticated investors’ failure to read securities disclosures was “reckless” and precluded them from bringing fraud claim); Rossi v. Douglas, 100 A.2d 3, 7 (Md. 1953) (“[O]ne having the capacity to understand a written document who reads it, or, without reading it or having it read to him, signs it, is bound by his signature.”). This obligation applies even to illiterate buyers. See, e.g., Johnnie’s Homes, Inc. v. Holt, 790 So. 2d 956, 960 (Ala. 2001); Secoulsky v. Oceanic Steam Nav. Co., 112 N.E. 151, 152 (Mass. 1916). For additional scholarship on the duty to read, see Douglas G. Baird & Robert Weisberg, Rules, Standards, and the Battle of the Forms: A Reassessment of § 2-207, 68 VA. L. REV. 1217 (1982); Russell Korobkin, Bounded Rationality, Standard Form Contracts, and Unconscionability, 70 U. CHI. L. REV. 1203 (2003); and Stewart Macaulay, Private Legislation and the Duty to Read—Business Run by IBM Machine, the Law of Contracts and Credit Cards, 19 VAND. L. REV. 1051 (1966).

10. For examples of the duty to read applied in the modern consumer contract context, see McKenna v. Metropolitan Life Insurance Co., 126 F. App’x 571, 574 (3d Cir. 2005) (holding that it was “unreasonable” for an insured consumer not to read his insurance policy); and Federal Trade Commission v. IFC Credit Corp., 543 F. Supp. 2d 925, 947 (N.D. Ill. 2008) (holding that consumers were responsible for reading telecommunications equipment leases).
to [the] terms." The presumption has long been justified as a necessary attribute of contracting regimes grounded in both efficiency and equity. For example, in Lewis v. Great Western Railway, the Court of Exchequer unanimously rejected counsel's argument that the plaintiff should not be bound to unread terms of the contract:

> It would be absurd to say that this document, which is partly in writing and partly in print, and which was filled up, signed, and made sensible by the plaintiff, was not binding upon him. A person who signs a paper like this must know that he signs it for some purpose, and when he gives it to the Company must understand that it is to regulate the rights which it explains. I do not say that there may not be cases where a person may sign a paper, and yet be at liberty to say, "I did not mean to be bound by this," as if the party signing were blind, and he was not informed of its contents. But where the party does not pretend that he was deceived, he should never be allowed to set up such a defence.12

The duty to read doctrine is contract law's analog to the assumption of risk doctrine in tort law. A buyer who could have read but did not assumes the risk of being bound by any unfavorable terms.

Consumer protection law responds to the doctrine by attempting to induce firms to create a real opportunity for consumers to read. Thus, firms cannot enforce terms that are hidden in fine print or written in obscure language; even prudent consumers who had diligently tried to apprise themselves of the offered terms would later be "surprised."13 The question whether the consumer plausibly could have read the contract also takes center stage when courts scrutinize Internet contracts. The "clickwrap" cases often turn on whether consumers could realistically have read the entire contract before agreeing to it.14

---

13. See, e.g., Harris v. Green Tree Fin. Corp., 183 F.3d 173, 181 (3d Cir. 1999) (internal quotation mark omitted) ("Procedural unconscionability pertains to the process by which an agreement is reached and the form of an agreement, including the use therein of fine print and convoluted or unclear language." (citing E. ALLAN FARNSWORTH, CONTRACTS § 4.28 (2d ed. 1990))).
14. "Clickwrap" generally refers to electronic agreements that automatically present contractual terms to a user and require the user to accept by affirmatively clicking an "I agree" icon. See generally Robert Lee Dickens, Finding Common Ground in the World of Electronic Contracts: The Consistency of Legal Reasoning in Clickwrap Cases, 11 MARQ. INTELL. PROP. L. REV. 379 (2007) (providing a background on "clickwrap").
15. See, e.g., Specht v. Netscape Commc'ns Corp., 150 F. Supp. 2d 585, 596 (S.D.N.Y. 2001) (refusing to enforce a clickwrap license where users were required to take no affirmative steps in acknowledging their understanding of the agreement and noting that "[m]utual assent is the bedrock of any agreement to which the law will give force"), aff'd, 306 F.3d 17 (2d Cir. 2002); see also Grosvenor v. Qwest Commc'ns Int'l, Inc., No. 09-cv-2848-WDM-KMT, 2010 WL 3906253, at *2 (D. Colo. Sept. 30, 2010) ("As a rule, a
turers and regulators commonly respond to the no-reading problem by requiring ever-widening sets of disclosures and initialing procedures that are meant to induce consumers to become informed about particular terms before becoming bound. Some legislatures have required contracting parties to include specific language or "magic words"; others require the prominent disclosure of particularly important terms. These legal requirements attempt to reduce consumers' cost of reading the contract.

The new requirements rest on questionable procedural and substantive premises, however. Procedurally, decisionmakers assume that requiring contract terms to be more conspicuous or written in simpler language, without more, will solve the no-reading problem. This premise founders on the avalanche of real-world evidence that virtually no one wants to read contract terms regardless of how accessibly rendered those terms are. Substantively, decisionmakers assume that consumers only learn terms by reading the contracts that contain those terms; hence, consumers who fail to read cannot know what their contracts say. Recent evidence contests this assumption. Consumers also learn about the deals they make from visiting firms, their experience with

---

16. See, e.g., Ian Ayres, Regulating Opt-Out: An Economic Theory of Altering Rules, 121 YALE L.J. 2032, 2079-80 (2012) (analyzing the Higher Education Opportunity Act of 2008, which employs an altering rule to ensure students are more informed about their loans). Our proposal might be conceived as a kind of altering rule. To write enforceable terms that are in derogation of the expectations of a majority of buyers, mass-market sellers must abide by the enhanced disclosure obligations set out below. See infra Part III.

17. In North Dakota, for example, a mortgagee may only waive her homestead exemption rights if the mortgage contains a specific statement "printed in a conspicuous manner" and "immediately followed by the date and the signature of the person to indicate that the person is specifically and knowingly waiving the exemption." N.D. CENT. CODE § 47-18-05.1 (2013). Similarly, under the Employee Retirement Income Security Act of 1974, federal law requires that a waiver of spousal rights to pension plans include "specific language" designating another beneficiary for survivor benefits. See Hagwood v. Newton, 282 F.3d 285, 291 (4th Cir. 2002).


THE NO-READING PROBLEM

Because the premises underlying current regulation are questionable, we take a different approach to the no-reading problem in this Article. The data show that consumers are aware of some contract terms but not others. For example, new car buyers know that the warranty does not last forever; that they cannot get a new car if the sound system is out of tune; and that they must take the car to an authorized dealer for service. On the other hand, it is less clear that consumers would expect their mortgage to have a prepayment penalty term or a forum selection clause requiring them to sue in a distant jurisdiction. Therefore, disclosure regulation would use consumers' limited cognitive capacities more efficiently if it directed consumers' attention to terms such as these that have two key features: they are unknown to many consumers; and they disadvantage the consumers. We capture these features in the phrase "term optimism," which exists when consumers expect a contract to contain more favorable terms than it actually provides. A consumer thus would be term optimistic if she be-

---

20. See, e.g., Zakaria Babutsidze, How Do Consumers Make Choices? A Survey of Evidence, 26 J. ECON. SURVS. 752, 756 (2012) ("[C]onsumer reports and dealer visits [are] the most widely used source[s] of information. Next come experts' and friends' opinions. Advertising and mass media score considerably lower . . . . More recent studies find that interpersonal relations are so important that consumers exhibit more faith in information obtained through their friends than the reasonable level." (citation omitted)); see also GOOGLE INC., ZMOT HANDBOOK: WAYS TO WIN SHOPPERS AT THE ZERO MOMENT OF TRUTH 46 (2012), available at http://ssl.gstatic.com/think/docs/2012-zmot-handbook_research-studies.pdf ("68% of consumers report using YouTube to browse and research retail companies." (italics omitted)); Benedict G.C. Dellaert & Gerald Häubl, Searching in Choice Mode: Consumer Decision Processes in Product Search with Recommendations, 49 J. MARKETING RES. 277, 277 (2012) ("[O]utside the contracts context, an effective means of assisting consumer search is to provide them with recommendations . . . . Such assistance may be provided by human advisors (e.g., sales assistants, financial advisors, real estate agents), but it is increasingly available in the form of recommendations that are generated automatically by information systems."); Kenneth Hendricks et al., Observational Learning and Demand for Search Goods, AM. ECON. J.: MICROECONOMICS, Feb. 2012, at 1, 1 ("A consumer’s decision to learn about a product can be influenced by the choices of other consumers . . . ."); Andrea Pozzi, Shopping Cost and Brand Exploration in Online Grocery, AM. ECON. J.: MICROECONOMICS, Aug. 2012, at 96, 97 ("E-retailers provide recommendations based on customer[ ]profiling . . . . These features can affect product exploration . . . . [T]hese practices are becoming ubiquitous . . . .").

21. There is a separate concern where consumers expect the inclusion of inefficiently unfavorable terms (for example, in the form of supracompetitive back-end fees) that can result when sellers cannot credibly commit to exclude these terms and instead compete by lowering the (front-end) price. See Michael S. Barr et al., The Case for Behaviorally Informed Regulation, in NEW PERSPECTIVES ON REGULATION 25, 47 (David Moss & John Cisternino eds., 2009). If consumers expect the terms, they will be correctly priced. Thus, these authors claim that the problem is cognitive error. Our empirical results, reported in Part IV, suggest, however, the possibility of term optimism, which would yield incorrect pricing.
lieved that her homeowner’s insurance policy covered damage from flooding when the policy actually excluded flood damage. Regulation should attempt to make this exclusion salient but ignore terms of which consumers are aware.\footnote{22}

More generally, the state should jettison the disclosure project of making \emph{all} terms accessible to consumers with the expectation that consumers can read the entire document. The read-all-the-terms project is both normatively unattractive and descriptively unattainable. The metagoal of contract formation policy is to make party assent real. The law of contractual assent, we argue, best implements this goal by permitting firms to enforce even poorly disclosed or hidden terms if consumers expect and understand what those terms do while regulating only those terms that consumers incorrectly believe are more favorable to them than they actually are.\footnote{23} Our scheme thus flips the traditional notion of the duty to read on its head.

The scheme rests on two key premises and raises two questions. Regarding the premises, as said above, the traditional knowledge prerequisite for "meeting of the minds" consent posits that reading the contract is the sole mechanism through which the nondrafter learns of her contractual rights and obligations. Nondrafters, however, learn of contract content through several channels. Because a party can be taken to consent to terms of which he is actually aware, we initially argue that the knowledge requirement is satisfied for parties who hold correct expectations regarding contract content, even if any such party has not read the terms at issue. Further, and more radically, we propose that the expectations of representative consumers should be sufficient to satisfy the knowledge prerequisite for informed consent.

The first question concerns how the decisionmaker is to know which terms consumers expect and in what direction their mistakes run. Here, we propose that "mass-market" sellers conduct "term-substantiation studies," similar in scope to the advertising substantiation studies that the Federal Trade Commission (FTC) currently requires, to assure the accuracy of certain advertising

\footnote{22. Part II defines term optimism more precisely. An optimistic term has two features: (i) the consumer is unaware of the term’s content; and (ii) the consumer assigns more positive utility or less negative utility to the term than he would have assigned had he known what the term actually does. The text above illustrates the mistakenly high-utility case: the consumer who is unaware of his insurance policy’s exclusion clause incorrectly assumes that he is covered for more categories of harm than he is in fact, so he attributes more utility to the insurance contract than the contract actually generates for him.}

\footnote{23. As explained below in Part III, the regulatory scheme we propose would encourage sellers to bury expected terms and instruct courts to enforce those terms even though consumers may have lacked a ready means of reading the terms prior to purchase. Our approach, that is, would \textit{discourage} consumers from reading terms whose substance the consumers expect in favor of reading terms whose presence in the contract would otherwise be regrettabley surprising.}
claims. In particular, the FTC should promulgate a rule requiring mass-market sellers periodically (i) to substantiate consumers' expectations about their contracts; and (ii) to warn consumers about terms that are unexpectedly unfavorable. Second, how should firms disclose unexpected terms? We propose that these terms should be presumptively enforceable if they are disclosed in a "warning box" with an FTC-provided standardized border. Because the warning box would have the same appearance regardless of the setting—whether it is in a car rental agreement or a refrigerator contract—consumers could quickly learn what the warning boxes do. To prevent sellers from misusing or overusing the box, sellers would need (i) to exclude terms from the box that meet or exceed consumer expectations; and (ii) to rank unexpected terms in the box in descending order of importance to the consumer.

This novel disclosure scheme may do better than existing regulations for three reasons. First, the consumer would have to focus only on a subset of payoff-relevant terms—those that are both materially disadvantageous and unexpected. Our proposal thus would likely reduce the number of terms that would need to be read and the concomitant time required to digest them. Second, the box format is more vivid than the formats current disclosure requirements utilize. Third, understanding the box format is a capital investment. Because the box would appear in connection with many transaction types, the consumer could amortize her initial learning cost over many purchases. Hence, consumers might pay attention from the start.

We close this Introduction with four remarks. First, we do not explain why term optimism exists. There can be many causes, such as consumer inexperience, cognitive bias, or seller advertising. The important point is that prior studies and ours show, as a matter of fact, that consumers attribute optimistic outcomes to some terms whose actual content they do not know. That the phenomenon exists is sufficient reason for regulatory concern. Second, we assume that consumers can rationally process the information that our disclosure scheme should induce. This assumption is made largely for methodological convenience. The issue here is how to make the consent of capable consumers

24. We consider below which firms should be classified as mass-market and what a term-substantiation study would look like. See infra Part III.

25. Recent studies suggest that the appropriate choice of format can materially influence consumer choice. See John Kozup et al., Sound Disclosures: Assessing When a Disclosure Is Worthwhile, 31 J. PUB. POL’Y & MARKETING 313, 315-16 (2012) ("[R]ecent research suggests that message format has profound effects on different attitudinal, belief, and knowledge variables. . . . [M]essage characteristics, such as the format of the label, can make a difference . . . [although] additional research on format specificity is necessary."); Vanessa G. Perry & Pamela M. Blumenthal, Understanding the Fine Print: The Need for Effective Testing of Mandatory Mortgage Loan Disclosures, 31 J. PUB. POL’Y & MARKETING 305, 307 (2012) ("[P]rior findings imply that disclosure information, in a clear and simple format, may have a positive effect on decisions . . . ").
to form contracts real. Our scheme could then be the benchmark from which deviations could be made in response to cognitive errors that affect contracting consent. Third, our proposal has a dynamic aspect. Disclosures should be updated as consumers learn of previously unknown contract terms or as firms change their contracts. Fourth, the proposal requires a multi-institutional response. Creating a warning format and a methodologically sound term-substantiation inquiry requires expertise; these also are public goods. As a consequence, we recommend that the FTC act initially to regulate the warning and term-substantiation tasks. Consumers should then be permitted to bring state court actions to enforce the requirements the FTC creates.

The remainder of this Article is divided into four Parts and a brief Conclusion. Part I sketches and criticizes current rules regulating when consumers should be taken to consent to the terms in form contracts. Part II presents a simple model of consumer contracting based on expected but unread seller terms. We explore equilibria in which sellers protected by the duty to read doctrine underprovide information about the terms of an agreement. In the model, uninformed consumers with pessimistic expectations about the terms they face may reject utility-maximizing contracts while uninformed consumers with optimistic expectations may accept utility-minimizing contracts. Firms have an incentive to cure pessimism because it costs them sales, but they lack an incentive to cure optimism because it induces excess demand. Hence, when the optimism effect dominates, firms operating under current law may offer disadvantageous unread terms because those terms are enforceable under the duty to read doctrine. It is this practice that our disclosure proposal addresses. We also use the model to show that effective disclosure of hidden disadvantageous terms would help consumers who are in, or about to be in, the market. Helping these consumers, that is, would also help those that follow because firms hide the terms that typical consumers would miss.

Part III lays out the details of our disclosure proposal and shows how it would increase efficiency. Part IV provides some empirical verification of the model’s predictions. We report on an initial attempt to show how term substantiation would work in practice by surveying 242 Facebook users about Facebook’s EULA. Consistent with our hypothesis, we found that many terms of the Facebook contract met or exceeded the expectations of Facebook users. But we also found several terms that were unexpectedly unfavorable for a majority of our survey respondents. For example, respondents were overly optimistic with regard to the privacy of their “public” posts. The survey results thus establish that term optimism exists and that a workable system of term substantiation can identify the optimistic terms and determine whether disclosure of them would affect consumer contracting decisions. A brief Conclusion follows.

26. See infra Part IV.B.
We end this Introduction with a reprise of our central message. Commentators and regulators are beginning to give up on disclosure solutions because they produce little consumer learning. This view mistakenly overestimates the task disclosure regulation should perform. Consumers learn contract-relevant information in a variety of ways, and these ways, data show, are effective. Disclosure regulation thus should focus on the relatively small subset of information that a contract can most efficiently convey. Even this overstates the disclosure task because markets induce firms to address the erroneous consumer belief that contracts are excessively disadvantageous. Disclosure regulation of contract form therefore has a much more manageable task than is commonly supposed: to correct only optimistic consumer mistakes regarding contract content. Switching to more coercive interventions, such as prohibiting terms, without a showing, not yet made, that disclosure cannot handle this truncated task would be premature. Our goal here is to clarify what the real disclosure task entails and to begin the work of showing that the state can accomplish it.

I. PRIOR ACADEMIC THEORIES AND LEGAL RESPONSES TO THE UNREAD CONTRACT PROBLEM

Whether courts should enforce unread terms in form contracts has been a central concern of both courts and contract scholars for decades.27 Flying under various flags, a vast literature grapples with the question of how courts should treat contracts of adhesion and boilerplate.28 Reform proposals are of two

27. See supra notes 9-12 and accompanying text.
types, both of which assume that actual consumer consent to a particular term is lacking. The first group of proposals is substantive: a public decisionmaker should decide whether the term is sufficiently conscionable to warrant enforcement. The second group of proposals is procedural: (i) a court should refuse enforcement of the term if the firm knew or should have known that the reasonable consumer would not expect it; and (ii) reforms should focus on reducing the consumer’s cost of reading the term. In this Part, we exhibit important difficulties with these reforms.

Karl Llewellyn’s early analysis of the form contract problem is emblematic of the former (substantive third-party review) approach:

Instead of thinking about “assent” to boiler-plate clauses, we can recognize that so far as concerns the specific, there is no assent at all. What has in fact been assented to, specifically, are the few dickered terms, and the broad type of the transaction, and but one thing more. That one thing more is a blanket assent (not a specific assent) to any not unreasonable or indecent terms the seller may have on his form, which do not alter or eviscerate the reasonable meaning of the dickered terms. The fine print which has not been read has no business to cut under the reasonable meaning of those dickered terms which constitute the dominant and only real expression of agreement, but much of it commonly belongs in

In Llewellyn’s view, the “true answer to the whole problem” of form contracts is to delegate to courts the tasks of assessing as a substantive matter whether particular terms are “unreasonable or indecent” and whether any such terms undercut the reasonable meaning of the dickered terms. Todd Rakoff’s proposed solution also delegates to courts the task of evaluating a term’s substantive fairness, but Rakoff flips the enforceability default. Rakoff proposes that “invisible” terms be presumptively unenforceable unless the drafter can show that the terms further legitimate contractual ends. The tendency of some modern courts to review form contracts for substantive fairness substantiates Llewellyn’s legacy.

Other scholars, including David Slawson and Arthur Leff, urge the government to evaluate particular terms before permitting firms to use them.

30. Id.
32. See id. at 1262-64.
33. See, e.g., Steven v. Fid. & Cas. Co. of N.Y., 377 P.2d 284, 295-98 (Cal. 1962) (providing a canonical example of California’s unconscionability doctrine).
34. See Leff, supra note 28, at 524 (“There is nothing to prevent a legislature from regulating certain particular contractual provisions out of existence, as they have done on innumerable occasions in the past.”); Slawson, Standard Form Contracts, supra note 28, at 558 (“There is no obvious reason, for example, why a court is not competent to review the
Slawson argues that standard form contracts should be regulated in the same way as proposed administrative agency rules. Sellers thus could not use particular terms unless they had survived a process of public notice and comment subject to protective limitation. Ex ante regulations of this kind, for example, have resulted in the prohibition of cross-collateralization clauses\(^\text{35}\) and mortgage prepayment penalties.\(^\text{36}\) Governmental ex ante assessment of term substance could also be used proactively to encourage best contracting practices. Israel, for example, has a quasi-administrative agency that sometimes prescreens potentially adhesive contracts and strikes out or amends terms that the agency believes are unfair.\(^\text{37}\)

Both ex post and ex ante substantive review are questionable for two reasons. To understand the first, assume that procedural defects are absent and consumers are informed, rational, and free from coercion. Under these circum-

\(^{35}\) Such clauses, also known as “dragnet clauses,” typically “state[] that the mortgage will secure not only the debt incurred in the instant mortgage transaction, but in addition all other debts or obligations that are presently owed or may in the future be owed to the mortgagor.” \textit{Restatement (Third) of Prop.: Mortgs.} § 2.4 cmt. (1997). While many states enforce these clauses, see, \textit{e.g.}, Lundgren \textit{v. Nat’l Bank of Alaska}, 756 P.2d 270, 277-78 (Alaska 1987) (surveying the case law of state dragnet enforcement, though ruling against the dragnet clause in the specific case); \textit{Citizens & S. DeKalb Bank v. Hicks}, 206 S.E.2d 22, 24 (Ga. 1974); \textit{Capocasa v. First Nat’l Bank of Stevens Point}, 154 N.W.2d 271, 274 (Wis. 1967), courts in other states have expressed skepticism over such clauses and, in some circumstances, have refused to enforce them, see, \textit{e.g.}, \textit{Nat’l Bank of E. Ark. v. Blankenship}, 177 F. Supp. 667, 673-74 (E.D. Ark. 1959), aff’d, 283 F.2d 574 (8th Cir. 1966); \textit{Wood v. Parker Square State Bank}, 400 S.W.2d 898, 902 (Tex. 1966).


stances, current freedom of contract theories hold that a consumer's consent to a term is binding unless the term creates a negative externality: that is, the existence of a procedural defect is a necessary condition for nonenforcement. Regulation should therefore focus on curing procedural defects. Second, there is no well-developed fairness theory to guide decisionmakers in regulating contract terms that are freely and rationally chosen and do not affect third parties. Hence, ex post review for substantive fairness would expose both sellers and buyers to ex ante uncertainty about which terms of a contract are enforceable. The lack of a widely accepted substantive fairness theory likely also would call into question the legitimacy and effectiveness of ex ante substantive regulation.

These concerns understandably lead lawmakers and scholars to focus on procedural solutions to the no-reading problem. The principal common law approach imposes a duty on sellers to correct consumer errors of which the seller was or should have been aware. Section 153 of the Restatement (Second) of Contracts, governing unilateral mistake, provides that a party's mistake as to a basic assumption on which the contract was made renders the contract voidable by the mistaken party if, inter alia, "the other party had reason to know of the mistake or his fault caused the mistake." The Restatement's regulation of "Standardized Agreements," in section 211, makes explicit that a court may re-

38. For example, Interactive Brokers has an innovative contract with its retail investor customers under which customers who buy on margin contractually waive the right to receive a telephonic margin call. See INTERACTIVE BROKERS LLC, INTERACTIVE BROKERS LLC AGREEMENTS AND DISCLOSURE DOCUMENTS 194, available at http://www.interactivebrokers.com/download/IB_LLCAgreementsandDisclosure_Packag e.pdf ("IB Will Not Issue Margin Calls: IB does not have to notify Customer of any failure to meet Margin Requirements prior to IB exercising its rights under this Agreement. Customer acknowledges that IB generally will not issue margin calls; generally will not credit Customer's account to meet intraday or overnight margin deficiencies; and is authorized to liquidate account positions in order to satisfy Margin Requirements without prior notice."). Instead, the brokerage sends a message to the client, and absent a timely deposit of funds, automatically closes a sufficient portion of the position to reestablish the requisite margin amount. Id. A problem with ex post scrutiny of the transaction's conscionability is that it may be difficult for the brokerage or its clients to be confident that this time-saving waiver will be enforced.

39. Notwithstanding these concerns, one of the authors believes that both ex ante and ex post substantive protections, if properly crafted, can usefully complement the reforms suggested in this Article.

40. RESTATEMENT (SECOND) OF CONTRACTS § 153(b) (1981); see also id. § 20(2)(a) (explaining that the meaning that a consumer attaches to a contract can prevail if "[the consumer] does not know of any different meaning attached by the other, and the other knows the meaning attached by the first party"); id. § 161 ("A person's non-disclosure of a fact known to him is equivalent to an assertion that the fact does not exist . . . where he knows that disclosure of the fact would correct a mistake of the other party as to a basic assumption on which that party is making the contract and if non-disclosure of the fact amounts to a failure to act in good faith and in accordance with reasonable standards of fair dealing.").
fuse enforcement of procedurally unconscionable contracts that the consumer did not read. Subsection 3 of section 211 provides: "Where the other party has reason to believe that the party manifesting such assent would not do so if he knew that the writing contained a particular term, the term is not part of the agreement."\(^4^1\) Comment b to this section provides: "Customers do not in fact ordinarily understand or even read the standard terms. They trust to the good faith of the party using the form . . . . But they understand that they are assenting to the terms not read or not understood, subject to such limitations as the law may impose."\(^4^2\)

Section 211 thus deploys a "blank check" analogy to define the limits of consumer assent:

Although customers typically adhere to standardized agreements and are bound by them without even appearing to know the standard terms in detail, \textit{they are not bound to unknown terms which are beyond the range of reasonable expectation}. A debtor who delivers a check to his creditor with the amount blank does not authorize the insertion of an infinite figure. Similarly, a party who adheres to the other party's standard terms does not assent to a term if the other party has reason to believe that the adhering party would not have accepted the agreement if he had known that the agreement contained the particular term.\(^4^3\)

This comment—which announces what is sometimes referred to as the "doctrine of reasonable expectations"\(^4^4\)—assumes, as do we, that consumers can have a "range of reasonable expectation[s]" about the content of unread terms. Section 211 tasks courts with identifying those expectations and deciding whether a consumer would have rejected the contract if she had known that the contract contained the unexpected terms.\(^4^5\) Even substantively conscionable provisions are unenforceable if they fail this counterfactual test. Section 211

\(^{41}\) \textit{Id.} § 211(3); see also Wayne R. Barnes, Toward a Fairer Model of Consumer Assent to Standard Form Contracts: In Defense of Restatement Subsection 211(3), 82 \textit{WASH. L. REV.} 227, 249 (2007) ("In this subsection, the 'other party' is almost invariably the business that drafted the standard form, and the party which appears to manifest assent is the consumer entering into the transaction with the business.").

\(^{42}\) \textit{RESTATEMENT (SECOND) OF CONTRACTS} § 211 cmt. b.

\(^{43}\) \textit{Id.} § 211 cmt. f (emphasis added).


\(^{45}\) James J. White credits an attorney (a "Mr. Willard") with introducing the "would not [have] assent[ed]" restriction. White, \textit{supra} note 28, at 321 n.13 (quoting Friday Afternoon Session, 47 A.L.I. PROC. 485, 528 (1970)). During a debate on this issue with Allan Farnsworth, Mr. Willard reasoned, "[M]any of us have signed contracts containing provisions that we wish weren't in there, but on balance we thought: All right, we want the contract, and we have to take the good with the bad." \textit{Id.} at 322 n.13 (quoting Friday Afternoon Session, \textit{supra}, at 528). But Willard's reasoning loses force with respect to unread terms, because these buyers are not knowingly taking the good with the bad.
thus qualifies the conclusive enforceability presumption of the duty to read. Terms that a buyer had an opportunity to read may not be enforceable if the seller had reason to know that the terms contradicted the buyer's reasonable expectations.

Section 211 is unsatisfactory for two related reasons. First, what consumers expect in fact is difficult for courts to know without term-substantiation studies of the type we propose. Second, and likely in consequence of the first reason, the comments to section 211 suggest that it calls for a normative inquiry. The question under this section is not whether the contract and the consumer's actual beliefs are inconsistent. Rather, the court is told to attribute inconsistent beliefs to the consumer when the court dislikes the term at issue. The comment provides:

Such a belief or assumption may be shown by the prior negotiations or inferred from the circumstances. Reason to believe may be inferred from the fact that the term is bizarre or oppressive, from the fact that it eviscerates the non-standard terms explicitly agreed to, or from the fact that it eliminates the dominant purpose of the transaction. The inference [of inconsistency] is reinforced if the adhering party never had an opportunity to read the term, or if it is illegible or otherwise hidden from view. This rule is closely related to the policy against unconscionable terms and the rule of interpretation against the draftsman.

Few courts have relied on this section to strike unread terms except in insurance cases. James J. White attributes this reluctance to the tendency of courts to ignore the scienter requirement in the context of insurance cases; these cases change the issue from whether the seller had knowledge of actual consumer expectations to whether the term went beyond the consumer's reasonable expectations. A better way to put White's point is that section 211 invites courts to engage in substantive fairness regulation under the guise of procedural fairness regulation. American courts commonly decline such invitations.

The UNIDROIT Principles of International Commercial Contracts relaxes the Restatement requirement that the drafter must know or have reason to know that a term is unexpected. Rather, it is enough that the term is beyond the consumer's reasonable expectations. Article 2.1.20 provides in part: "(1) No term contained in standard terms which is of such a character that the other party could not reasonably have expected it, is effective unless it has been expressly accepted by that party." Such normative inquiries are questionable for the reasons given.

46. See Barnes, supra note 41, at 268.
47. RESTATEMENT (SECOND) OF CONTRACTS § 211 cmt. f (emphasis added).
49. UNIDROIT PRINCIPLES OF INT'L COMMERCIAL CONTRACTS art. 2.1.20 (Int'l Inst. for the Unification of Private Law 2010); see also White, supra note 28, at 315 ("In a consumer
The American Law Institute's *Principles of the Law of Software Contracts* illustrates procedural approaches to the no-reading problem that attempt to inform consumers about terms, or at least increase the consumer's opportunity to become informed:

The preferred strategy of these Principles is to establish and encourage transferor best practices that promote reading of terms before a transferee commits to a transfer, which, in turn, should decrease the instances of market failure. A secondary strategy is to increase the opportunity to read, even if transferees continue not to read all or most of the terms for all of the heretofore discussed reasons. Increasing the opportunity to read supports autonomy reasons for enforcing software standard forms and substantiates Karl Llewellyn's conception of transferees' "blanket assent" to reasonable standard terms, so long as they have had a reasonable opportunity to read them. Blanket assent means that transferees have delegated to the drafter the duty of drafting reasonable boilerplate terms, just as they delegate to software transferors and engineers the duty of creating the appropriate software for the task at hand.50

This Article rejects the notion that "promoting reading of terms" should be the "preferred strategy." The secondary strategy of increasing the "opportunity to read" also is misanalyzed. The passage claims that "the opportunity to read...substantiates Karl Llewellyn's conception of transferees' 'blanket assent' to reasonable standard terms, so long as they have had a reasonable opportunity to read them."51 Putting aside the redundant repetition of "opportunity," nothing in Llewellyn's theory of blanket assent requires consumers to have an opportunity to read. Consumers could delegate to the drafter the duty of drafting reasonable boilerplate terms, even (indeed, especially) if they lack a ready opportunity to read them at the time of conferring blanket assent. We support the unexceptional notion that consumers have an opportunity to read the terms of their agreements, but enlightened policy about the formal procedures needs to be much more cognizant of the blinding reality that the majority of terms under any disclosure regime will remain unread by the vast majority of contractors. The approach taken here thus differs materially from the approaches just summarized. Our concern is whether actual consumer mistakes induce firms to offer inefficient contracts.

Part II next shows that contracts are inefficient when consumers are mistakenly optimistic or pessimistic about contract content. In the former case, the

---


51. Id.
seller degrades contract quality excessively; in the latter case, some consumers reject contracts whose prices are below the value to those consumers. Our disclosure scheme responds more directly to the optimism concern, but it would partly ameliorate the pessimism concern because it calls consumer attention to terms about which mistakes most commonly are made. As appears in more detail below, we recommend targeted disclosures to promote consumer autonomy.52 But, unlike the previously mentioned disclosure schemes, our evidence-based procedure requires disclosure only of terms that consumers believe are more favorable to them than the terms actually are. Our approach ultimately relies on the ability of consumers that have targeted information about these unexpected terms to protect themselves, but in that effort we enlist the sellers to uncover, once again through a process that we call “term substantiation,” whether the median consumer has accurate beliefs about her contractual rights and duties. Like Todd Rakoff, we propose that “invisible” terms of mass-market contracts be presumptively unenforceable.53 But unlike Rakoff, who would require sellers to bear the burden of defending the substantive fairness of their terms, we would have sellers bear the procedural burden of showing either that a majority of consumers expected the term or that the term had received the heightened disclosure.

II. ANALYZING CONSUMER EXPECTATIONS

We next ask how a market behaves when the no-reading problem exists: that is, when sellers maximize profits but only a subset of consumers has correct expectations. Because our concern is disclosure, we abstract from competition issues to model a market with one seller. The model yields three results. First, the principal policy concern is optimism: contracts fall in quality as consumers become more optimistic about their content. Optimistic consumers are

52. The goals of promoting autonomy and efficiency may at times diverge. While we emphasize the efficiency-enhancing effects of our proposal, autonomy advocates might embrace our proposal because it is less likely to bind consumers to unfavorable terms that they did not expect.

53. Rakoff insightfully appreciated that the line that divides visible from invisible terms is different from the line that divides dickered from nondickered terms:

In language an adherent might use, we must separate the “visible” terms of the contract from the “invisible” ones. Bargained terms are, of course, visible; but a term does not become invisible merely because it was presented by the drafting party on a take-it-or-leave-it basis. If we follow the dynamics of the practice we have investigated, we must also include within the set of visible terms those for which a large proportion of adherents (although not necessarily all) may be expected to have shopped; for bargaining is not essential to protect adherents as long as shopping concerning the particular term takes place.

Rakoff, supra note 28, at 1251. But unlike Rakoff’s visual image, we would find some terms to be visible based on widely shared consumer expectations even if the terms were literally never seen by consumers.
willing to pay too much for bad contracts so the seller has too little incentive to offer good contracts. Second, uninformed consumers who are “in” the market are relevantly alike: that is, all of them would benefit from disclosure of the same unexpectedly disadvantageous terms. As a consequence, a term-substantiation study that focuses on actual or potential buyers would have external validity. In the model here, consumers with minority preferences with respect to contract terms are not in the market at all. Third, having several sellers has an additional virtue: the market may serve consumers with minority preferences.

A. Efficiency and Mistakes

Two types of inefficiency may be present in the context we analyze. Both are conveniently introduced by considering predatory lending, which is said to exist in connection with credit card and mortgage contracts and payday loans. For convenience, we focus on credit cards.

The first type of inefficiency involves “state-of-the-world” mistakes. The consumer may make a state-of-the-world mistake either because he lacks information or because his choice is a product of cognitive bias. Suppose then that the consumer knows that he must pay a large late fee if he misses a monthly credit card payment. The consumer agrees to the contract nevertheless either because he is myopic and thus focuses only on the good consequences for him of a low introductory fee\(^5\) or because he is present-biased and overestimates his ability to stick to a timely payment schedule.\(^5\) The consumer accordingly purchases an inefficient credit card contract, not because he is unaware of the late payment penalty, but because he fails to appreciate that consumers like him often have to pay large penalties.\(^6\)

The second type of inefficiency involves “term” mistakes. The consumer may be informed and capable of making rational decisions, but she does not

---


\(^5\) Present bias is said to cause consumer mistakes in connection with credit card contracts in Paul Heidhues & Botond Köszegi, *Exploiting Naïvete About Self-Control in the Credit Market*, 100 AM. ECON. REV. 2279 (2010). Heidhues & Köszegi and Bar-Gill & Bubb implicitly assume that consumers know what their contracts say.

\(^6\) State-of-the-world inefficiency may present itself broadly. For example, a consumer fails to understand a transaction’s consequences if she underestimates her cell phone use, the likelihood of her defaulting on a loan, or the probability that a product is defective. *See* OREN BAR-GILL, SEDUCTION BY CONTRACT: LAW, ECONOMICS, AND PSYCHOLOGY IN CONSUMER MARKETS 7 (2012) (noting that one of the main “tenets” of “behavioral-economics theory” assumes that “[c]onsumers’ purchasing and use decisions are affected by systematic misperceptions”).
know that she is liable for a penalty if her payment is as much as a day late or the size of that penalty. Had she been aware of the complete credit card contract, she either would have used another card or switched to a debit card. The consumer made an inefficient mistake because she failed to understand the legal relationship the contract created.

The no-reading problem involves term-mistake inefficiency. Therefore, solving the problem in a particular context may leave the inefficiency from a state-of-the-world mistake unaffected. For example, our reform would increase the probability that consumers are aware of contractual penalties for late credit card payments but would not reduce the probability that a consumer’s acceptance of a particular credit card contract is biased or uninformed. Nevertheless, we focus here only on inefficiencies that flow from term mistakes—not knowing the rights and responsibilities that particular contracts create.  

It is helpful to begin by defining term mistakes more precisely. Let a contract have $T$ total terms. As in the analysis above, we assume that consumers come to know the content of a subset of terms: $t_i \in T$. For example, the consumer knows the price and the delivery date. The consumer also knows that terms probably exist the content of which he is specifically unaware. A consumer is “term optimistic” when he believes his utility is nondecreasing in the “hidden” $T - t_i$ terms. In other words, the consumer either believes that what he does not know will not hurt him, or that what he does not know is good for him. As an example of the former mistake, the consumer erroneously thinks that the contract lacks unfavorable procedural terms (e.g., he is required to return the product to the seller in ten days to make a warranty claim); as an example of the latter mistake, the consumer erroneously thinks that the substantive terms are

---

57. One might, however, imagine extending our proposal to require enhanced warning to correct state-of-the-world optimism. Thus, for example, au pair providers might inquire into whether clients have systematically optimistic views about the probability of having to “rematch” (i.e., send away an initial au pair from your family and seek a replacement). See CV Harquail, How to Rematch: Share Your Best Practices, AUPAIRMOM (Apr. 16, 2013), http://aupairmom.com/how-to-rematch-share-your-best-practices/2013/04/16/celiaharquail. Indeed, one might imagine using seller substantiation and disclosure to respond to other forms of optimism—including attribute optimism (e.g., consumers mistakenly believe their iPhone screen will not scratch) and competition optimism (e.g., consumers mistakenly believe their cell phone contract is less expensive than those offered by competitors). See infra note 87 (suggesting that the concepts of optimism and substantiation may apply to default rules as well). We focus here on term optimism, not because these other possibilities for unpleasant surprises are unimportant, but because promoting informed assent as to legal rights and duties is a core concern of contracting and because applying the substantiation idea to these other areas would require a separate analysis. See, e.g., Frédéric Koessler & Régis Renault, When Does a Firm Disclose Product Information?, 43 RAND J. ECON. 630, 631-32 (2012).

58. Regarding this notation, a partly informed consumer knows $t_i$ terms where $i \in [1, T-1]$. In the example above, $i = 2$. 
more favorable than they are in fact (e.g., he thinks the warranty is broader than it actually is). A consumer is “pessimistic” when he believes his utility is nonincreasing in the $T - t_i$ hidden terms. Thus, a New York consumer believes that the contract requires him to litigate warranty claims in Oregon when the contract actually lacks a forum selection clause. A consumer has “correct” expectations when (i) he has come to know the content of all $T$ terms or (ii) the subjective utility he assigns to the hidden $T - t_i$ terms sums to the utility he would assign to those terms had he known them.

B. Summary of the Analysis

The analysis in Subparts C through E below is technical in places. We summarize the argument informally here. Readers who are uninterested in the technical details should read the propositions and the remarks that follow each of these Subparts and then turn to Subpart F.

We begin by assuming that all consumers have correct expectations, as just defined, and show that the monopoly seller nevertheless may offer an inefficient contract. First, assume that the seller is facing a population of informed consumers who differ in the utility they derive from contract terms. For example, some consumers value warranty protection more than others do. The utility that the “marginal consumer” derives from the contract equals the utility he would lose by parting with the contract price. Because there is a population of consumers that differ in the value they place on contract quality, some consumers also must have “average” valuations; they are in the middle of the consumer population. The seller focuses on the preferences of the marginal consumer because, if he mistakes those, marginal consumers may exit the market.

Now assume that the seller is considering whether to increase contract quality. For example, he may offer a broader warranty. Consumers value the broader warranty but it is more costly for the seller to offer. The question the seller thus asks is whether the marginal consumer’s willingness to pay for a higher quality contract would increase by as much as or more than the seller’s increased cost. Suppose that the marginal consumer’s willingness to pay, say for a better warranty, would increase by $x$ while the average consumer’s willingness to pay would increase by $y$, greater than $x$. If the cost of the increase is $z$, which exceeds $x$, the marginal consumers would drop out if the seller broadened the warranty; and because the seller focuses on the marginal consumer, the seller would leave the contract unchanged. It is possible, though, that $y$ is greater than $z$: that is, the average consumer’s willingness to pay for warranty protection would increase by more than the cost of the better warranty. Therefore, when the sensitivity of average consumers to increases in contract quality exceeds the sensitivity of marginal consumers, contracts will exhibit inefficiently low quality even when demand is “correct”: that is, when all consumers have correct expectations. The average consumer would be willing
to bear the cost of an increase in contract quality but the seller will not make that increase.

This analysis raises two questions: (i) what is the relationship between the average consumer's and the marginal consumer's willingness to pay for quality in "markets for contracts"? and (ii) if the relationship is as in the example just above, does term optimism or term pessimism make matters worse? Before reaching these questions, we relax the assumption that demand is correct, and then show that markets are flawed more by optimism than by pessimism. Some pessimistic consumers will not contract when they incorrectly believe that the utility a contract would provide them is less than the price, and those pessimists who are in the market have an artificially low willingness to pay. Hence, the seller has an incentive to cure pessimistic mistakes. With respect to optimists, these consumers are either incorrectly in the market or are correctly in the market but willing to pay too much for what they get. The seller has no incentive to inform the optimists.

We next argue, using a game-theoretic analysis, that the relationship between average and marginal willingness to pay in contract markets is as set out in the warranty example. Hence, the seller, as a general matter, will degrade contract quality even when he faces correct demand. Relevant here, term optimism exacerbates the problem. Because optimists have an artificially high willingness to pay, their presence widens the gap between the average and marginal consumers. Put another way, optimists punish the seller less than informed consumers for degrading contract quality because the optimists are willing to pay too much for whatever contract the seller offers. Accordingly, the more optimists there are in a market, the worse market contracts are for everyone. Finally, though we formally consider the one-seller case, the analysis is relevant when several sellers exist for two reasons. First, sellers have local market power when consumers face positive search and switching costs; our analysis applies to these realistic cases. Second, we recommend a standard disclosure format, so our proposal would reduce the cost to consumers of comparing contracts across firms.

We conclude, therefore, that disclosure should focus on reducing term optimism. Subparts C and D contain more rigorous demonstrations of the points summarized here. Subpart E, which is more accessible than the intervening

59. A consumer's total cost of search comprises the cost of comparing the contracts of competing firms and the cost of learning about the associated contracts. When search costs, so defined, are zero, competition compels firms to offer efficient contracts. Search costs are often positive, however, and can disadvantage consumers. As an example, one recent study found that borrowers sacrifice at least $1000 by not shopping around enough for mortgage brokers. See Susan E. Woodward & Robert E. Hall, Diagnosing Consumer Confusion and Sub-Optimal Shopping Effort: Theory and Mortgage-Market Evidence, 102 AM. ECON. REV. 3249, 3249 (2012).
analyses, then shows how sellers attempt to bury just those terms on which public policy should focus.

C. The Benchmark Case of Correct Demand

A monopolist seller produces a good and an associated contract. Consumers are risk averse, and both consumer utility and seller cost are increasing in contract quality. Denote output as \( x \) and contract quality as \( k \). A consumer's expected utility for a product-contract combination thus is \( v(x, k) = v \), which is distributed on \( G \). The support of \( G \) is \([0, \infty)\).\(^{60}\) We assume that \( \delta v/\delta k > 0 \) and \( \delta c/\delta k > 0 \).\(^{61}\)

To begin, let all consumers have correct expectations: consumers believe the contract has quality \( k \) when the contract has quality \( k \). At price \( p \), the expected utility of buyers who contract is value less price:

\[
-p + \int_{v \geq p} (v - p) dv
\]

The valuation of the marginal buyer solves this as an equality. Denote the marginal buyer value at price \( p \) and contract \( k \) as \( v_0 \).\(^{62}\)

Social welfare \( W \) is the difference between consumer utility and seller cost.

\[
W(x, k) = v(x, k) - c(x, k)
\]

The seller, however, maximizes the difference between price and its cost for the quality/contract pair.

\[
Max_{x, k} = p(x, k)x - c(x, k)
\]

The seller's first-order condition for contract quality is:

\[
\frac{\delta p(x_m, k_m)}{\delta k} x_m = \frac{\delta c(x_m, k_m)}{\delta k}
\]

Marginal revenue—the left-hand side—equals marginal cost—the right-hand side.

We are interested in the effect on social welfare of marginal changes in contract quality at the seller's optimal output. Differentiating Equation 1 with respect to quality yields\(^{63}\):

\[60\text{ We constrain the seller to offer the same contract to everyone because we are interested in how heterogeneous buyer expectations affect contract content. This assumption rules out price discrimination. We note that consumers in the model differ in two dimensions: as said above, they hold different beliefs about contract content, and some care more about contract quality than others do.}\]

\[61\text{ As an example of what these inequalities represent, consumers get more utility from a broader warranty than from a narrower warranty, but a broader warranty is more costly for the seller to offer.}\]

\[62\text{ We assume for convenience that consumers value the product equally but have different preferences over the associated contract.}\]

\[63\text{ We omit subscripts for convenience.}\]
The difference in social welfare from increasing contract quality is the difference in the consumer’s marginal utility gain less the marginal cost of providing a higher-quality contract.

The policy-relevant concern is whether the seller under- or overproduces contract quality. To determine which is the case, substitute the seller’s first-order condition into the solution to the social welfare maximization problem.

\[
\frac{\delta W(x,k)}{\delta k} = \frac{\delta v(x,k)}{\delta k} - \frac{\delta p(x,k)}{\delta k} \tag{2}
\]

The first term on the right-hand side of Equation 2 is the marginal utility gain from an increase in contract quality; the second term is the marginal cost. Social welfare would be maximized—contract quality would be at the optimal level—when the right-hand side equals zero: then, the marginal utility from further increasing contract quality would equal the marginal cost. Both right-hand side terms in Equation 2 are positive, however. Hence, there is no a priori way to sign the right-hand side. In other words, the welfare effect of an increase in contract quality appears analytically ambiguous.

We proceed by letting \( p(x,k) \) be a consumer’s reservation price: a consumer would be marginal—would derive no surplus from purchasing—at \( p(x,k) \). Hence, \( v(x,k) \) sums the reservation prices. Then this sum divided by output \( x \) yields the average willingness to pay. We can insert the values for the marginal willingness to pay—\( p(x,k) \)—and the average willingness to pay into Equation 2 by dividing each side by \( x \).

\[
\frac{1}{x} \frac{\delta W(x,k)}{\delta k} = \frac{\delta}{\delta k} \left[ \frac{v(x,k)}{x} - p(x,k) \right] \tag{3}
\]

Interpreting Equation 3, contract quality would be at the social optimum when the average consumer’s willingness to pay for contract quality increases with increases in quality at the same rate as the marginal consumer’s willingness to pay increases. Intuitively, the seller focuses only on the reaction of the marginal consumer to changes in contract quality. Therefore, when the average willingness to pay increases at a greater (or lesser) rate than the marginal willingness to pay, the seller produces too little (or too much) contract quality relative to the social optimum.

In the consumer context, a high-quality contract provides more protection to a risk-averse consumer—a broader warranty, a narrower security interest—than a low-quality contract provides. Because there is a distribution of consumer preferences regarding quality, and the average is taken over all the consumers in the market, the average consumer must have a stronger preference for protection—for contract quality—than the marginal consumer has. There is, then, no reason to believe that the marginal consumer is as sensitive, or more sensitive, to increases in the protection his contract offers than the average consumer. This reasoning supports:
**Proposition 1.** Even when the demand curve is correct, contract quality probably is too low.\textsuperscript{64}

**Remark 1.** The assumption that the seller has market power drives this result, so increasing competition would tend to increase efficiency. However, when consumer demand is based on mistaken quality beliefs, increased competition may not help.\textsuperscript{65}

**Remark 2.** Adding optimists raises the market average of willingness to pay, which suggests that contract quality is lower when there are optimists than when demand is correct. Subparts D and E establish this conjecture.

**D. Mistaken Demand**

The seller's demand at any price $p$ is the number of buyers who make contracts at this price. In the analysis above, demand was correct: there were $x$ consumers, all of whom were informed. To understand how mistaken demand presents itself, we define term mistakes more precisely. Consumers, recall, are aware of $t_i$ terms, from which they derive utility $v(t_i) > 0$.\textsuperscript{66} A consumer who is aware of all $T$ contract terms would derive utility $v(T)$. The consumer assigns a subjective utility of $v(T - t_i)$ to the terms she does not know. Hence, the consumer's demand is correct when $v(t_i) + v(T - t_i) = v(T)$.

We begin with pessimists when analyzing mistakes. Let $v^*$ be the utility that a consumer would assign to the unknown $T - t_i$ terms if she knew what they were. For a pessimist $v^* > v(T - t_i)$: she underestimates the utility that she would actually derive from the unknown terms. Pessimists are of two types: The first type is in the market: $v(t_i) + v(T - t_i) \geq p$. This result obtains because $v^* > v(T - t_i)$. The second is not in the market: $v(t_i) + v(T - t_i) < p$, but $v(t_i) + v^* < p$. This pessimistic consumer would have been in the market had she been correctly informed. Her absence is inefficient. The seller's price equals or exceeds his costs, so the pessimistic consumer would derive more utility from the contract than the contract costs the seller to offer. We let $0 \leq \beta \leq 1$ represent such consumers.

Turning to the term optimists, $v^* < v(T - t_i)$: she overestimates the utility that she would actually derive from the unknown terms. Some optimists incor-

---

\textsuperscript{64} This proposition parallels an analogous result of A. Michael Spence, *Monopoly, Quality, and Regulation*, 6 BELL J. ECON. 417 (1975), which demonstrates that monopolists maximize profits by attending to quality preferences of the marginal, and not the average, purchaser. \textit{Id.} at 419-22.

\textsuperscript{65} See supra note 59 (describing search costs). We assume here that search costs, especially the costs of learning the contract, are positive. Bad contracts, accordingly, may drive out good contracts in an otherwise competitive environment. See Alan Schwartz, *How Much Irrationality Does the Market Permit?*, 37 J. LEGAL STUD. 131, 149 (2008).

\textsuperscript{66} The consumer derives positive utility from the terms she knows because, we assume, people do not knowingly purchase negative utility contracts.
rectly believe that contract \( k \) is more favorable to them than it actually is but they nevertheless reject \( k \); even their mistaken valuations are too low. We ignore this set because they would not have contracted even were they correctly informed. Of the remaining optimists, some would have contracted if their expectations had been appropriately reduced. The optimists who cause concern satisfy two inequalities: (1) \( v(t_i) + v(T - t_i) \geq p \), but (2) \( v(t_i) + v^* < p \). These consumers are in the market—Inequality 1—but they would have been out of the market were they correctly informed—Inequality 2. We let \( 0 \leq \lambda \leq 1 \) represent such consumers, and their presence is inefficient: that they would have rejected the contract at price \( p \) implies that most of them would derive less value from the contract than it costs to produce.

To complete this picture, recall that some pessimists and optimists would have been in the market even with corrected expectations, and that some consumers actually have correct expectations. All of these consumers are correctly in the market and we let \( 0 \leq \alpha \leq 1 \) represent them. We now denote potential demand at price \( p \) as \( x' \) in number consumers. The seller’s actual demand when consumers may have incorrect expectations thus is:

\[
x' \{ \alpha + [ (1 - \alpha) \lambda - (1 - \alpha) \beta ] \}
\]

The first term in braces is the portion of potential demanders who are in the market with effectively correct expectations; the first term in brackets is the portion of potential demanders who are mistakenly in the market because they are optimists; and the second term is the proportion of potential demanders who are mistakenly absent from the market because they are pessimists. The correct demand, as above, is \( x \), which obtains when \( \alpha = 1 \); then all consumers are informed.

If the term in brackets is negative, then the true demand \( x \) exceeds the uninformed demand. This apparently is the less serious case. When demand is inadequate, the seller has an incentive to correct mistakes: that is, the seller attempts to disclose so that demand increases to \( x \). On the other hand, there is incorrect demand with certainty if the term in brackets is positive. This requires \( \lambda > \beta \): there are more optimists wrongly in the market than there are pessimists wrongly out of the market. The seller does not have an incentive to exclude consumers who are willing to contract. This leads to:

*Proposition 2.* When some consumers hold incorrect expectations, the seller may face excess or insufficient demand for contract quality relative to the fully informed case; the seller has an incentive to correct only mistaken expectations that cause insufficient demand.

*Remark 3.* Because disclosure formats, such as the warning box, are public goods, a seller may be unable fully to correct pessimistic mistakes on its own.

67. When the seller has market power, excess (net optimistic) demand may at times counteract the deadweight loss of supracompetitive pricing.
Proposition 2's emphasis on the optimistic case is basically true under a weaker assumption, however. The seller costlessly retains optimists in the market but must incur costs to induce pessimists to enter. Thus, sellers will not attempt to correct mistakes unless they face many more pessimists than optimists.

E. The Term Optimism Problem

We next revisit the benchmark case, in which consumers have correct expectations, using a game-theoretic analysis, as a premise to showing more clearly how optimistic consumer errors induce sellers to degrade contract quality. The seller offers a joint “product”: the good and the associated contract. Let $k^*$ be the “correct” contract: $k^*$ is the contract the seller would offer when consumers are aware of all $T$ terms. The seller increases output until marginal revenue equals marginal cost. Denote the resultant price $p(k^*)$. We first argue that the pair $(k^*, p(k^*))$ would not exist in equilibrium. To see why, consider a consumer who is marginal at $p(k^*)$ when the contract is $k^*$. This consumer realizes no surplus because the price just equals her valuation. The seller, however, realizes positive surplus—$s^*$—from every buyer because the monopoly price exceeds cost. The seller’s profit is $S^* = \sum s^*$. Now let the seller reduce contract quality slightly below $k^*$ but continue to charge the price $p(k^*)$. Consumers who are marginal at $p(k^*)$ would exit; they would incur losses under the inefficient contract. The inframarginal consumers would stay, and the seller would realize a higher surplus—say $S^h$—from these consumers because contract cost would fall with contract quality. The seller now earns $S^h = \sum_{s=m}^{x} s^h$, where $m$ is the number of marginal consumers who exit. Reducing contract quality slightly below $k^*$ is a profitable seller strategy—$S^h > S^*$—in the usual case, in which there are many more inframarginal consumers than marginal consumers. Thus, $k^*$ is not an equilibrium contract.

The seller will continue to degrade contract quality at price $p(k^*)$, losing newly marginal consumers along the way, until the profit lost from consumer exit equals the profit gained from the remaining inframarginal consumers. Denote the inefficient equilibrium contract $k_m$. In equilibrium, the seller thus charges the monopoly contract price $p(k^*)$ for the inefficient contract $k_m$, though all consumers have correct expectations: the correct contract $k^*$ is not supplied.69

This inefficiency is exacerbated when the seller faces incorrect demand. To see how, denote the total number of consumers in the market as $x_0$, which now is composed of $\alpha x_0$ consumers with correct expectations and $(1 - \alpha)\lambda x_0$ op-

---

68. As an example, the seller inserts an inconvenient forum selection clause.
69. As said above, the argument in the text is a game-theoretic way to derive the result in the benchmark case that contract quality is inefficiently low because inframarginal/average consumers value contract quality more than marginal consumers.
timists. Optimists commonly have a higher willingness to pay for any contract $k$ than informed consumers have because the optimists mistakenly believe they derive greater utility from the hidden $T - t_i$ terms than the utility those terms actually yield. The number of inframarginal consumers in the market population $x_o$ therefore is larger and the number of marginal buyers smaller than in the original consumer population $x'$. As a consequence, the seller loses fewer buyers for any particular contract degradation than the seller lost when it faced correct demand. Using the notation here, the seller maximizes surplus by continuing to charge $p(k^*)$ while reducing contract quality below the original monopoly contract $k_m$; there now are more inframarginal consumers to exploit. Denoting the equilibrium “optimistic contract” $k_o$, when term optimism exists, the seller supplies contract quality $k_o < k_m < k^*$ at price $p(k^*)$.

When demand is effectively corrected—the law requires the seller to disclose—a subset of optimistic buyers exits the market. This reduces the number of inframarginal consumers in the market and thereby increases the number of consumers who would be marginal for any contract $k$ at price $p(k^*)$. As a consequence, the process of degrading contract quality “stops sooner”; equilibrium contract quality rises above $k_o$ toward $k_m$. This leads to:

**Proposition 3.** When consumers that hold incorrect expectations are more likely to be optimists, (i) contract quality is worsened relative to the fully informed case and (ii) disclosure regulation can be productive.

To make the intuition clear, when consumers have correct expectations, contract quality is too low because (i) inframarginal consumers accept reductions in contract quality that cause marginal consumers to exit the market; and (ii) there are many more inframarginal consumers than marginal consumers for any contract $k$ at the monopoly price $p(k^*)$. Optimists likely overweigh the utility a contract offers relative to informed buyers. When optimists enter the market, the number of marginal buyers therefore is reduced relative to the number of inframarginal buyers for the same contract $k$. It thus becomes profitable for the seller to degrade contract quality even further than in the benchmark case. Effective disclosure induces optimists to exit, thereby arresting, and probably partly reversing, the contract degradation process. 70

---

70. The model’s results continue to hold when contracts are disaggregated given a severability assumption. The assumption holds that the consumer’s demand for a particular term is independent of her demand for other terms. To illustrate, let a contract have two terms: a price and a warranty, which we denote $w$. Accordingly, $k = w$ and the analysis proceeds as above: the contract is degraded if the warranty is narrowed. Severability apparently is a plausible assumption in many contexts. Regarding the warranty example, the consumer’s demand for a warranty should not be affected by how she finances the purchase or whether she would be penalized for prepaying the loan. As an example of how general the severability assumption is, let term $y$ in the Facebook EULA permit Facebook to collect information from a consumer’s posts but permit the consumer to delete those posts. Facebook then adds term $z$, which permits it to share widely the information in any undeleted post. Though there
Remark 4. The presence of optimists creates two inefficiencies. The first concerns the optimists themselves, who pay more for contracts than the contracts are worth to them. The second inefficiency is a negative externality: the presence of optimists with incorrectly high willingness to pay increases the seller's ability to degrade contract quality, and thus harms the other consumer types.

Remark 5. Propositions 2 and 3 suggest two lessons for term-substantiation studies. First, if the studies focus on consumers who are in, or plan to be in, the market, then identifying hidden terms whose negative utility consumers overestimate should not prompt new disclosures. These pessimistic consumers would be in the market with correct expectations so there is no need to correct their mistakes. Also, pessimists create a positive externality: their artificially low willingness to pay is a partial brake on the contract degradation process. Second, disclosure should focus on hidden terms whose positive utility consumers overestimate. Many of these consumers should not be in the market, or should be in the market to a lesser extent, than they are; their presence harms consumers with correct or pessimistic expectations. Likely examples of such "optimistic terms" are insurance policy exclusions and restrictions on making claims. And to summarize, for policy purposes the no-reading problem presents as an optimism problem.

F. The Consumer's Search Strategy

The analysis above assumed that consumers were aware of a subset of contract terms, but did not identify a particular search strategy. We initially define rational search, and then describe the satisficing search in which consumers likely engage. Under this strategy, we argue, consumer "representativeness" would seldom be a concern: disclosure of optimistic terms would help everyone in the market.

To begin, the seller chooses contract \( k \) from the set of possible contracts \( K \). Each contract in \( K \), we now assume, has the same \( T \) terms; the contracts differ in the order in which the terms are set out. For example, contract \( k_a \), after the price, describes certain product attributes, next warrants a subset of attributes, and puts the payment schedule third. Contract \( k_b \), after the price, sets out the warranty, then the payment schedule, and then the rebate policy. Consumers create utility rankings for terms. Rankings can differ across consumers. Thus, for a particular consumer \( v(t_a) > v(t_b) > v(t_c) \), where term \( a \) is a strong warranty,
term b is a convenient payment schedule, and term c is a lenient repossession policy. Another consumer may have a different ranking over these three terms. We let some terms generate negative utility.

An important finding in the search literature is that the order in which attributes are presented affects choice. As an illustration, putting in alphabetical order the colleges that U.S. News and World Report ranks does not influence applications, though the rankings appear next to the names. Putting high-ranking schools on the top of the list affects applications. A seller’s best response to this consumer trait is to make attributes consumers probably prefer highly salient, commonly by putting them first in the term order. High-utility terms are likely to appear on the contract’s first page or the like and low- or negative-utility terms further down.

Consider now a consumer’s strategy of exploring \( t_1 < T \) terms and buying if some, but not all, of the terms in the “search set” \( t_i \) yield sufficiently high utility. If search were costless, this would not be a maximizing strategy given the seller’s best response. To see why, let \( i = 3 \): the consumer becomes aware of three terms. The seller will then attempt to put the low or negative value terms fourth or lower in the term order; that is, the seller will choose a contract \( k \) that so places relatively undesirable terms. Suppose, then, that the representative consumer decides to expand his search to five terms. A seller’s best response is to place undesirable terms sixth or lower in the term order, and so forth.

The contract generates total utility of \( v(T) \), which is the sum of the high-utility and the low- or negative-utility terms. Because some terms may yield low or negative utility (e.g., a broad disclaimer), the consumer cannot know whether \( v(T) \) less the price is positive unless he searches over all the terms. If the consumer does search every term, his choice cannot be affected by where the seller puts particular terms. Hence, the minimally rational search strategy is order independent. Under rational search, a firm cannot exploit consumers by “burying” terms.

That consumers fail to read does not imply that consumers violate the minimally rational search strategy. Consumers may exploit the usual sources of consumer information to learn the content of all \( T \) terms. It seems more realistic, however, to suppose that many consumers behave as in the analysis above:


72. As said above, consumers seldom actually read contracts. Consumers can ask friends or consult Internet rankings to see if a product or service they like comes with favored or disfavored terms. Firms, we assume, can affect these extracontractual channels to create salience. For convenience, the text sometimes refers to the first or the second page of a contract or the like. These references may be taken as metaphor. The key assumption is that salience is partly within a seller’s control.

they stop short. The seller’s best response, as just suggested, is to choose the contract whose term order follows the preferences of substantial consumer segments.\textsuperscript{74} To make this clear, let some consumers search $t_i$ terms and buy if the terms $t_q$ and $t_r$ are in $t_i$ and if the consumer believes, perhaps mistakenly, that the low or negative utility that the hidden $T - t_i$ terms generate does not outweigh $v(t_q, t_r)$ less the price.\textsuperscript{75} A substantial number of consumers likely have these preferences if the seller chooses the contract $k_i$ that has $t_q$ and $t_r$ as its first two terms with other terms lower in the order. The firm has no incentive to increase the salience of low-utility, or possibly negative-utility, terms because that would reduce the contract’s desirability.

This analysis confirms and extends the analysis above for three reasons. First, disclosure of terms that are important to consumers in the usual sense is unnecessary. Consumers search such terms, and firms reduce their costs of searching. Rather, disclosure should focus on terms with three features: (i) sellers do not emphasize the terms; (ii) the terms probably generate low or negative utility for the typical consumer; and (iii) consumers would be less likely to purchase at the market price were they made aware of the hidden terms.\textsuperscript{76} Second, the stress in the analysis above on term optimism is correct. Optimists are more likely to wrongly believe that a contract with a subset of searched desirable terms would generate net positive utility for them.

Third, disclosure helps everyone who is in, or likely to be in, the market. To see why, initially consider a consumer who also searches $t_i$ terms but who plans to buy only if the contract contains $t_o$ and $t_d$ terms (and these terms generate net expected positive utility). The seller has little incentive to increase the salience of terms that rank high only for these atypical consumers. Therefore, the seller may put terms $t_o$ and $t_d$ low in the contract order. Because the seller likely knows the size of the search set $t_i$ and because the cost of searching a term increases as the term is presented in a less salient way, some atypical consumers may not find the contract they like and so will not be in the market. The search set $t_i$ is too small to uncover all hidden terms, and it is too costly for these consumers to increase it.

An implication of this analysis is that consumers are relevantly alike for disclosure purposes. Consumers who are in the market buy only if they see a contract that contains positive utility terms. For example, let a consumer’s

\textsuperscript{74} We note that stopping short can be rational when it is costly to search. Part III.A introduces costly search into the consumer’s learning problem when discussing the efficacy of our warning box proposal.

\textsuperscript{75} For convenience, we ignore indifference and assume transitivity.

\textsuperscript{76} We use the word “important” in two senses. A term is “important” if consumers care about the term and sellers know they care. The warranty and the price usually are important in this sense. A term also is “important” if the term is not salient to consumers, but likely would affect their behavior if the term were made salient. Our proposal focuses on terms that are important in this second sense.
search reveal one positive utility term and one negative utility term. The contract cannot disadvantage this consumer because, as above, she requires two positive value terms and so rejects the contract. No consumers search rationally, in the strict sense of searching all terms. Nevertheless, some consumers are correctly in the market. Other consumers are incorrectly in the market if they mistakenly assign excessive utility to the terms over which they do not search. Disclosure does not affect consumers with correct expectations but it helps consumers who are mistakenly in the market because, as in the example above, they prefer terms $t_q$ and $t_r$ but they overweigh the utility of the other terms.

Increasing the number of sellers is helpful. One firm may compete for the first consumer set, making particular terms most salient, while the other firm may compete for the second consumer set, making different terms most salient. Competition, that is, may expand the set of efficient contracts that consumers could buy.

G. An Application to the Warning Box

The goal is to rank terms by the welfare losses that consumer mistakes cause. Welfare losses are decreasing in $\alpha$, the portion of informed consumers,

77. This logic applies regardless of the size of the consumer's search set. We ignore the case in which the consumer observes two terms she likes and one that has negative utility, but buys because the good outweighs the bad. This consumer is informed and better off on net by buying.

78. Disclosure probably should ignore the consumers who prefer terms $t_c$ and $t_d$ because disclosure would make these terms salient and thus possibly decrease the salience of the terms that a substantial number of consumers prefer. This could worsen the information environment overall. For an analysis of this heterogeneity concern, see Richard Craswell, *Static Versus Dynamic Disclosures, and How Not to Judge Their Success or Failure*, 88 WASH. L. REV. 333, 345-54 (2013). As the text above suggests, increasing competition is a better response.

79. Abraham Wickelgren has an analysis that is similar to ours. See Abraham L. Wickelgren, *Standardization as a Solution to the Reading Costs of Form Contracts*, 167 J. INSTITUTIONAL & THEORETICAL ECON. 30 (2011). He argues that if firms offer the efficient contract, consumers need not read it to deter deviations; rather, a credible threat that consumers will read is sufficient. Cost-reducing standardization, in his view, helps to make the reading threat credible. *Id.* at 34-35. Reducing the costs of reading the entire contract, for the reasons given in Part I above, is not likely to make the threat of reading more credible, however. Hence, we focus on the subset of terms whose content consumers optimistically misinterpret.

80. We argue that sellers should warn about unfavorable terms that fifty percent or more of consumers do not anticipate. Sellers also should warn about terms that fewer than fifty percent of consumers mistake if the mistake imposes large losses on the consumers who make it. Terms that induce such mistakes likely reduce welfare as much as lessgrave terms that half or more of consumers mistake.
and increasing in $\lambda$, the portion of uninformed optimists that contract. Hence, if a survey revealed, say, that consumers commonly believe the warranty is broader than it actually is (an optimistic belief), but many consumers understand the financing terms and the rest make pessimistic mistakes (they think sellers are tougher on defaulters than they actually are), then the warning box should highlight warranty terms but not financing terms.

To generalize, the empirical researcher should consider three variables: the frequency of mistakes; the direction of mistakes; and the cost of mistakes. Evidence could uncover frequency and direction more conveniently than cost. Some mistakes seem monetizable, however. An example may be the cost difference between a narrower and a broader warranty. In any event, the general idea is clear: to rank mistakes by their welfare cost, for which we proxy in our proposal by requiring sellers to inquire about the relative importance of particular terms.

To introduce how such a scheme would work, consider the following 1989 Roper study of 1484 adults regarding the coverage of a homeowner’s insurance policy. Figure 1 below shows that a substantial majority could correctly answer that their policy covered theft, liability for bodily injury, storms, and vandalism. A slight majority (54%), however, incorrectly believed that damage from riots was not covered.

**FIGURE 1**
Term-Substantiation Survey of Homeowner’s Insurance Coverage:
Knowledge of Basic Coverages

![Bar chart showing knowledge of basic coverages](chart.png)

Source: All-Industry Research Advisory Council.

---

81. ALL-INDUS. RESEARCH ADVISORY COUNCIL, PUBLIC ATTITUDE MONITOR 1989: A SURVEY OF PUBLIC ATTITUDES ON AUTO INSURANCE RATES, SEAT BELTS, ATTORNEY ADVERTISING, HOMEOWNER'S INSURANCE, AND INSURANCE CLAIM FRAUD 15 (1989); see also Thomas, supra note 44, at 308 n.63.
The policies' riot coverage illustrates pessimism: a majority of consumers believed that the contract was less favorable to them, with regard to riot coverage, than it actually was. We show above that pessimism is not a cause for concern. These pessimists would have continued to contract were their expectations corrected, so there is no need to correct them.

The same study, however, also produced substantial evidence of optimism—the unexpected and unfavorable term. Figure 2 reports respondent answers concerning five possible losses that the standard homeowner's policy excludes.

**FIGURE 2**
Term-Substantiation Survey of Homeowner's Insurance Exclusions: Knowledge of Basic Exclusions

A majority of respondents correctly understood that losses from nuclear accidents and normal wear and tear are not recoverable. But a majority of respondents failed to recognize that damages from floods, earthquakes, and mudslides are also excluded. In particular, respondents held unexpectedly favorable beliefs about flood coverage. If we put aside the 15% who reported not knowing whether flood damage is covered, Figure 2 shows that a majority of the remaining respondents thought they were protected against flood damage. And even those who reported not knowing might have mistakenly attributed some value to the possibility of such coverage. A positive fraction of these term optimists may not have been in the market under correct expectations, so their mistakes should be corrected. The term-substantiation part of our proposal would require insurers to inform themselves about such mistakenly favorable beliefs; the disclosure part would require the informed insurers to warn consumers about the unexpected terms.
More recently, a 2008 study by Brian Bucks and Karen Pence provided evidence that mortgage borrowers hold systematically optimistic beliefs about the terms of their adjustable-rate mortgages. As discussed by Christine Jolls:

The Bucks and Pence study produced clear evidence of borrower misunderstanding—in an optimistic direction—of permissible interest rate adjustments in adjustable-rate mortgages. . . . 40 percent [of adjustable-rate borrowers] believed that interest rates on their adjustable-rate mortgages could increase at most one percentage point per period, while [lenders reported that] less than two percent of adjustable-rate mortgages had caps this low. Rather, 47 percent had caps of two percentage points per period, and 46 percent had caps higher than two percentage points. Likewise, with respect to the lifetime cap on interest rate adjustment, 63 percent of adjustable-rate mortgage borrowers . . . believed the cap to be five percent or less, whereas only 31 percent of adjustable-rate mortgages had caps this low . . . .

As with our insurance example, optimistic consumer expectations about mortgage terms probably caused inefficiency. Optimistic consumers attributed greater utility to the payment term than they would have attributed to that term were they informed. As a consequence, mortgage contract quality probably was inefficiently low. Accordingly, evidence that consumer borrowers make this or similar mistakes about actual mortgage content could, if sufficiently substantial, trigger a heightened lender duty to warn.

III. THE DETAILS OF OUR PROPOSAL

We use the incentive of more certain enforcement to induce mass-market sellers to become better informed about likely consumer mistakes. In essence, we would require a “know thy customer” duty that is already in place with re-


gard to brokers and other financial intermediaries. But while brokers need to learn of the substantive investment goals of their clients, we only require sellers to learn what their customers believe about the contractual attributes of the product or service being purchased. Indeed, in the current era of Big Data, our "know thy customer" proposal comes at a time when many sellers are independently scoring their customers' beliefs and behaviors.

Once sellers acquire actual knowledge of consumer beliefs, the sellers could not enforce disadvantageous, unknown terms. A consequence would be to increase the incentive of sellers to make better disclosures. For the reasons in Part I, however, the standard efforts to increase disclosure efficacy are unlikely to work. Our approach is an advance because it (i) encourages the burying of expected terms, and (ii) mandates a standardized form, the "unexpected term box," to alert consumers to unexpectedly unfavorable terms. By reducing the salience of expected terms and increasing the salience of unexpected terms (with the help of an easily identifiable box), our enhanced disclosures have an increased chance of promoting informed consumer consent in a cost-effective manner.

A. Institutional Implications and Warning Principles

Our proposal is directed to both federal and state actors. At the federal level, we propose that the FTC promulgate a term-substantiation policy that would require mass-market sellers to become informed about unexpected, unfavorable terms and to provide warnings about such terms in a cautionary standardized box. At the state level, state courts should reinforce the term-substantiation


85. See, e.g., IAN AYRES, SUPER CRUNCHERS: WHY THINKING-BY-NUMBERS IS THE NEW WAY TO BE SMART 47 (2007) (noting how Capital One has been at the forefront of using customer data to solicit business); Oren Bar-Gill & Oliver Board, Product-Use Information and the Limits of Voluntary Disclosure, 14 AM. L. & ECON. REV. 235, 236-37 (2012).

86. See RESTATEMENT (SECOND) OF CONTRACTS §§ 153, 211 (1981) (articulating, respectively, the doctrine of unilateral mistake and the standardized agreement rule, which holds that if another party has reason to believe that the party manifesting assent would not do so if he knew that the writing contained a particular term, then the term is not part of the agreement).

87. The concept of term substantiation might in some contexts be extended to the idea of substantiating that consumers do not hold optimistic views about the content of legal default rules. For example, Pauline Kim has argued that employees hold systematically optimistic beliefs about the default terms of at-will employment contracts. Pauline T. Kim, Bargaining with Imperfect Information: A Study of Worker Perceptions of Legal Protection in an At-Will World, 83 CORNELL L. REV. 105, 147 (1997). Note, however, that Kim's survey data was collected from former employees at a state unemployment insurance office and
project by refusing to enforce unexpected terms both as a matter of common law—as a violation of section 211 of the *Restatement*—and as a matter of state “Little-FTC Acts” as an unfair and deceptive trade practice. Our proposal thus represents a handoff from federal to state enforcement. Although either federal or state consumer protection officials might enforce “substantiate and warn” duties, more often the federal duty to substantiate would trigger private state enforcement actions (in contract or under the Little-FTC Acts). In the shadow of a federal substantiation policy, state common law courts should presumptively void invisible terms when a mass-market seller fails to adequately substantiate or warn.

We limit the duty of term substantiation to mass-market sellers because there are nontrivial fixed costs to substantiation surveys that would impose undue burdens on smaller sellers that are likely to outweigh any benefit in consumer welfare. The law and the marketplace already draw distinctions between small and large businesses in many contexts. The *Uniform Computer Information Transactions Act*, for example, provides special legal rules for “[m]ass-market transaction[s],” which are flexibly defined as transactions aimed at a broad market and governed by a standard form. The Small Business Administration generally defines a business as “small” if it has 500 or fewer employees and $7 million or less in average annual receipts. For concreteness, we therefore might not reflect the understanding of employees at the time of contracting. See id. at 127-28.


89. Term-substantiation studies would make it easier for consumers to bring contract actions under section 211 of the *Restatement*. But some Little-FTC Acts have historically limited private causes of action. While all states (except for Mississippi) currently provide a private right of action to sue for alleged violations of state consumer protection laws, see *CONSOMER PROTECTION AND THE LAW* app. 5A (West 2013), many states initially did not allow such private rights or limited available relief to injunctions and/or consumer redress, see id. § 6:2. For further background on the role of Little-FTC Acts and how they differ from their federal counterpart, see generally Butler & Wright, supra note 88.


91. See 13 C.F.R. § 121.101 (2013); U.S. SMALL BUS. ADMIN., SBA SIZE STANDARDS METHODOLOGY 7 (2009), available at http://www.sba.gov/sites/default/files/size_stands_methodology.pdf; U.S. SMALL BUS. ADMIN., TABLE OF SMALL BUSINESS SIZE STANDARDS MATCHED TO NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM CODES (2013), available at http://www.sba.gov/sites/default/files/files/size_table_07222013.pdf. These size determinations based on North American Industry Classification System (NAICS) designations are legally binding upon parties and have the effect of providing or precluding access to Small Business Administration loans and benefits. See, e.g., 13 C.F.R. § 123.403. There are, of course, many other ways in which businesses are distinguished.
propose defining a "mass-market" seller as one with more than 500 employees or more than $20 million in annual retail sales.

We propose a regime for mass-market contractors under which unexpected, unfavorable terms would be presumptively unenforceable unless the seller adequately disclosed and secured separate assent to them. A seller who satisfied this requirement would predictably win a summary judgment motion challenging its standard form. The next Subpart discusses in more detail what the process of term substantiation would entail and how it might identify unexpected, unfavorable terms. Here we describe what the seller should do when it learns of terms that are unexpectedly unfavorable.

Before reaching the details, we note a common objection. If consumers do not read current contracts, then a reform that relies on consumers reading is misguided. This objection overlooks the role that search costs play in the consumer's search strategy. When search costs are introduced, it becomes apparent that a reform that reduces those costs can increase the amount that consumers learn. To see how this insight applies in the warning box context, first let the consumer's cost of learning the content of a term from reading it be \( r \), and the cost of learning term content from informal channels be \( r_c \). Revealed preference reasoning implies that \( r_c < r \) for every written term: the consumer learns but does not read. Next define the most important contract term for a consumer (say the warranty term) as \( t \), yielding the consumer expected utility of \( v(k') \). Then the second most important term is \( t - 1 \), yielding expected utility of \( v(k'^{-1}) \), which is lower than the utility of term \( t \). The third most important term is \( t - 2 \), and so forth. The consumer learns the content of terms until the marginal utility of further learning equals the marginal cost. Letting the "stopping term" be \( t - s \), we have \( v(k'^s) = r_c \). The first "post-stopping term" thus is \( t - (s + 1) \);
the second is \( t - (s + 2) \). The consumer does not learn the content of any post-stopping term because \( v(k^{(s+1)}) < r_c \).

The warning box proposal reduces the consumer's learning cost. Denoting the cost of learning by reading the box as \( r_b \), we claim that \( r_b < r_c \): it is less costly for the consumer to learn term content from the warning box than from informal channels. Then \( v(k^{(s+1)}) > r_b \) is possible: the consumer will read—that is, learn the content of—the \( t - (s + 1) \) term because he expects to derive more utility from knowing the content of the term than the cost of finding out. The warning box proposal, however, does not strictly follow a consumer's term ordering. Rather, its goal is to identify the post-stopping terms about which consumers are optimistic and greatly reduce the cost of learning these. Denoting a post-stopping optimistic term as \( t - (s + s_0) \), the warning box will alter behavior if \( v(k^{(s+s_0)}) > r_b \): the consumer would find it worthwhile to read the highlighted term. Therefore, important optimistic terms should be added to the warning box until either there are no more such terms or a term is reached regarding which the gain for the representative consumer from learning it likely would equal or exceed the cost. To summarize, the warning box proposal requires reading when before there was none, but it also increases the net gain from reading when before there was none. The proposal therefore does not raise raise concerns of information overload; rather, it will increase the consumer's purchase utility. We next set out the "warning principles" that should guide the state in attempting to realize this goal. There are six warning principles:

**Standardized Warnings.** To create enforceable contracts, mass-contract drafters must place unexpected terms in a box that is bordered with a government-provided, standardized filigree interweaving the words “Unexpected Term Warning” and beginning with the disclaimer: “Warning. The following terms have been found to be unexpected by a majority of customers who agreed to similar contracts: . . . .” Only terms that a study shows are less favorable than consumers expect may be placed in the box. The terms as well as the contours of the box should be standardized. For example, the government should ensure that if any prepayment penalty must be disclosed, all such penalty terms should be disclosed in the same way. This will facilitate consumer learning and also comparison shopping when several sellers are available.

**Separate Assent to Warnings.** The consumer must separately indicate her assent to the unexpected terms by initialing or clicking a box next to the words

---

94. Studies, including ours, show that consumers are aware of many terms in common contracts and have pessimistic expectations about a subset of the rest. See Joshua Mitts, An Experimental Evaluation of Term Substantiation 1 (Oct. 13, 2013) (unpublished manuscript) (on file with authors); supra note 20. Thus, relatively few contract terms would be candidates for inclusion in the warning box. Part II.E above sets out the criteria that should guide inclusion: the frequency and direction of consumer mistakes and the likely costs those mistakes cause.
“I assent to these unexpected terms”; these words must be placed just below the unexpected term box. For paper contracts, the unexpected term box must at least begin on the first page of the contract. For electronic contracts including online sales, the unexpected term box must be displayed on the same page on which the buyer indicates acceptance of the contract.

The Ordering of Warnings. The unexpected terms included in the box must be placed in order of decreasing likelihood that optimistic mistakes about those terms might influence purchase behavior. Consumer responses to term-substantiation inquiries should illuminate this issue. As described below, the term-substantiation process would not only elicit information about the accuracy of consumers’ beliefs about contractual terms, but also the importance consumers place on the disclosure of particular term information. The more importance consumers attribute to knowing about a term, the more likely it is that this knowledge would have materially affected their choice.

Validation of Warning Effectiveness. The seller must establish through independent testing that a majority of consumers who read the box learn the true impact of the unexpected term. The underlying term need not be described in accessible layperson’s terms, but the box’s warning should transparently and succinctly alert the reader to the unexpected consequences. Courts, implementing this section, should not engage in free-floating assessment of whether the disclosure is comprehensible, however. The touchstone should be objective validation of the disclosure’s impact on consumers’ ability to describe correctly the terms of the contract.

95. There are serious difficulties in eliciting information about term importance. Consumers who hold inaccurate views about term content may not be able to say how important a term is until they know how their beliefs are wrong. Accordingly, it might be appropriate to iteratively elicit information on term importance from mistaken consumers only after they are informed about the actual content of the contract.

96. As indicated below, validation has a dynamic aspect: warnings should change with changes in consumer knowledge and contract content.

97. Regulators should be concerned about the possibility that warnings overshoot and cause optimistic consumers to be overly pessimistic about the terms of the contract. Similar concerns have arisen with regard to “corrective advertising.” See Richard Craswell, Regulating Deceptive Advertising: The Role of Cost-Benefit Analysis, 64 S. CAL. L. REV. 549, 567 (1991) (discussing cost-benefit concerns of corrective advertising). Recent testing shows that warning consumers that the terms of a click-through agreement are important or relevant can be effective at increasing the likelihood that consumers will spend time reading and comprehending the terms. See Victoria C. Plaut & Robert P. Bartlett, III, Blind Consent? A Social Psychological Investigation of Non-Readership of Click-Through Agreements, 36 LAW & HUM. BEHAV. 293, 300 (2012). More recently, Joshua Mitts has completed a rigorous experimental study of cell phone and credit card contracting that directly tests whether unexpected term warnings can be effective. Mitts, supra note 94, at 5-6. Mitts finds that a warning box improved consumer understanding by nine to ten percent and that the presence of six unexpected term warnings caused subjects to be less likely to choose the warned-of provider. Id. at 1.
Regarding our last two warning principles, sellers have an incentive to create information overload—to overwhelm consumers by including expected, trivial, or opaque terms in the warning box along with important terms. The exclusion of expected terms, the ordering of the most important terms first, and the validation requirement that the warning effectively communicate the unexpected consequences are intended to deter these seller strategies. As with the duty of term substantiation itself, the subsidiary disclosure duties are enforced by the off-equilibrium threat of nonenforcement of unexpected terms when there are insufficient warnings.

Warning Waivers. The process of validating warning effectiveness would also elicit information from consumers about whether they would prefer not to receive a warning or whether they would prefer to receive fewer warnings. If a seller can establish, among the consumers who now understand the unexpected term, that a majority would have preferred not to be warned about the term, the seller can forego the warning.98 Warning waivers would let representative consumers determine which terms must be included in the box. Also, the firm and the regulator would be aided in determining the order in which terms must be displayed by knowing what consumers value. Sellers might attempt to reduce the effectiveness of the box by adding many unexpected, unfavorable terms. But our waiver principle would exclude terms that consumers did not find valuable.

Third-Party Contestability. Actionable evidence (based on credible studies meeting minimum quality standards discussed below)99 of unexpected terms for consumers of the same or similar products submitted by third parties (including rival sellers, consumer protection groups, and academics) can trigger a seller's warning duties. The mass-market seller would then be required to reconsider its own warning practice in light of third-party and other publicly available evidence. Thus, for example, if a consumer group submitted to an insurer the industry-sponsored study discussed above showing that a majority of the insured held mistakenly optimistic beliefs about the coverage of homeowner's insurance, the insurer might be under a duty to warn (or required to rebut with separate empiricism that certain terms were in fact expected). But the duty to warn should only be triggered by objective evidence that the third-party studies comply with standards set by the FTC regarding the minimum qualities of a substantiation study. The impact of these last two warning principles is to democratize the drafting process. Under our proposal, consumers would have

98. The seller can treat this kind of term as "expected," making it enforceable even if buried. The warning waiver concept is implied by our focus on the disclosure of terms that may have affected consumer choice if correctly perceived. Consumers who eschew notice of particular terms would not have changed their purchase behavior were those terms brought to their attention.

99. See infra Conclusion.
substantially more control over the content of warnings. Our waiver principle would give representative informed consumers the option of dispensing with warnings, individually or in gross, that they ultimately found to be unhelpful. Unwanted disclosures could threaten to turn our proposal into the Sarbanes-Oxley of contract law. To protect against this concern, our waiver principle allows consumers to say: "bug me not."

Our contestability principle also responds to the concern that sellers/drafters rig the game by framing questions in ways that make contractual consequences look innocuous. Giving third parties the option of asking more pointed questions (e.g., "Did you know that under the agreement the seller could . . .") would help to expose this behavior and thus increase courts' confidence that most mass-market contracts are properly vetted. But to make sure that third-party evidence does not impose duties to warn that outstrip consumer interest, the warning duty would only be triggered if a majority of consumers surveyed provide "wish they had been told" evidence. A recent spate of status update responses by some Facebook users to changes in the EULA privacy settings suggests that there is some consumer demand for affecting the contours of standard-form contracting. Our proposal would not give consumers substantive control over the terms of form contracts, but it would subject the content of warnings to a species of representative majority rule.

These cautionary warning terms would evolve over time with consumer expectations and preferences. In 2012, Facebook users might not have expected that the social networking site could sell data about the identity of their friends,

100. At times it may be difficult to elicit consumer information about the content of their legal rights under the contract as distinct from their probable rights as the contract is normally administered by the seller. For example, a credit card contract as a formal matter may impose a thirty-dollar late-payment charge or give the lender a right to accelerate payments. But card users may come to expect that the charges are often not imposed or will be waived upon request, and that in the normal course the debt will not be accelerated. See, e.g., Hillman & Rachlinski, supra note 19, at 442-43 (arguing that consumers may believe a seller would be unwilling to enforce particularly exploitative contract terms if doing so would threaten the seller's reputation); Stephen J. Ware, Comment, A Critique of the Reasonable Expectations Doctrine, 56 U. Chi. L. Rev. 1461, 1482 (1989) (arguing that, in certain circumstances, consumers may expect that sellers "will not risk a bad reputation in the market by sticking to the fine print").

101. User concern at various times in 2010 and 2012 led to a viral proliferation of status updates by some Facebook users attempting to unilaterally modify the Facebook EULA by posting disclaimers, such as: "In response to the new Facebook guidelines, I hereby declare that my copyright is attached to all of my personal details, illustrations, comics, paintings, photos, and videos, etc. (as a result of the Berner [sic] Convention)." David Cohen, WARNING: Privacy Notices in Facebook Status Updates Are Still a Hoax, ALLFACEBOOK (Nov. 26, 2012, 10:56 AM), http://allfacebook.com/privacy-notices-hoax-returns_b105301. While this posting is (and would continue to be) insufficient to alter the Facebook EULA, see id., the number of postings itself provides evidence of user anxiety about the scope of Facebook's rights to use consumer content.
but the very process of highlighting this provision in a cautionary box might change consumer perceptions in ways that would allow the term to be buried in the future. Alternatively, subsequent testing may provide evidence that a majority of consumers would prefer a different order or would prefer to dispense with a particular warning even if the substance of the term remains unexpectedly unfavorable. In this way, the indirect consumer control over contractual warnings would be a recurring plebiscite.

B. Expected Terms: The Carrot

In sharp contrast to our proposal’s treatment of unexpected terms, our proposed treatment of “expected” terms represents a “carrot” that gives the seller options absent under some conceptions of current law (including the previously discussed Principles of the Law of Software Contracts). Under our proposal, “expected” terms would be enforceable even if buried, delayed, or opaque. In a world where few consumers read form contracts, it would be pointless to increase the salience of terms that a majority of consumers independently expect. We would require evidentiary specificity that terms of contracts be reasonably available to interested consumers who affirmatively seek them. But giving sellers the option of reducing the salience of these expected terms (without threatening their enforceability) enhances the relative salience of the unexpected-term warnings. All sellers (regardless of whether they qualified as mass-market sellers or not) under our proposal would retain the freedom to display (i.e., to not bury) those terms that exceed consumers’ expectations. The only prohibited seller activity with regard to expected terms would be placing them in the warning box.

Though we formally modeled sellers with market power, we note that our proposal would likely strengthen reputational competition in more competitive markets: sellers there would either have to offer terms that are consistent with consumer expectations or provide consumers with standardized warnings highlighting unexpected terms about which a substantial number of consumers are most concerned. We are under no illusion that our system of enhanced disclosure with separate assent will induce anywhere close to universally informed assent. But highlighting the most troubling unexpected terms may inform enough consumers to raise the sellers’ cost of offering inefficient, self-

102. Zev Eigen has found that contractors may be more likely to pay attention to disclosed terms when there is less background noise. Zev J. Eigen, Experimental Evidence of the Relationship Between Reading the Fine Print and Performance of Form-Contract Terms, 168 J. INSTITUTIONAL & THEORETICAL ECON. 124, 134-37 (2012) ("Results suggest that individuals spend almost three times more time reviewing form contracts when less information is provided outside the contract ....").
engrossing terms. In the shadow of warning duties, evidence that sellers retracted unexpected terms or that, over time, a majority of consumers expected the term or waived the warning would suggest that our proposal was functioning as intended.

The foregoing concerns related to substantiation and warning duties apply to unilateral modifications as well. Standard-form relational contracts increasingly include "change of term" provisions that allow banks, credit card issuers, cellular service carriers, frequent flier programs, cable television providers, website operators, and other sellers of consumer products and services to modify the terms of an agreement without securing additional assent from consumers. For example, Florencia Marotta-Wurgler and Robert Taylor found in a survey that forty percent of software licenses were modified between 2003 and 2010. Sixty percent of the modified licenses made three or more changes. In essence, these change of term provisions rely on the contract law doctrine that silence can constitute acceptance. The quality of consumer assent to such midstream modifications is worrisome, however, because consumers may pay insufficient attention to apparent "junk mail" that actually changes substantive provisions. As in other contexts, the law has responded with a mixture of substantive ex ante and ex post regulations. The Credit Card Accountability Responsibility and Disclosure Act of 2009, for example, restricts the types of unilateral interest modifications that can be made to credit card contracts. Some courts have drawn an enforcement distinction between modifications that alter existing terms and those that insert additional terms.

To the contrary, our approach permits unilateral changes, without separate assent, to any provision that consumers expect. For example, an EULA modification clarifying that a provider is not liable for service outages caused by hurricane damage would be enforceable if consumer surveys showed that a majority of consumers expected that damage limitation. In contrast, a seller could not use its unilateral modification authority to require arbitration if a majority of consumers did not expect and would dislike an arbitration term, unless the sell-

106. See RESTATEMENT (SECOND) OF CONTRACTS § 69 (1981) (delineating circumstances in which silence may constitute acceptance).
er warned the consumer as outlined above and validated that the warning was effective.

The requirement of separate assent to these ongoing relational contracts likely would disrupt service for buyers who failed to assent to additional terms. On the Internet, we would imagine that websites would direct nonassenting users to a warning page that required separate assent before the consumer could continue to the site. Alternatively, automated cell phone warnings that orally warned of unexpected terms with validated disclosures could be used to secure separate assent. The costs of these disruptions justify the safeguard of warning waivers. If the seller can establish that a majority of consumers would prefer waiving warnings about particular unexpected terms, then the seller would be able to secure enforcement of those terms. For example, if a credit card issuer historically charged a late fee of $5, and a unilateral modification attempted to increase the fee to $5.10, the new fee probably would be unexpected by a majority of consumers. But a majority of informed consumers, as representatives of the larger class of uninformed consumers, might indicate that they would have preferred not to have this error corrected. Thus, our proposal would allow unilateral modification without separate assent to terms that consumers expect, or to unexpected, unfavorable terms that informed consumers would rather remain hidden. Sellers would only need to secure additional assent to modifications that representative consumers do not expect and prefer to be warned against.

C. Small Sellers

Our proposal would lightly regulate sellers who fell below the "mass-market" definition. Non-mass-market sellers would only be put on notice of publicly available findings that particular terms are unexpected. Sellers who include a term that is similar to an unexpected term of a mass-market competitor must also include an analogous warning. Except for this duty of smaller sellers to piggyback on the substantiation efforts of their mass-market competitors, however, small sellers would not need to warn consumers of unexpected terms. Regulating small sellers in this way could create some potential for abuse, but these sellers' contracts (like all contracts under our proposal) would continue to be subject to unconscionability review. In addition, the ambit for abuse is self-limiting by both the mass-market size trigger and the piggyback

109. Our approach is conceptually analogous to a proposal of Oren Bar-Gill and Kevin Davis that unilateral modifications only be enforced if approved by "Change Approval Boards." See Oren Bar-Gill & Kevin Davis, Empty Promises, 84 S. CAL. L. REV. 1, 37-39 (2010). Our approach enlists the sellers' efforts to more directly elicit the preferences of consumers. Our approach may thus be less susceptible to a kind of autonomy-defeating paternalism, whereby consumer protection advocates block substantive terms or require separate assent to warnings that a majority of consumers dislike.
duty. A firm that grows to mass-market size would become subject to the regulation advocated here.

D. A Relevant Precedent

Finally, we note the similarity between our proposal to require mass-market sellers to substantiate whether their consumers hold accurate beliefs about their contractual terms and the well-established system of claim substantiation in the advertising context. The FTC Policy Statement Regarding Advertising Substantiation requires that “advertisers and ad agencies have a reasonable basis for advertising claims before they are disseminated.” In determining whether an advertisement’s claim leaves consumers with a mistaken impression, the FTC and the courts routinely focus on empirical evidence of consumer perception: “[T]he most convincing . . . evidence is a survey ‘of what consumers thought upon reading the advertisement in question.’” In Kraft, Inc. v. Federal Trade Commission, for example, the Seventh Circuit evaluated Kraft’s claims that a slice of its cheese contained as much calcium as five ounces of milk and focused on surveys showing that over seventy percent of consumers “rated calcium content an extremely or very important factor in their decision to buy” Kraft’s cheese—a finding that underscored the materiality of the claim. Similarly, in Federal Trade Commission v. Five-Star Auto Club, Inc., the court focused on survey evidence that a majority of consumers joined the defendant’s auto club because of misleading promises of receiving free cars and money.


113. Id. at 323.

114. 97 F. Supp. 2d 502, 529-30 (S.D.N.Y. 2000). Once the FTC has identified an advertisement’s claims based on evidence of consumer perception, it determines whether the advertiser or ad agency had a “reasonable basis for advertising claims before they [were] disseminated.” In re Thompson Med. Co, 104 F.T.C. at 839. Courts evaluate the level of substantiation required on a case-by-case basis, looking to a number of factors including “(1) the type of claim; (2) the product; (3) the consequences of a false claim; (4) the benefits of a truthful claim; (5) the cost of developing substantiation for the claim; and (6) the amount of substantiation experts in the field believe is reasonable.” Fed. Trade Comm’n v. QT, Inc., 448 F. Supp. 2d 908, 959 (N.D. Ill. 2006) (quoting In re Thompson Med. Co, 104 F.T.C. at 839), amended on reconsideration in part, 472 F. Supp. 2d 990 (N.D. Ill. 2007), aff’d, 512 F.3d 858 (7th Cir. 2008). Therefore, the requisite level of substantiation varies significantly from case to case. In the FTC’s recent challenge to Skechers U.S.A., Inc.’s claims about the
The Lanham Act imposes a slightly different standard in evaluating whether an advertisement is "false or misleading," but as with the FTC Act, a central element of the analysis is an empirical assessment of consumer perception. For example, in LG Electronics U.S.A., Inc. v. Whirlpool Corp., efficacy of its "Shape-ups" toning shoes, for example, Skechers was able to produce four clinical case studies demonstrating that the average consumer lost nearly three pounds and experienced a 1.3% reduction in body fat as a result of wearing the shoes. See Complaint at 7, Fed. Trade Comm'n v. Skechers U.S.A., Inc., No. 12-cv-01214 (N.D. Ohio May 16, 2012), 2012 WL 1699432. Nonetheless, the FTC persuasively argued that because only two of the four studies were conducted independently, the results were unreliable and Skechers therefore lacked substantiation for its claims. Id. at 7-8 (explaining defects in studies' methodologies). For another example of the FTC imposing a relatively high standard in evaluating evidence of substantiation, see Federal Trade Commission v. Sabal, 32 F. Supp. 2d 1004, 1008 (N.D. Ill. 1998), which granted the FTC a preliminary injunction against a hair growth manufacturer's advertisements, whose claims relating to the efficacy and superiority of its products were not supported by adequate scientific research. By contrast, in Federal Trade Commission v. Garvey, the Ninth Circuit found that the star of a weight loss infomercial had adequately proved his genuine belief in the claims related to the efficacy of the program that was the subject of the infomercial by demonstrating that he and his wife had lost eight and twenty-seven pounds using the program, respectively, and that he had reviewed two booklets with substantiation materials for the program. 383 F.3d 891, 901-02 (9th Cir. 2004). Therefore, under the "reasonable basis" standard, the FTC and the courts have flexibility in determining whether, under the circumstances, an advertiser has provided adequate substantiation for its claims.

115. See 15 U.S.C. § 1125(a)(1). See generally Gregory Klass, Meaning, Purpose, and Cause in the Law of Deception, 100 GEO. L.J. 449, 482-88 (2012) (providing background information on false advertising actions under the Lanham Act). Note that section 1125 technically governs unfair competition, but as many courts and commentators have noted, it has effectively become a tool for protecting consumers. See id. at 490 n.156 (citing Ames Pub'l'g Co. v. Walker-Davis Pub'l'ns, Inc., 372 F. Supp. 1, 13-14 (E.D. Pa. 1974)) ("[W]hile unarticulated in the Act itself, an underlying purpose of Section 43(a) appears to be protection of the consuming public from false representations and descriptions in connection with the advertising of goods and services."); see also 20th Century Wear, Inc. v. Sanmark-Stardust Inc., 747 F.2d 81, 91 (2d Cir. 1984) ("[S]ection 43(a) has been broadly construed to provide protection against deceptive marking, packaging, and advertising of goods and services in commerce."). An advertisement generally violates section 43(a) when it includes:

1. a false or misleading description of fact or representation of fact by the defendant in a commercial advertisement about its own or another's product; (2) the statement actually deceives or has the tendency to deceive a substantial segment of its audience; (3) the deception is material, in that it is likely to influence the purchasing decision; (4) the defendant placed the false or misleading statement in interstate commerce; and (5) the plaintiff has been or is likely to be injured as a result of the false or misleading statement, either by direct diversion of sales from itself to defendant or by a lessening of goodwill associated with its products.

Clorox Co. P.R. v. Proctor & Gamble Commercial Co., 228 F.3d 24, 33 n.6 (1st Cir. 2000).

116. E.g., Clorox, 228 F.3d at 36 ("An advertisement's propensity to deceive the viewing public is most often proven by consumer survey data."); see also Klass, supra note 115, at 483 (noting that courts generally require evidence of consumer perception when, as is often the case, advertisements are literally true but may include implicit falsehoods).
Whirlpool failed to defeat a Lanham Act challenge to its “steam dryer” advertisements when the plaintiffs produced survey evidence that sixty-five percent of consumers believed its dryers actually used steam.\textsuperscript{117}

Under both the FTC Act and the Lanham Act, advertisers can be held liable for consumer misperceptions caused by their ads—even if the factual representations are literally true.\textsuperscript{118} Literal truth is not a defense if consumers are left with a false impression.\textsuperscript{119} Analogously, our term-substantiation requirement would focus on whether consumers have independent optimistic beliefs about contract terms.

Part IV next gives a preliminary example of how term substantiation would operate. A methodologically valid survey would draw from a representative (ideally randomly selected) subsample of a seller’s consumers and elicit their beliefs about the terms of the agreements to which they had assented. Through a mixture of open-ended or multiple-choice questions, the survey would attempt to uncover whether consumer beliefs about particular terms were accurate, more favorable, or less favorable to the consumer than the actual terms of the contract. The questions would focus on the duties and rights of the consumers (e.g., “If your home was damaged by a flood, would your insurance cover a reasonable estimate of the damages?”). A warning duty would be triggered if

\begin{itemize}
\item \textsuperscript{117} 661 F. Supp. 2d 940, 943, 952-56, 958 (N.D. Ill. 2009); see also Stiffel Co. v. Westwood Lighting Grp., 658 F. Supp. 1103, 1114 (D.N.J. 1987) (noting that the potential that between 22% and 57% of consumers will be misled is “not insubstantial” (internal quotation marks omitted)); McNeilab, Inc. v. Am. Home Prod. Corp., 501 F. Supp. 517, 527 (S.D.N.Y. 1980) (holding that 23% of consumers being misled was enough to demonstrate that a commercial “tend[ed] to confuse or mislead” (emphasis omitted) (internal quotation marks omitted)); R.J. Reynolds Tobacco Co. v. Loew’s Theatres, Inc., 511 F. Supp. 867, 876 (S.D.N.Y. 1980) (finding a deception rate of between 20% and 33% sufficient to demonstrate that an advertisement was likely to confuse consumers or had a tendency to mislead them). But see Mead Johnson & Co. v. Abbott Labs., 201 F.3d 883, 883-86 (7th Cir.) (discussing the inadequacy of consumer surveys in the context of an infant nutrition manufacturer’s claim that its products were the “1st Choice of Doctors”), amended on denial of reh’g, 209 F.3d 1032 (7th Cir. 2000) (per curiam).
\item \textsuperscript{118} While the general rule is that an advertiser must substantiate its claims before disseminating them, the FTC and the courts may, in their discretion, consider post-claim evidence of substantiation in determining whether advertisements are false or misleading. See \textit{In re Thompson Med. Co.}, 104 F.T.C. at 841 (“[U]sing post-claim evidence to evaluate the truth of a claim, or otherwise using such evidence in deciding whether there is a public interest in continuing an investigation or issuing a complaint, is appropriate policy.”); see also Charles Shafer, \textit{Developing Rational Standards for an Advertising Substantiation Policy}, 55 U. CIN. L. REV. 1, 67 (1986) (discussing the history of the FTC’s substantiation policy and explaining the four circumstances in which the FTC considers post-claim substantiation: “when (1) evaluating the truth of the claim; (2) deciding whether there is public interest; (3) deciding the appropriate scope of the order; and (4) assessing the reasonableness of the prior substantiation”).
\item \textsuperscript{119} See Johnson & Johnson-Merck Consumer Pharm. Co. v. Rhone-Poulenc Rorer Pharm., Inc., 19 F.3d 125, 129 (3d Cir. 1994).
\end{itemize}
the proportion of consumers with optimistic expectations about a contractual consequence was statistically greater than fifty percent. A description of the methodology and the results of the survey would be publicly available on the Internet at a centralized FTC site, in part to facilitate the triggering of warning duties by other sellers in the industry.

As we will discuss in more detail in Part IV, questions can be framed with different degrees of specificity in ways that may importantly affect consumers' responses (e.g., “Have you given the website permission to use any photographs that you upload?” versus “Does the website have permission to sell uploaded photographs of you and your friends for funeral home advertisements?”). A seller's strategic use of framing and degrees of specificity to understate the severity of unexpected terms may be partly deterred by the ability of competitors to contest a firm's disclosure format. Indeed, competitors have good incentives to frame questions in ways that elicit systematic consumer misinformation about a rival's most material terms.

The largest facial distinction between the two types of substantiation, advertisement substantiation and term substantiation, concerns the consumer beliefs that are being tested. Advertisement substantiation relates to consumer perceptions regarding factual claims of sellers. Term substantiation, in contrast, relates to consumer perceptions regarding contract content. At a deeper level, both forms of substantiation ask whether consumers have accurate views about the quality of a seller's goods or services. Representations in advertisements can convey important aspects of product quality (e.g., “Oreo cookies contain no trans fat”). But promises from the seller to the buyer (e.g., “The drive train is warranted for five years or 100,000 miles”), or from the buyer to the seller (e.g., “Renter promises to pay $150 if GPS indicates that the rented car was driven at an average speed of eighty miles per hour for more than two minutes”), can also convey important aspects of product quality—in the sense of expected consumer surplus. Accordingly, consumer protection ac-

120. Requiring statistically significant (p < .05) results helps resolve whether a competitor survey was sufficiently large to produce credible evidence of an unexpected term. A smaller substantiation survey would only trigger a warning duty if it uncovered a substantial enough disparity to achieve statistical significance. To assure that mass-market sellers surveyed an adequate number of consumers, sellers would also calculate and disclose a “power analysis” indicating that their chosen sample size is sufficient to identify a five percent disparity at least eighty percent of the time. We discuss in Part IV.A how the warning trigger should treat a respondent who reports not having beliefs or “any idea” about particular terms.

121. Term substantiation might also elicit information about contractual representation. For example, some users of stickK may not realize that they represent “that the total of all Commitment Stakes authorized by [a] Client is less than 10 percent of [a] Client's annual income.” Terms and Conditions of Commitment Contract, STICKK ¶ 6.2, http://www.stickk.com/faq/tac (last visited Feb. 22, 2014).
tions contest advertisements that create erroneous impressions about contractual promises.

For example, in *Federal Trade Commission v. In Deep Services, Inc.*, the government alleged a failure adequately to disclose material terms in violation of the FTC Act when defendants advertised a “No Hassle Money Back Guarantee,” but the contract’s formal terms and conditions required consumers, among other things, to “wait 88 days from the date of their order” before applying for a refund. FTC enforcement actions, however, do not reach many of the misimpressions that our proposal would regulate. For example, in *Federal Trade Commission v. Financial Freedom Processing, Inc.*, the FTC challenged a debt consultant’s false and unsubstantiated claims that defendant’s service could reduce a buyer’s debt by thirty to sixty percent, and that the seller’s debt reduction program could be completed in eighteen to thirty-six months. A central issue in the case concerned a nonrefundable “administrative fee” charged by the seller “equal to 9.9 percent of the customer’s debt at the time of enrollment”; the fee had to be paid in full before the seller would negotiate possible credit card debt reductions. Many consumers likely failed to understand, or to perceive (the fee was set out in eight-point fine print), that their initial payments to the defendant would not reduce their debt. The FTC’s challenge was limited to the false and unsubstantiated nature of the card issuer’s factual representations, however.

Courts have appropriately found that actions challenging the accuracy of factual representations should turn on the “net impressions” of seller behavior on the consumer so that misleading advertisements cannot be automatically negated by inconsistent formal disclaimers. In contrast, current law does not assess the net impression of consumers regarding rights and duties under a contract. In the *Financial Freedom Processing, Inc.* dispute, the net impression of


127. See Fed. Trade Comm’n v. Tashman, 318 F.3d 1273, 1283 (11th Cir. 2003) (Vinson, D.J., dissenting) (“[B]oth the advertisements and the disclosure documents must be construed together to evaluate the net impression of the representations to consumers.”); see also Removatron Int’l Corp. v. Fed. Trade Comm’n, 884 F.2d 1489, 1497 (1st Cir. 1989) (addressing the “common-sense net impression of petitioners’ advertising claims”).
many consumers was likely inconsistent with the formal promise to pay 9.9% of their debt as an administrative fee before the seller would negotiate a credit card debt reduction on their behalf. Our approach would require sellers of mass-market services to substantiate that a majority of consumers have an accurate net impression of their contracts’ actual terms (and warn consumers about terms that are shown to be unexpected). 128

Many commentators have criticized the role of consumer surveys in false advertising cases because of their cost. 129 In the advertising context, however, each survey must be individually tailored to a particular advertisement. In contrast, in studying consumers’ expectations with respect to contract terms, a single study could produce results that would apply to a broad set of contexts. This is because many contract terms are similarly phrased, even when used in different transactions. A prepayment penalty term or a disclaimer reads similarly in sales of goods, money, or services. And while sellers should periodically retest consumers to establish possible changes in consumer beliefs, the cost per study of gathering consumer perception data probably would be significantly lower in the buried terms context than in the advertising context.

IV. A PRELIMINARY TERM-SUBSTANTIATION STUDY OF THE FACEBOOK EULA

From late November 2012 through early January 2013, we administered a survey designed to illustrate the type of research a mass-market company could undertake using our model. 130 We set up a table at four different public settings and offered subjects $5 to take a fifteen-minute Yale Law School survey. The survey asked a series of twenty-five questions concerning specific terms in-

128. A second distinction between advertisement and term substantiation concerns causation. Advertisement substantiation tries to uncover the causal impact of particular advertisements on consumer impressions. Sellers are not liable for misperceptions that stem from independent sources. But we favor assessing the net impression of consumers’ belief about contractual terms regardless of the source of those impressions. If the seller learns that a majority of its customers have false and overly optimistic impressions about certain terms of an agreement, the seller should warn customers about these unexpected terms (or face the prospect that the terms will not be enforced). This result is consistent with the impetus behind cigarette health warnings, which, as argued by Christine Jolls, can be justified as an attempt to “debias” consumers’ overoptimistic perceptions of health risks (regardless of whether those misperceptions were caused by seller advertisements). See Christine Jolls, Product Warnings, Debiasing, and Free Speech: The Case of Tobacco Regulation, 169 J. INSTITUTIONAL & THEORETICAL ECON. 53, 54, 56 (2013).

129. See, e.g., Klass, supra note 115, at 481.

130. The feasibility of empirically assessing nondrafter beliefs about contractual terms is underscored by the recent efforts of the Consumer Financial Protection Bureau to ascertain, via multiple rounds of testing, the impact of alternative disclosure forms on borrower knowledge of loan terms. See KLEIMANN COMM’N GRP., INC., supra note 1, at 31.
cluded in Facebook’s *Statement of Rights and Responsibilities*,131 and how important those terms were to the respondent.132 We also asked the respondents a number of ancillary questions about the basis of their knowledge (e.g., whether they use Facebook and whether they had previously read Facebook’s EULA) and their socioeconomic and demographic identity (e.g., their age, gender, race, and income).

**A. Background and Methodology**

A total of 242 respondents completed the survey. One hundred forty-three of our respondents were Yale affiliated and participated by answering the survey at various campus locations.133 Ninety-nine of our respondents (who were, for the most part, not affiliated with Yale) participated by answering the survey at an off-campus location in New Haven (just inside the entrance of a grocery store).134

The vast majority (85%) of respondents were Facebook users and reported not having previously read Facebook’s *Statement of Rights and Responsibilities*.
Broadly speaking, the demographics of the survey population were representative of Facebook’s user base in the United States. Our population was quite young—somewhat younger, in fact, than Facebook’s users, with approximately 75% between the ages of eighteen and thirty-four. This compares to this group’s approximately 50% share of Facebook’s user base in the United States. The sample was slightly more female than male (52% female and 45% male, as compared to Facebook’s breakdown of 54% female and 46% male in the United States). We achieved significant racial diversity in our survey population: 40% of participants were white and not of Hispanic descent, 25% were black or African American, 10% were Hispanic, and 10% were Asian. This is significantly more diverse than the U.S. population, according to Census data, and most likely more diverse than Facebook’s U.S. user base. Respondents were wealthier than the average American, with about 45% of participants reporting household income of $100,000 or greater, but since Facebook does not disclose the socioeconomic breakdown of its users, it is not clear whether our survey’s population was unrepresentative in this respect. Finally, because one of our four survey locations was located within Yale Law School, a significant portion of our population (29%) had some law school education. Appendix A provides more detailed summary statistics about our final sample.

The small size of our sample and the specialized population of our respondents preclude this study from providing valid inferences about what particular Facebook terms are expected or unexpected. We offer the survey instead as a heuristic exercise. The survey suggests that actual sellers could identify

135. Given the empiricism reported in notes 6 and 7 above and the accompanying text, it is unlikely that 23% of our subjects actually had read the Facebook EULA.

136. See United States Facebook Statistics by Country, Socialbakers, http://www.socialbakers.com/facebook-statistics/united-states (last visited Feb. 22, 2014). Note that this disparity can be partly explained by the fact that six percent of Facebook’s users are under the age of eighteen, and that we were only authorized to survey participants aged eighteen or older in this study.

137. See id. Three percent of our respondents did not identify as male or female, instead either not replying or identifying as transgender or gender queer.

138. Based on 2012 census data, the U.S. population is 63% white and not of Hispanic descent, 17% Hispanic, 13% black or African American, and 5% Asian. See State & County QuickFacts, U.S. Census Bureau (Dec. 17, 2013, 2:44 PM EST), http://quickfacts.census.gov/qfd/states/00000.html.

139. Based on reports from 2009 and 2010, racial minorities are likely underrepresented in Facebook’s U.S. user base. Compare id. (estimating that thirteen percent of the U.S. population is black or African American), with Cameron Marlow, How Diverse Is Facebook?, Facebook (Dec. 16, 2009, 6:54 PM), http://www.facebook.com/note.php?note_id=205925658858 (estimating that Facebook’s U.S. user base was approximately ten percent black in 2009).
those terms that should be subject to enhanced warnings under our proposal and those that would be enforceable even if buried.

Our twenty-five core questions about Facebook’s EULA concerned several of the different sections of the Statement of Rights and Responsibilities, including “Privacy,” “Safety,” “Registration and Account Security,” “Protecting Other People’s Rights,” “Mobile and Other Devices,” “Amendments,” and “Disputes.”

For example, regarding “Privacy,” we asked the following multiple-choice question:

You “like” the page of your favorite pizza chain. Your grandmother, with whom you are friends on Facebook, visits a website and notices that it contains an advertisement for the pizza restaurant with a photo of your face and the text “[Your Name] likes this restaurant.” Is this scenario possible under Facebook’s current terms of service?

a. No, your photo and name cannot appear in an advertisement.

b. No, your photo and name cannot appear in an advertisement outside of Facebook.

c. Yes, Facebook may use your photo and name in advertisement for a page you “like.”

d. Yes, Facebook may use your photo and name for any advertisement.

Interested readers might pause and answer the question before proceeding. The correct answer is described below.

Our survey design also included two dimensions of randomization. First, we randomized the order of the questions—assigning respondents at random to “forward” and “backward” conditions—which differed only in that the back-
ward condition reversed the order of all the questions (such that the first question became the last and vice versa). The purpose of this randomization was to test whether question order affected respondent answers. We found no systemic difference in respondent answers between the two conditions, suggesting that priming of prior questions did not influence respondents' answers.\textsuperscript{143} Second, and more centrally, we randomly assigned subjects to either a group that added an "I have no idea" answer to each of the twenty-five questions or to a group that excluded this option. Thus, respondents in the "no idea" group were given the option of answering each question by indicating that they had no idea while the "best guess" group was given choices that excluded this "no idea" option. Randomizing on this second dimension allowed us to test the impact of "forcing" subjects to express an opinion when they may have had little confidence in their knowledge about the content of particular terms.

By comparing the relative accuracy of respondents who at random were or were not given the "no idea" option, we can infer the probable accuracy of those who answered that they had no idea had they not been given this option.\textsuperscript{144} Overall, we find that 41\% of the "no idea" responses would have been accurate responses if the respondents had not been given this option. This percentage is statistically smaller than the 51\% accuracy of the respondents who were given the "no idea" option but chose nonetheless to express an opinion. Thus, we can infer that the people who answered "no idea" were less knowledgeable than those who volunteered to express an opinion, but their inferred accuracy of 41\% was still statistically better than random guessing. Our initial survey, while preliminary, provides some evidence in favor of not including a "no idea" option because we find that respondents who said they had "no idea" in fact had better than random beliefs about what the contractual terms were. Accordingly, to determine which questions trigger a duty to warn under our proposal, we analyze those respondents in the "best guess" group who answered optimistically.

\textsuperscript{143} See infra Table 1 (reporting statistical insignificance of "backward" variable).

\textsuperscript{144} For example, on Question 5 ("[True or False:] You cannot post a photo of your friend's driver's license on Facebook."), see Ayres et al., supra note 131, at 12, in the "no idea" survey group, 48\% responded that they had "no idea," and 34\% answered correctly (True). In the "best guess" group, 52\% answered correctly. If we assume that the same 34\% from the "no idea" group would have still answered correctly if they had been in the "best guess" group, we can infer that 37\% of those who answered "no idea" in the "no idea" group would have answered correctly if they had been assigned to the "best guess group" ((52\% - 34\%)/(48\%).
B. Core Results

Our central results concern the accuracy of respondents' answers to the twenty-five term questions. For the "best guess" treatment groups,²¹ four of the twenty-five questions would not trigger our proposed duty to warn standard.²² Hence, under our proposal, these twenty-one terms should unproblematically be enforced by courts even if buried, delayed, or opaquely worded. We found that twelve of our thirteen true/false questions qualified as "buriable." For example, a majority of respondents correctly answered the following two questions as "true":

When you register a Facebook account, it must be under your own name.

An advertiser tells Facebook that it wants to post an advertisement targeted at 24-year-old women who live in Detroit and like Michael Phelps. You fit all of these criteria. Facebook may share this information with the advertiser so that you will receive its advertisement.²³

Eight of our twelve multiple-choice questions qualified as buriable. Thus, for example, a majority of respondents (54%) understood with regard to the foregoing pizza restaurant advertisement question that Facebook could use your name and photo in an advertisement for a page that you "like."²⁴ To summarize, a majority of Facebook users either could correctly identify the content of the Facebook EULA or would expect less favorable terms than those in that EULA though these subjects did not read it. These results are important because they validate our premise that consumers who do not read nevertheless acquire substantial information about the terms of the contracts to which they agree.

Our survey found systematic consumer optimism with regard to some terms, however. A statistically significant majority of respondents in the "best guess" treatment group optimistically believed that four terms were more fa-

²¹. The two dimensions (forward/backward and no idea/best guess) of randomization produced a total of four survey versions. If we expand our analysis to include "no idea" group respondents, and count "no idea" responses as problematic, the number of required warnings would increase from five to eleven terms.

²². One of the questions (concerning the choice-of-law provision) might have triggered disclosure because only a minority of respondents could correctly identify that California law governed, but it is not clear whether the actual term was less favorable than consumer perceptions. See Statement of Rights and Responsibilities, supra note 131 ("The laws of the State of California will govern this Statement, as well as any claim that might arise between you and us, without regard to conflict of law provisions.").

²³. Ayres et al., supra note 131, at 11, 14.

²⁴. Another 8.7% of respondents believed that the contract was less favorable than the actual contract by answering, "Facebook may use your photo and name for any advertisement."
vorable to them than the actual terms.\textsuperscript{149} Under our proposal, these terms would need to be included in a standardized warning box in decreasing order of importance to consumers.\textsuperscript{150} Although our proposal calls for mass-market companies to engage in additional validation to assure that the warning box is effective at communicating information to readers, a nonvalidated attempt at such an ordered warning is provided below.

\textbf{FIGURE 3}

\begin{center}
\includegraphics[width=\textwidth]{warning_box.png}
\end{center}

By sharing your Facebook posts using the "Public" setting, you are letting everyone—including people who are not on Facebook—have access to the post.

Even if you select "Only Me" as the audience for your friend list, Facebook may still share your friend list with the games, websites, and applications you use.

If you gather information from other users, you must not only obtain those users' permission, but also make it clear that you (not Facebook) are the one collecting the information and post a privacy policy.

Even though Facebook provides its mobile services for free, you are still responsible for your carrier's normal rates and fees.

\textsuperscript{149} The four warnings are derived from the corresponding sections of Facebook's EULA. See \textit{Sharing and Finding You on Facebook}, FACEBOOK, http://www.facebook.com/about/privacy/your-info-on-fb (last visited Feb. 22, 2014) (“When you select an audience for your friend list, you are only controlling who can see the entire list of your friends on your timeline. We call this a timeline visibility control. This is because your friend list is always available to the games, applications and websites you use, and your friendships may be visible elsewhere (such as on your friends’ timelines or in searches). For example, if you select ‘Only Me’ as the audience for your friend list, but your friend sets her friend list to ‘Public,’ anyone will be able to see your connection on your friend’s timeline.”); \textit{Statement of Rights and Responsibilities}, supra note 131 (“When you publish content or information using the Public setting, it means that you are allowing everyone, including people off of Facebook, to access and use that information, and to associate it with you (i.e., your name and profile picture).”); \textit{id.} (“If you collect information from users, you will: obtain their consent, make it clear you (and not Facebook) are the one collecting their information, and post a privacy policy explaining what information you collect and how you will use it.”); \textit{id.} (“We currently provide our mobile services for free, but please be aware that your carrier’s normal rates and fees, such as text messaging and data charges, will still apply.”).

\textsuperscript{150} For our ranking of importance we limited the sample to respondents who had pessimistic or uninformed responses.
We separately tested whether distinct subgroups might exhibit different forms of optimism and thus require targeted forms of warnings. In our data, respondents from all racial and gender subgroups separately triggered the fifty-percent warning criterion on these same five questions. While important normative questions about the possible utility of targeted disclosure remain for our general proposal, in this survey, for at least race and gender, subgroup validity is not empirically a problem.

C. Regression Results

We used regression analysis to explore what underlying factors were associated with problematic responses. Specifically, we created a “Warn” indicator variable that was set equal to one if a respondent responded to a question either with inaccurate optimism or with “I have no idea.” Then in a logistic regression, we regressed “Warn” on a variety of variables related to the version of the survey, the respondent type, and the type of questions asked. The results of two nested regressions are reported in Table 1.

151. We found no significant difference in the number of terms triggering warnings for salient subgroups (i.e., black or African Americans, Hispanics, and women).
152. “Warn” was also triggered if a participant selected an incorrect response that could not properly be classified as either optimistic or pessimistic (e.g., selecting New York rather than California in a question related to Facebook’s choice-of-law provision).
153. “Backward” refers to the effect of reversing the question; “No Idea” refers to the inclusion of the “I have no idea” answer option; “Read Terms” refers to affirmatively answering that the respondent had read Facebook’s Statement of Rights & Responsibilities; “Importance” refers to the respondent’s subjective rating of the importance of a given term on a scale from one to five; “Non-Yale Location” refers to the administration of the survey at the New Haven Super Stop & Shop, as opposed to a Yale campus location, see supra note 134; and “Law School Education” refers to whether the participant is currently or has ever been enrolled in law school. We selected obvious defaults for gender (male) and race (white), and we used the median reported household income of our respondents ($60,000 to $99,999) as the income default. These defaults are omitted from Table 1.
<table>
<thead>
<tr>
<th></th>
<th>Specification 1</th>
<th>Specification 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backward</td>
<td>0.0424</td>
<td>0.0378</td>
</tr>
<tr>
<td></td>
<td>(0.79)</td>
<td>(0.62)</td>
</tr>
<tr>
<td>No Idea</td>
<td>0.6071***</td>
<td>0.6901***</td>
</tr>
<tr>
<td></td>
<td>(11.41)</td>
<td>(11.47)</td>
</tr>
<tr>
<td>Facebook User</td>
<td>0.3145***</td>
<td>0.0675</td>
</tr>
<tr>
<td></td>
<td>(4.09)</td>
<td>(0.69)</td>
</tr>
<tr>
<td>Read Terms</td>
<td>-0.0810</td>
<td>-0.1056</td>
</tr>
<tr>
<td></td>
<td>(-1.24)</td>
<td>(-1.39)</td>
</tr>
<tr>
<td>Importance</td>
<td>-0.0998***</td>
<td>-0.1065***</td>
</tr>
<tr>
<td></td>
<td>(-5.17)</td>
<td>(-4.72)</td>
</tr>
<tr>
<td>Non-Yale Location</td>
<td></td>
<td>-0.0229</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.26)</td>
</tr>
<tr>
<td>Law School Education</td>
<td></td>
<td>-0.4026***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-5.60)</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>0.0073</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.12)</td>
</tr>
<tr>
<td>Other Gender</td>
<td></td>
<td>0.1389</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.31)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>0.0066*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.77)</td>
</tr>
<tr>
<td>American Indian</td>
<td></td>
<td>0.6405**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.96)</td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td>0.3217***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3.87)</td>
</tr>
<tr>
<td>Asian</td>
<td></td>
<td>0.1200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.21)</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td>-0.0771</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.67)</td>
</tr>
<tr>
<td>Income &gt; $350,000</td>
<td></td>
<td>0.2505**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.35)</td>
</tr>
<tr>
<td>Income $150,000-$349,999</td>
<td></td>
<td>0.0223</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.26)</td>
</tr>
<tr>
<td>Income $100,000-$149,999</td>
<td></td>
<td>-0.0328</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.28)</td>
</tr>
<tr>
<td>Income $30,000-$59,999</td>
<td></td>
<td>-0.1504</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1.57)</td>
</tr>
<tr>
<td>Income &lt; $30,000</td>
<td></td>
<td>-0.1362</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1.21)</td>
</tr>
<tr>
<td>Observations</td>
<td>5,950</td>
<td>5,325</td>
</tr>
<tr>
<td>Pseudo R-squared</td>
<td>0.0222</td>
<td>0.0801</td>
</tr>
</tbody>
</table>

* Significant at 10% level  ** Significant at 5% level  *** Significant at 1% level
In both specifications, we first tested the impact of our two randomized treatments. As expected, we found no significant difference in the results from the “backward” treatment group relative to the omitted “forward” treatment group. Also as expected, we found the respondents in the “no idea” group had a statistically significant increased chance of giving an answer triggering a warning, or a “warnable” answer, relative to respondents in the omitted “best guess” treatment group who did not have the option of giving the “no idea” response, which triggers a warning.

The specifications next estimate the impact of aspects of the respondent’s relationship to the Facebook website. The regressions suggest that respondents were less likely to give warnable answers if they reported having read the Facebook EULA at an earlier time. While we are somewhat skeptical that twenty-one percent of respondents had actually read the contract fully and carefully, the result that reading produces better-informed respondents is consistent with what one would expect. We also found (as might be suggested by theory) that respondents were less likely to give an inaccurate optimistic or “no idea” response with regard to terms that they assessed as being important. But somewhat counterintuitively, the regressions estimated that registered Facebook users were more likely than non-Facebook users to give warnable answers (although this effect was not statistically significant in the second specification).

The second specification added a variety of controls related to the type of respondent (including a number of demographic controls). There was no statistically significant difference in the likelihood of giving a warnable answer for Yale versus non-Yale respondents, but (as might be expected) respondents with some legal training were statistically less likely to give a warnable answer. We found no statistical difference in gender, but found that black or African American and American Indian respondents were statistically more likely to give warnable answers. The specification also found that respondents reporting incomes over $350,000 were statistically more likely to give warnable answers (than the omitted category of respondents with reported annual household incomes of $60,000 to $99,999).

For the reasons mentioned above, it is important to emphasize that this study would not suffice as a real-world implementation of our “buried terms” proposal. We have instead conducted the study as an exercise, with the goal of both demonstrating the feasibility of conducting a real-world version of this survey and gaining a preliminary perspective on consumers’ expectations in at least one prominent example of a mass-market contract. Important issues remain as to the level of specificity required in the substantiation survey and

154. The level of specificity in the framing of consumer knowledge might importantly affect the results of term-substantiation studies such as this one. But as discussed in Part
whether systematic optimism by identifiable consumer subgroups should trigger additional (potentially targeted) warnings.\footnote{155. As mentioned above, racial and gender subgroups in our sample would not have triggered distinct warnings. See supra note 151 and accompanying text. We recommend that policymakers initially only require testing to assess whether term optimism varies substantially across different consumer demand segments. If the subgroup-validity problem is substantial, it might be worth adopting second-wave regulation requiring tailored segment-contingent disclosures. See Ariel Porat & Lior Jacob Strahilevitz, \textit{Personalizing Default Rules and Disclosure with Big Data}, 112 Mich. L. Rev. (forthcoming 2014).} \footnote{156. See discussion supra Part II.E.}

At the very least, our study suggests why so many consumers (in our case, seventy-seven percent of respondents) fail to read the terms of agreements that bind them: they expect many of these terms to be in the agreement and rationally prefer not to expend cognitive resources reading what they are reasonably confident they will see.\footnote{156. See discussion supra Part II.E.} In particular, this study finds that consumers held either accurate or pessimistic expectations with respect to eighty percent of the terms we tested, leaving only five of the twenty-five terms in need of better disclosure. We would expect that the average consumer would better understand the terms of this agreement if those five terms were flagged for his attention—signaling not only the terms’ importance but their inconsistency with most consumers’ expectations.

This expectation presents an avenue for research; that is, we have yet to demonstrate that consumers’ comprehension of these contract terms would improve were they presented in the warning box format. Although this preliminary survey (on fewer than 300 respondents) at most can suggest the utility of our approach, this example of presenting warnings with reference to consumers’ perceptions of importance illustrates how a warning system might efficiently correct the most serious forms of consumer optimism.

CONCLUSION

Contract law should abandon the duty to read doctrine: the view that a consumer is bound to terms that she had an opportunity to read. Rather, courts should not enforce terms that a substantial number of consumers believe are more favorable to them than the terms actually are. A seller could restore enforceability to such a term only if it discloses the existence of the term in an enhanced, standardized warning format.

Contract law’s current duty to read requirement binds consumers to terms of which they should have been aware. In a sense, our proposal makes an analogous “should have known” presumption: our proposal can be understood as saying that the consumer should have known the expectations that a majority
of other consumers hold. Our view regarding consent is analogous to corporate law's "fraud-on-the-market" theory, which posits that shareholders who are not aware of a corporate disclosure may nonetheless rely on the informed decisions of other shareholders (and the market more generally). Our argument that contract law should dispense with requiring individual consent to particular terms rests on the findings of earlier studies, and our own, that consumers know much about contract content, though they seldom read contracts. Consumers learn from their own prior experience, each other, advice from experts, Internet sites, and the like. Consumers can also infer the existence of some terms from a sufficiently competitive context.

We have shown, however, that consumers sometimes hold optimistically mistaken beliefs about important terms. When consumers attribute greater utility to those terms than their better-informed selves would do—when consumers are "term optimists"—firms have an incentive to, and likely do, degrade contract content. We therefore recommend that firms be given a duty to learn which of their terms consumers optimistically mistake, and to correct those mistakes with vivid warnings. These warnings should appear in a standardized "warning box" whose content is limited to the important mistaken terms.

The proposal here differs in an important respect from prior disclosure recommendations. Those recommendations would sometimes require sellers to highlight particular terms, but rest on the premise that consumers should, and probably would, read the entire contract. As noted above, studies of what consumers know show that consumers are aware of a large majority of terms. Consumers also hold pessimistic expectations regarding some unread terms. Accordingly, there are few terms in the typical consumer contract that both are materially unfavorable and unexpected: perhaps five or fewer, as demonstrated by Part IV. Because we permit sellers to bury the other terms, our proposal would radically truncate the consumer's reading task, and thereby increase the probability that consumers will read. Consumers are more likely to observe four vividly disclosed terms than they are to look at an entire contract.

Our proposal should not be put into effect without major administrative interventions of two kinds. First, there is no widely accepted way for a seller to

157. See Ian Ayres, Back to Basics: Regulating How Corporations Speak to the Market, 77 VA. L. REV. 945, 945-46, 966 (1991); see also Jonathan R. Macey & Geoffrey P. Miller, Good Finance, Bad Economics: An Analysis of the Fraud-on-the-Market Theory, 42 STAN. L. REV. 1059, 1066 (1990) (arguing that, if they could, shareholders would allow, and even contract for, management misrepresentations because they would benefit from the resulting long-term increase in share price).

158. A competitive market, for example, is unlikely to place risk on the inefficient loss avoider. Therefore, consumers might infer that grossly inefficient terms that merely engross seller profits would not persist in a market with sufficient reputational checks on sellers.
ascertain what its customers expect about the contract—to engage in what we call "term substantiation." A seller should be held liable, we argue, for failing to warn when it should know that its customers are making contracting mistakes. This raises a question of how the seller should conduct a term-substantiation study. This question is serious partly because evasion is a danger: a seller may conduct a casual survey and argue that it need warn little because its customers know almost everything. Even sellers in good faith may be uncertain as to what a court will later regard as a rigorous test. Accordingly, a major administrative task would be to create guidelines that term-substantiation studies must satisfy before they can create a safe harbor for the seller. There have been many recommendations that the state should create standard formats for term disclosure. We add to these calls by recommending that the state should also create, or approve, standard methodological guidelines for term-substantiation studies.

The second administrative intervention would involve testing the efficacy of particular warning formats. Though there are many disclosure requirements, there is little knowledge as to what requirements actually work. Thus, we claim for our particular proposal of a warning box not that it will work with certainty, but that it is sufficiently plausible to be seriously tested. We hope that the state, and empirical researchers as well, will take on this task.

---

159. See, e.g., Kozup et al., supra note 25, at 313 ("Despite numerous academic articles across different disciplines, large-scale government-sponsored studies, and meta-analyses, it is difficult to ascertain the conditions under which disclaimers and disclosures are most beneficial."). The Consumer Financial Protection Bureau recently announced a new program that seeks to reverse this trend by conducting studies of disclosure for financial contracts. Alex Plunkett, Disclosures: A New Avenue for Improvement, CONSUMER FIN. PROTECTION BUREAU BLOG (Oct. 3, 2013), http://www.consumerfinance.gov/blog/disclosures-a-new-avenue-for-improvement ("[The CFPB’s] new trial disclosure policy . . . allows companies to apply for a waiver to test potential disclosure improvements on a trial basis.").
### Respondent Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facebook User</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>205</td>
<td>84.7%</td>
</tr>
<tr>
<td>No</td>
<td>33</td>
<td>13.6%</td>
</tr>
<tr>
<td><strong>Read Facebook Terms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>51</td>
<td>21.1%</td>
</tr>
<tr>
<td>No</td>
<td>187</td>
<td>77.3%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>28.0</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>24.0</td>
<td></td>
</tr>
<tr>
<td>Under 18</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>18-22</td>
<td>87</td>
<td>36.0%</td>
</tr>
<tr>
<td>23-29</td>
<td>82</td>
<td>33.9%</td>
</tr>
<tr>
<td>30-39</td>
<td>19</td>
<td>7.9%</td>
</tr>
<tr>
<td>40-49</td>
<td>21</td>
<td>8.7%</td>
</tr>
<tr>
<td>50-59</td>
<td>15</td>
<td>6.2%</td>
</tr>
<tr>
<td>Over 60</td>
<td>5</td>
<td>2.1%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>108</td>
<td>44.6%</td>
</tr>
<tr>
<td>Female</td>
<td>126</td>
<td>52.1%</td>
</tr>
<tr>
<td>Other/No Response</td>
<td>8</td>
<td>3.3%</td>
</tr>
<tr>
<td><strong>Law School Enrollment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>71</td>
<td>29.3%</td>
</tr>
<tr>
<td>No</td>
<td>160</td>
<td>66.1%</td>
</tr>
<tr>
<td><strong>Hispanic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>25</td>
<td>10.3%</td>
</tr>
<tr>
<td>No</td>
<td>169</td>
<td>69.8%</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td>61</td>
<td>25.2%</td>
</tr>
<tr>
<td>East Asian</td>
<td>17</td>
<td>7.0%</td>
</tr>
<tr>
<td>Native American</td>
<td>6</td>
<td>2.5%</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>2</td>
<td>0.8%</td>
</tr>
<tr>
<td>South Asian</td>
<td>5</td>
<td>2.1%</td>
</tr>
<tr>
<td>Southeast Asian</td>
<td>1</td>
<td>0.4%</td>
</tr>
<tr>
<td>White</td>
<td>109</td>
<td>45.0%</td>
</tr>
<tr>
<td>Annual Household Income</td>
<td>Respondents</td>
<td>Percentage</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>Greater than $350,000</td>
<td>29</td>
<td>12.0%</td>
</tr>
<tr>
<td>$150,000 - $350,000</td>
<td>58</td>
<td>24.0%</td>
</tr>
<tr>
<td>$100,000 - $149,999</td>
<td>22</td>
<td>9.1%</td>
</tr>
<tr>
<td>$60,000 - $99,999</td>
<td>27</td>
<td>11.2%</td>
</tr>
<tr>
<td>$30,000 - $59,999</td>
<td>40</td>
<td>16.5%</td>
</tr>
<tr>
<td>Less than $30,000</td>
<td>29</td>
<td>12.0%</td>
</tr>
<tr>
<td>Total Respondents</td>
<td>242</td>
<td></td>
</tr>
</tbody>
</table>

Note: Not all survey respondents answered all questions. The number of responses to any particular question may be less than 242.