

Searching for the Common Law: The Quantitative Approach of the Restatement of Consumer Contracts

Oren Bar-Gill,[†] Omri Ben-Shahar^{††} & Florencia
Marotta-Wurgler[‡]

In 2012, the American Law Institute asked us to serve as reporters for a new Restatement of Consumer Contracts. Recognizing that many innovations in American contract law in the past generation occurred in the area of consumer transactions, the project seemed timely and challenging. We discovered that many of these innovations are controversial and seemingly subject to conflicting approaches in the case law and heated debates among commentators. We also discovered that prior attempts to devise a unified set of rules have largely failed. We therefore decided to take a new approach to our search for, and restatement of, the emerging rules. In addition to identifying the majority rules, we used an empirical approach that involved collecting, coding, and systematically analyzing the entire body of court decisions on relevant questions. We identified the degree of support that different rules garnered in courts and the rate at which they were adopted or rejected over time. We thus discovered which rulings and rationales serve as guiding precedent. We based the black-letter rules in the final draft of the Restatement of Consumer Contracts on these findings (complementing them with qualitative support). In this Essay, we present our empirical approach to searching for the law and legal precedent, discuss its conceptual and normative foundations, and describe some of the doctrinal debates it helped resolve.

INTRODUCTION

Applying a precedent is the fundamental craft of a common-law judge. Judges do not go back to general principles to derive novel solutions to each case at hand, along with novel justifications and renewed persuasion efforts. Instead, they turn to the

[†] William J. Friedman and Alicia Townsend Friedman Professor of Law and Economics, Harvard Law School.

^{††} Leo and Eileen Herzel Professor of Law and Kearney Director of the Coase-Sandor Institute for Law and Economics, The University of Chicago Law School.

[‡] Professor of Law, New York University School of Law. For helpful comments and suggestions, we thank Lewis Kornhauser, Richard Revesz, participants in *The University of Chicago Law Review's* symposium on "Developing Best Practices for Legal Analysis," and participants in the American Law Institute's Restatement of the Law, Consumer Contracts project.

legal decisions in prior cases with similar facts and import their effect and reasoning.

But what *is* the legal precedent? What if different rules have been previously applied to cases with similar facts? In an adversarial system in which the attorneys for the disputing parties thrive on exposing *vagueness* in precedent, identifying the precedent and its exact prevalence is often difficult, time intensive, and potentially error prone.

Various methods have developed over time to reduce the costs of searching prior law and distilling the precedent. Prominent among them is the American Law Institute's (ALI) Restatement project, which seeks "to promote the clarification and simplification of the law."¹ Restatements sometimes aspire to steer the law in new directions, but even then it is the role of the reporters to identify where the governing rules currently lie and explain why they need to be reformed.

In 2012, the ALI asked us to serve as reporters for a new Restatement of the Law, Consumer Contracts. Recognizing that many innovations in American contract law in the past generation occurred in the area of consumer transactions, the project seemed timely and challenging. We discovered that many of these innovations are controversial and subject to seemingly conflicting approaches in the case law, rendering an unclear picture of what the law actually is. We also discovered that prior attempts to devise a unified set of rules had largely failed. We therefore decided to take a new approach to our search for, and restatement of, the emerging rules—a comprehensive quantitative approach.

Our approach was intended to answer the question of what rules the majority of courts and jurisdictions follow. To answer this question, we collected the entire body of court decisions on a given issue. We read these cases and coded their relevant facts, characteristics, decisions, rationales, and citations. We then used quantitative methods to analyze the database. For example, by analyzing the statistical relationship between facts and legal outcomes, we were able to discern the type of notice that satisfies the doctrinal requirement of precontractual disclosure in the formation of a contract.

This method provided a broader, richer view of precedent in an environment in which discerning precedent is challenging.

¹ *About ALI: Creation* (ALI), archived at <http://perma.cc/9W6X-KSYZ>.

Many of the central questions in consumer contract law have not been settled by state supreme courts, and therefore the conventional ALI method of discerning the majority rule by looking to the highest court in each state was not sufficient. We thus had to look to federal courts and to lower state courts. But how should they be counted and weighed?

Our basic insight was to aggregate the body of cases by measuring the influence of each case. We calculated how many times each ruling had been positively cited or followed, focusing on out-of-state citations (which are used as persuasive precedent when there is no binding intrajurisdictional precedent). We also studied trends, looking at how the rate at which cases were adopted or rejected changed over time. This analysis produced more robust conclusions about which rulings and rationales were guiding courts. Some lawyers and commentators, and even some reporters of Restatement projects, intuit which are the leading or influential cases. With our methodology, the relative importance of a decision became the *conclusion* of our analysis.² We based the black-letter rules in the Restatement on these findings (complementing them in the official comments with qualitative and normative support).³

This short Essay presents our quantitative approach. Part I lays out jurisprudential and practical problems in searching for the common law and legal precedent. Part II presents the quantitative approach and illustrates its application to two of the most important questions in consumer contract law: the legal effect of “shrinkwrap” terms and the status of privacy “notices” posted on websites. Finally, Part III addresses objections to the use of the quantitative methodology.

I. THE EVOLUTION OF THE COMMON LAW AND THE SEARCH FOR PRECEDENT

This Part develops the conceptual framework for the problem of searching for common-law rules. It presents the emergence of legal precedents in the common law as an information problem, and embeds this problem within the familiar framework

² We emphasize the importance of transparency, and we will make our databases, search criteria, and coding decisions publicly available once the Restatement is published.

³ The empirical methodology was used to derive some, but not all, of the rules in the draft Restatement. Some rules, such as the unconscionability rule and the deception rule, were restated as general standards and thus were less susceptible to the empirical methodology.

of rules versus standards. It then discusses the effects of information technology on the emergence of precedents.

A. From Standards to Rules

This Section makes two claims: (1) Rules and standards are not mutually exclusive, but rather operate in tandem—at different levels of generality. (2) Even when the general standard is broadly accepted, the rules generated from it may be inconsistent and subject to intense debate, with different courts deriving different rules.

1. Coexistence of standards and rules.

Precedent—a mapping from facts to legal outcomes—is often formed through the conversion of a standard into rules. In the common law, this conversion occurs through judicial applications of standards that provide greater precision, or specification, to the legal command.⁴ Consider, for example, the legal principle that requires mutual assent to form a contract. The principle is clear: a contract is created when both parties *signify assent* to the same set of terms.⁵ When contracts are not negotiated and are too long for the nondrafting party to read, the principle of signifying assent is challenging to apply.⁶ Does an “I agree” click suffice? How is assent signified to terms that are available for review only postpurchase? Or to terms that are merely linked on websites’ home pages? The general principle—that the consumer must signify assent to the terms for them to become binding—is clear, but what its application to a specific scenario requires may be hotly contested.

The conversion of standards to rules is increasingly refined. It may begin with a general principle (“signify assent”). From the principle, common-law adjudication of consumer contracts may derive a specific command: assent requires “reasonable

⁴ See Louis Kaplow, *General Characteristics of Rules*, in Boudewijn Bouckaert and Gerrit De Geest, eds, 5 *Encyclopedia of Law and Economics* 502, 511–13 (Edward Elgar 2000). See also generally Scott Baker and Lewis Kornhauser, *A Theory of Judicial Deference* (unpublished manuscript, Nov 2, 2015), archived at <http://perma.cc/PTY3-69DF> (stating that trial courts have access to local knowledge that is not available to higher courts, so higher courts may defer, permitting trial courts to refine the legal standard based on the facts).

⁵ Restatement (Second) of Contracts § 17(1) (1979).

⁶ See Margaret Jane Radin, *Boilerplate: The Fine Print, Vanishing Rights, and the Rule of Law* 82–85 (Princeton 2013); Nancy S. Kim, *Wrap Contracts: Foundations and Ramifications* 192–200 (Oxford 2013).

notice” of the terms.⁷ Further adjudication then translates this intermediate standard into more specific rules. A written notice may be reasonable, for example, if it is “conspicuous.”⁸ Conspicuousness, too, has to be converted into bright-line commands: how large the link’s font has to be, where it should be placed in the web page, what type of alert should accompany it, and so on. While the original general standard enjoys the status of a fundamental principle, the precedents we seek to characterize relate to the more specific rules.

2. The temporal dimension.

As rules emerge from a standard, when do they replace the standard as the basis for subsequent decisions? When the emerging rules are new or controversial, newcomer courts may still resort to the original standard rather than apply the budding rules. Over time, as rules become more accepted and are followed more frequently, newcomer courts fall back to the standard less often.

This temporal dimension depends on various factors, mostly relating to the heterogeneity of the environment. The speed of convergence toward well-settled rules can be quick. For example, courts were quick to hold that clicking “I agree” to digitally presented terms constitutes affirmative assent.⁹ Other times, convergence is slower. For example, it has taken longer for courts to answer the question whether terms presented only postpurchase are included in the contract. As we discuss in Part II, clear trajectories can be identified in the process of convergence, but they are slower and more difficult to observe.¹⁰

⁷ Kim, *Wrap Contracts* at 63 (cited in note 6).

⁸ *Id.* at 110.

⁹ This quick transition was aided by legislation that established the legal effect of electronic affirmations. The Electronic Signatures in Global and National Commerce Act (ESIGN), Pub L No 106-229, 114 Stat 464 (2000), codified at 15 USC § 7001 et seq, established that “a signature, contract, or other record relating to [a] transaction may not be denied legal effect, validity, or enforceability solely because it is in electronic form.” ESIGN § 101(a)(1), 114 Stat at 464, codified at 15 USC § 7001. This enactment helped import an older rule—that a signature is an affirmation of assent to the terms above it—to the new environment of digital terms. For a statement of the older rule, see Samuel Williston, 2 *A Treatise on the Law of Contracts* § 6:44 (West 4th ed 2007) (Richard A. Lord, ed).

¹⁰ See notes 42–43 and accompanying text. In some scenarios, convergence is never attained. See Lewis A. Kornhauser, *An Economic Perspective on Stare Decisis*, 65 Chi Kent L Rev 63, 69–70 (1989) (noting that judges may have different values, which may cause them to deviate from precedent); Oona A. Hathaway, *Path Dependence in the Law: The Course and Pattern of Legal Change in a Common Law System*, 86 Iowa L Rev 601,

In general, convergence is slower the larger and more varied the jurisdiction. In American contract law, convergence may occur quickly within each state, but more slowly across states. The ALI's Restatement projects "assume a body of shared doctrine"¹¹ (across the United States), which takes longer to crystalize. Indeed, in a federal system, full convergence might not be attained. Different rules may persist in different states, especially because there is no single highest court that can resolve the split.¹²

This dynamic account suggests that the timing of the search for the "law" is important. Early on, the search might uncover only a general standard. Later, we may find contradictory rules or a second-order standard that has not yet matured into specific rules. The search is most profitable if enough time is allowed for the jurisdictions to converge to one dominant rule.¹³

The timing-of-search question also highlights the importance of identifying temporal trends in the law. For example, it would be relevant to note when recent decisions, while still small in number, consistently deviate from a well-established majority rule, suggesting perhaps a deviation from previous practices due to exogenous factors. Such trends allow us to look beyond a single snapshot of the law and estimate the doctrine's evolutionary path.¹⁴ The methodology that we present in Part II considers doctrinal trends.

640 (2001) (noting that, often, "equilibrium is unlikely to be achieved before the environment changes").

¹¹ *Capturing the Voice of The American Law Institute: A Handbook for ALI Reporters and Those Who Review Their Work* *4 (ALI 2015), archived at <http://perma.cc/V8N2-UXL3> ("ALI Style Manual").

¹² Commentators often compare New York contract law and California contract law, two systems that adhere to different rules and jurisprudential approaches across important areas of legal doctrine. See, for example, Geoffrey P. Miller, *Bargains Bi-coastal: New Light on Contract Theory*, 31 *Cardozo L Rev* 1475, 1479–80 (2010); Colleen Honigsberg, Sharon Katz, and Gil Sadka, *State Contract Law and Debt Contracts*, 57 *J L & Econ* 1031, 1041–42 (2014) (concluding that "California represents the most pro-debtor state and New York the most pro-lender" of those studied).

¹³ The evolutionary process is influenced by many forces, which we do not discuss in this Essay. For example, selection effects play an important role—the website notices that courts see depend on how businesses design their websites, perhaps in response to prior rulings, and on lawyers' decisions to bring or appeal certain cases but not others. These selection effects are relevant for a normative assessment of the common-law evolutionary process and of the rules that it produces.

¹⁴ See *ALI Style Manual* at *5 (cited in note 11) (highlighting the importance of time trends).

B. Information Technology and the Emergence of Rules

Changes in information technology have created an abundance of easily accessible case law data, allowing aggregate patterns in decisions to be noticed faster and with greater precision. Specifically, we consider two effects that information technology produces.

The first may be called the “denominator effect.” Digital search and compilation means that the number of accessible court decisions available for analysis is substantially higher. In the predatabase days, only published opinions were easily available to lawyers and judges. And in the traditional method of Restatement drafting, only a few of the published opinions influenced, and were cited by, reporters. Now, the set of available decisions includes all published and many unpublished decisions by all courts in multiple jurisdictions. With this large denominator of cases, a perceived rule that emerged from a commonly cited case or treatise (“the numerator”) may be revealed to be a minority position when divided by the universe of decisions. A large denominator can thus give a more accurate snapshot of the prevalence of a rule.

Information technology also improves identification, which can help combat the difficulty created by large denominators. Comprehensive databases of past decisions come with powerful search algorithms that help identify subsets of relevant cases and issues. Patterns can be understood by slicing the universe of cases into clusters, providing better “resolution” of the analysis. The blurriness that a large denominator might generate can thus be offset by proper selection of cases, achieved by the application of search tools. For example, information technology can show the pace of rule convergence or provide a more accurate measure of jurisdictional splits.¹⁵

Another effect of information technology is a shift in the risk of abuse and of bias. While bias existed also in the predatabase age, its manifestation in the information age is different. In the predatabase age, a lawyer or advocate might selectively recall only favorable cases. Better-resourced parties who could afford more thorough searches were advantaged. In the database

¹⁵ In theory, we could limit our search to those cases that were accessible in the predatabase world. In that sense, more information can never make things worse. But, in practice, once the information denominator has increased, it is very difficult to artificially reduce it.

world, on the other hand, bias can creep in through the selection of search criteria or through filtering the “most relevant” cases among those identified by the search engine. The advantage of a quantitative approach is in making the search selection criteria transparent and subject to replication scrutiny. The risk is that most lawyers are not trained in scrutinizing search algorithms and statistical calculations and thus may be handicapped in challenging biased analyses.

The methodology developed in Part II seeks to exploit the benefits of information technology while minimizing its risks. To take advantage of the denominator effect and obtain the most precise and complete picture of trends in the law, we first consider all cases. We further offer various partitions of the data and adopt a series of safeguards to minimize the risk of bias in selecting search terms and in coding cases. Finally, we make the database and our analysis openly available to allow replication or rebuttal of our conclusions.

The accessibility of vast numbers of cases from different courts and different jurisdictions accentuates questions of influence. The principle of *stare decisis*, narrowly defined, says only that a lower court is bound by the ruling of a higher court in the same jurisdiction. While courts have long cited persuasive, non-binding precedent, this practice has accelerated in the database age.¹⁶ Courts routinely cite, as persuasive (not binding) authority, decisions by lower courts, unpublished decisions, and decisions by courts from other jurisdictions, including decisions by federal courts. Given the increasing importance of nonbinding precedents, how do we determine which decision is more or less influential? To measure influence, the methodology developed in Part II employs several objective citation counts that are commonly used in the academic literature on citation analysis and legal decision-making.

II. AN EMPIRICAL APPROACH TO MEASURING THE COMMON LAW

Restatements have been entrusted with the task of clarifying and harmonizing the common law since 1923.¹⁷ Traditionally,

¹⁶ See F. Allan Hanson, *From Key Numbers to Keywords: How Automation Has Transformed the Law*, 94 *L. Library J.* 563, 585–86, 590 (2002) (noting that “automation has been a contributing factor to the extension of legal research beyond the law as traditionally defined”).

¹⁷ *ALI Style Manual* at *3 (cited in note 11). The *ALI Style Manual* explains that “Restatements are primarily addressed to courts. They aim at clear formulations of

reporters identify a majority rule from recent decisions of the highest courts. Sometimes a minority position is followed, when it is more conceptually or normatively appealing, thus gently transforming the law during the exercise of clarifying it.¹⁸

In the Restatement of Consumer Contracts, we complemented the traditional approach with a comprehensive quantitative review of all available case law. As explained in Part I, our approach was intended to actuate a denominator effect—that is, to get a sense of the true frequencies at which different positions are followed and to empirically tease out more subtle legal rules. Timing-wise, the most significant changes in consumer contract law came about in the past generation with the rise of digital platforms for the formation of contracts. Because the value of waiting another decade or two to let more particular rules develop seemed modest, the ALI concluded that the time was ripe for a Restatement of Consumer Contracts, and our work began.

Section A explains the basic quantitative approaches and methods. Section B then illustrates the application of the method to two primary legal questions: (1) Does a contract between a business and a consumer include the standard terms that are provided for the first time only after the purchase is concluded (the “shrinkwrapped” terms)? (2) Is a privacy policy, which is posted online by a business that collects users’ personal data through its website, a contract?

A. Methodology of the Empirical Approach

1. Case selection.

We isolated several issues that were at the heart of the Restatement project, in which the question “what is the law” was thought to be unresolved, and in which the empirical methodology could be effective. For each legal question amenable to this style of analysis, we collected all available state and federal court cases reported on Westlaw and Lexis, including unpublished decisions. Because the number of cases was not

common law and its statutory elements or variations and reflect the law as it presently stands or might appropriately be stated by a court.” *Id.*

¹⁸ See *id.* at *4–5. The revised ALI Style Manual explicitly asks reporters to determine which rules are more coherent with the law as a whole and to “ascertain the relative desirability of competing rules,” and invites the use of empirical analysis to achieve these objectives. *Id.* at *5.

prohibitive, we did not have to engage in sampling.¹⁹ We then coded many aspects of each case and organized cases by their circumstances, outcomes, rationales, and subsequent influence.

More specifically, for each question, we began with natural-language searches of words likely to bring up relevant cases,²⁰ followed by more refined Boolean searches.²¹ Research assistants read each case and removed ones not relevant. We then shepardized each case from the original list to find additional cases, then shepardized those, and so on until no new cases showed up. To these, we added additional cases based on surveys and reviews in leading textbooks and in professional publications. We shared the list with ALI members and encouraged them to send us references to cases we missed (only a handful of cases were added in this manner).²² While the number of cases varied from question to question, this process typically led to final samples of between twenty and two hundred cases.²³

2. Classifying outcomes and measuring case influence.

The next task was to distill the information in each case in a manner amenable to empirical analysis. We read a sample of cases before developing a comprehensive coding methodology. We aimed to capture the outcomes of the cases and the rationales articulated by the courts. But unlike traditional analysis, the representation of each decision was done through fragments—breaking each decision into its building blocks, which included dozens of ingredients regarding the case characteristics

¹⁹ Lexis and Westlaw collect all published state and federal cases and, for the past several years, some unpublished state and federal cases as well. Some unpublished federal cases are available in the Federal Appendix. For a detailed description regarding the collection of unpublished opinions, see generally Ellen Platt, *Unpublished vs. Unreported: What's the Difference?*, 5 *Persp: Teaching Legal Rsrch & Writing* 26 (1996), archived at <http://perma.cc/6QV2-TLGJ>.

²⁰ For example, in looking for the universe of cases addressing the circumstances under which courts admit parol evidence in consumer contracts, we performed unconstrained searches of the terms “consumer,” “parol,” “evidence,” “contract,” and “standard form,” among others.

²¹ Also in the parol evidence example, we used searches such as “consumer AND ‘standard form’ AND parol” and “consumer parol evidence AND merger,” among others.

²² The cases that were flagged by ALI members were few and typically were early cases that bear a more distant (though relevant) relationship to the lineage of case law at issue. Such cases would be hard to pick up with precise keyword searches.

²³ We excluded employment cases, which sometimes dealt with identical issues, as these are addressed in the Restatement of Employment Law, and the ALI specifically requested that we not encroach on this neighboring project.

and the rationale. For example, in coding the shrinkwrap²⁴ cases, we looked of course to the result of the case (are the terms binding?) and to the rules applied, but also to a variety of facts that could be outcome determinative (for example, what type of notice did the consumer receive?). We coded the type of business party, the seniority of the court, which cases the court cited and followed, and much more.²⁵

We analyzed case influence by comparing different commonly used measures of citation counts.²⁶ These include total citations, citations by out-of-state courts, and the number of times a case is followed by other courts. Following the literature, we focused on citations by out-of-state and out-of-circuit courts.²⁷ When such discretionary references are made,²⁸ it is likely that the citing court found the cited cases helpful when internal precedent was unclear or missing. This methodology did not track the state or court hierarchy, however, of each out-of-state citation; each citation is counted equally. Out-of-state citations are thus a clean way to measure influence, and an ideal complement to our analysis of highest state court decisions, in which we weighted decisions in a more traditional hierarchical way.

Case citation measures are transparent and unlikely to suffer from the biases associated with handpicking cases, yet they can also be noisy and suffer from both over- and underinclusiveness. For instance, not all cases are cited for their holdings or

²⁴ These contracts are named for “the shrink-wrapped commercial software products that you buy in a box. The idea is that if you break the wrapper you are bound to the terms that are printed below it.” Radin, *Boilerplate* at 10 (cited in note 6).

²⁵ We hand-coded dozens of dimensions for each case, from the basic statistics of year, court, and class action status, to the critical details of procedural posture, sets of facts, Uniform Commercial Code (UCC) and Restatement (Second) of Contracts provisions applied, reasons articulated, and conclusions reached. For instance, we coded forty-four different dimensions for each of seventy-four shrinkwrap cases.

²⁶ See, for example, William M. Landes, Lawrence Lessig, and Michael E. Solimine, *Judicial Influence: A Citation Analysis of Federal Courts of Appeals Judges*, 27 *J Legal Stud* 271, 276–79 (1998) (describing one method for analyzing citation data).

²⁷ For other applications of out-of-state and out-of-circuit citation data compilations, see Gregory A. Caldeira, *The Transmission of Legal Precedent: A Study of State Supreme Courts*, 79 *Am Polit Sci Rev* 178, 180–81 (1985); Landes, Lessig, and Solimine, 27 *J Legal Stud* at 276–79 (cited in note 26); David E. Klein, *Making Law in the United States Courts of Appeals* 7–9, 40–46, 56–59 (Cambridge 2002); Stephen J. Choi, Mitu Gulati, and Eric A. Posner, *Judicial Evaluations and Information Forcing: Ranking State High Courts and Their Judges*, 58 *Duke L J* 1313, 1321–23 (2009).

²⁸ State courts are not bound by cases decided by federal courts sitting in diversity, so all citations to federal court cases are technically out-of-state citations even if decided by courts within the states comprising the federal courts’ jurisdiction. Landes, Lessig, and Solimine, 27 *J Legal Stud* at 326 (cited in note 26).

cited positively (although out-of-state citations are perhaps more likely to be cited in this manner). This can lead to an overestimate of influence. We addressed the problem of overinclusiveness by using an alternative, narrower measure of influence, which counts only those cases that have been followed by other courts. This captures the number of times that the principle articulated by the court in a given case has been applied to a case with comparable facts by another court. This measure might prove too restrictive and lead to an underestimate of the influence of a particular case, but it advances the underlying goal—identifying the dominant *rule*. Ultimately, the same cases turned out to be influential based on a number of alternative measures of influence, sparing us the need to trade off the pros and cons of any particular measure.²⁹

B. Illustrating the Empirical Approach

1. Shrinkwrap contracts.

Few contract cases have generated as much controversy as the Seventh Circuit's *ProCD, Inc v Zeidenberg*.³⁰ The court held that a standard-form contract shrinkwrapped inside the product's box was enforceable even though it was impossible to access until after the purchase was concluded.³¹ The decision focused on the elements of notice and the right to withdraw: as long as the buyer had reasonable notice of the shrinkwrapped terms and a meaningful opportunity to reject them by returning the product, the buyer's continued use of the product constitutes a "rolling" acceptance of the terms.³² The court reasoned that the shrinkwrap rule reduces transaction costs without sacrificing

²⁹ For an explanation of how cases are annotated and citations grouped, see *Case-Base Court Annotations* (LexisNexis), archived at <http://perma.cc/8SYB-NJDG>. Theoretically, some highly influential cases might not be cited at all because they settle an issue for good, thus stopping all future litigation. William M. Landes and Richard A. Posner, *Legal Precedent: A Theoretical and Empirical Analysis*, 19 J L & Econ 249, 251 (1976). Relatedly, there is no way to address the selection effects of not including cases that settle. See generally George L. Priest and Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J Legal Stud 1 (1984) (offering an explanation of which cases are selected for litigation).

³⁰ 86 F3d 1447 (7th Cir 1996).

³¹ *Id.* at 1450–53.

³² John E. Murray Jr, *The Dubious Status of the Rolling Contract Formation Theory*, 50 Duquesne L Rev 35, 37–38 (2012).

meaningful precontractual disclosure, and thus “may be a means of doing business valuable to buyers and sellers alike.”³³

ProCD's embrace of shrinkwrap contracting generated volumes of scholarship questioning both its normative grounding as well as its descriptive influence among courts.³⁴ Most legal commentators foresaw disastrous consequences from the expansion of the doctrine of acceptance by silence and from the erosion of precontractual disclosure.³⁵ Concerns over the legitimacy of shrinkwrap contracts have led to concerted but unsuccessful attempts in the past two decades to regulate the issue through model statutory rules.³⁶

But has *ProCD* been controversial in the courts? In another landmark case, *Klocek v Gateway, Inc.*,³⁷ a federal district court rejected *ProCD* and held that the terms in the box, or any later-arriving terms, are mere proposals for additional terms that need to be affirmatively accepted.³⁸ Prior to the empirical study of existing case law, it was widely thought and taught that courts around the country have split between the two approaches. Indeed, these two leading approaches are featured in all first-year contracts casebooks and are taught side by side.³⁹ But does one approach dominate?

To answer this, we assembled a comprehensive database of shrinkwrap decisions.⁴⁰ Approximately one-sixth of our cases

³³ *ProCD*, 86 F3d at 1451.

³⁴ See, for example, Christopher L. Pitet, Note, *The Problem with “Money Now, Terms Later”*: *ProCD, Inc. v. Zeidenberg and the Enforceability of “Shrinkwrap” Software Licenses*, 31 Loyola LA L Rev 325, 340–47 (1997); James J. White, *Contracting under Amended 2-207*, 2004 Wis L Rev 723, 741; Jean Braucher, *Delayed Disclosure in Consumer E-commerce as an Unfair and Deceptive Practice*, 46 Wayne L Rev 1805, 1819–24 & n 58 (2000).

³⁵ See, for example, Roger C. Bern, *“Terms Later” Contracting: Bad Economics, Bad Morals, and a Bad Idea for a Uniform Law, Judge Easterbrook Notwithstanding*, 12 J L & Pol 641, 709–10 (2004); Jean Braucher, *The Failed Promise of the UCITA Mass-Market Concept and Its Lessons for Policing of Standard Form Contracts*, 7 J Small & Emerging Bus L 393, 420–21 (2003); Pitet, Note, 31 Loyola LA L Rev at 345–47 (cited in note 34); Batya Goodman, Note, *Honey, I Shrink-Wrapped the Consumer: The Shrink-Wrap Agreement as an Adhesion Contract*, 21 Cardozo L Rev 319, 350, 353–54 (1999); Murray, 50 Duquesne L Rev at 73–74 (cited in note 32).

³⁶ See, for example, Uniform Computer Information Transactions Act § 208 at *90–93 (National Conference of Commissioners on Uniform State Laws, Oct 15, 2002), archived at <http://perma.cc/A39U-8HR3>.

³⁷ 104 F Supp 2d 1332 (D Kan 2000).

³⁸ *Id* at 1341.

³⁹ See, for example, Ian Ayres and Gregory Klass, *Studies in Contract Law* 325–31 (Foundation Press 8th ed 2012).

⁴⁰ We searched using natural-language key terms including “shrinkwrap,” “pay now, terms later,” “UCC 2-207,” “UCC 2-204,” “consumer,” “standard form contract,” and

were decided before the 1996 *ProCD* decision and thus feature different contracting scenarios and apply slightly different analysis. The case law addressing the enforceability of shrinkwrap contracts has been developing mostly since the 1990s. Interestingly, despite the rise of electronic contracting and the decline of physical shrinkwraps, the pace of decisions in this area has not slowed down. Table 1 reports some summary statistics.

TABLE 1. SHRINKWRAP CASES, 1954–2015

Court		Transaction Type	
Federal District	42	Sale of Goods	41
Circuit Court of Appeals	8	Service	15
State Appellate	8	Software	6
State Supreme	7	Credit	4
State Trial	2	Real Estate	1
Date		Finding	
2011–2015	15	Adopts Shrinkwrap	55
2006–2010	9	Before <i>ProCD</i> *	5
2001–2005	20	After <i>ProCD</i>	50
1996–2000	13	Rejects Shrinkwrap	12
1965–1995	10	Before <i>ProCD</i>	5
		After <i>ProCD</i>	7
Class Action		UCC Followed	
Yes	38	§ 2-204	5
No	29	§ 2-207	5
		Neither	57
Published			
Yes	41		
No	26		

* Before 1996
n = 67

The main result from this analysis is the dominant effect of *ProCD* and the resulting prevalence of the approach that enforces shrinkwraps. Table 1 reports the number of instances in which

“box top.” This generated an initial list of more than a hundred cases. An iterative process of shepardizing and searching, similar to that described previously, led us to a final body of sixty-seven cases, stretching from 1954 to 2015, with twenty-three of them coming from state appellate and supreme courts and federal appellate courts.

courts have explicitly adopted shrinkwraps as a valid contract-formation mechanism and shows that courts have adopted shrinkwraps in 82 percent of all cases since 1954 (fifty-five out of sixty-seven) and in 88 percent of cases decided after *ProCD* (fifty out of fifty-seven). Not all of these cases resulted in the ultimate enforcement of the contracts at issue, however, as enforcement occurred as long as the requirements of notice and opportunity to review and reject were met, and as long as there were no other intervening problems with the transaction, such as unconscionability.⁴¹

ProCD's influence can also be seen in other interesting respects. The case relied on UCC § 2-204. However, almost all subsequent cases enforcing shrinkwraps have cited *ProCD*, not the relevant UCC section.⁴² This confirms the unease that many commentators had with *ProCD*'s failure to apply UCC § 2-207.⁴³

A closer look at the evolution of the decisions over time reveals a trend toward overwhelming acceptance of shrinkwraps and the *ProCD* decision. In Figure 1, we split cases into those that endorse shrinkwrap contracts and those that do not. Before 1996 (the left vertical line), the year when *ProCD* was decided, shrinkwraps were embraced in half the cases (five out of ten). But after *ProCD*, there was an immediate shift in favor of enforcement. As mentioned before, since 1996 courts have endorsed shrinkwrap contracts in 88 percent of cases (fifty out of fifty-seven). The landmark case denying enforcement, *Klocek*, was decided in 2000 (the right vertical line), but this decision has not generated nearly as much of a following. In fact, the last

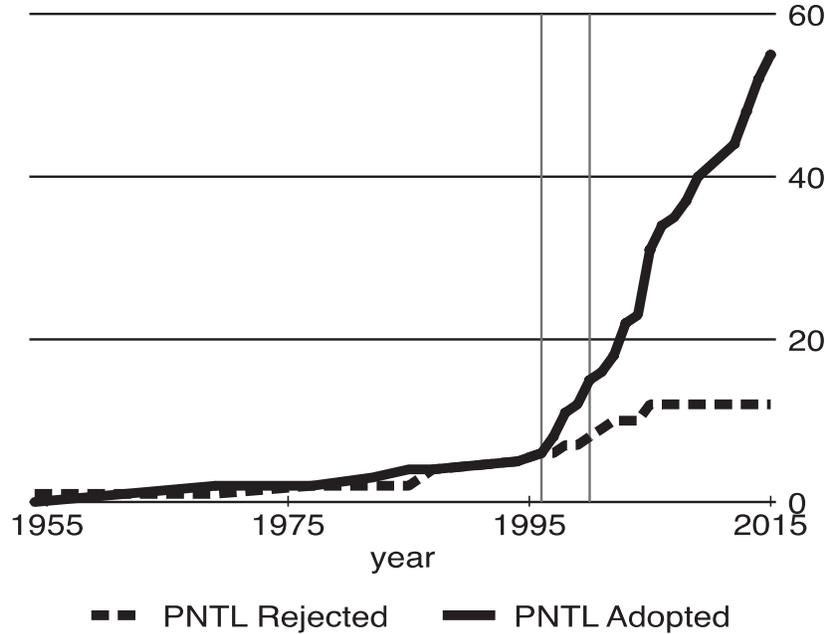
⁴¹ Table 1 reports whether the court explicitly adopted the shrinkwrap contract-enforcement mechanism, regardless of the ultimate outcome. In a minority of cases, the court adopted shrinkwraps but refused to enforce the contract in the given case because of intervening circumstances. See, for example, *Brower v Gateway 2000, Inc*, 246 AD2d 246, 250, 254 (NY App 1998) (declining to enforce the contract because the right to reject was too onerous, rendering the contract unconscionable); *Schnabel v Trilegiant Corp*, 697 F3d 110, 126–31 (2d Cir 2012) (declining to enforce the contract because e-mailed notice was inadequate).

⁴² Only four of the cases that have enforced shrinkwraps cited the UCC as a source of authority. See, for example, *DeFontes v Dell, Inc*, 984 A2d 1061, 1067–71 (RI 2009) (citing UCC § 2-204 as a source of authority, in addition to *ProCD*). The remainder cited *ProCD*.

⁴³ See, for example, Pitet, Note, 31 Loyola LA L Rev at 340–42 (cited in note 34) (criticizing *ProCD* as “at odds with both the plain language of the UCC and its intent to liberalize the common law rules of contract formation”). See also Bern, 12 J L & Pol at 642–43 (cited in note 35) (recounting commentators’ descriptions of the *ProCD* line of cases as “dangerously misinterpret[ing] legislation and precedent,” “dead wrong,” and a “detour from traditional U.C.C. analysis”).

time a shrinkwrap contract was rejected because of the rolling-formation procedure was in 2005. In the past eleven years, courts have embraced shrinkwrap contracting in all twenty-four cases in which they have had to address the issue.

FIGURE 1. ACCEPTANCE OF SHRINKWRAP (“PAY NOW, TERMS LATER” OR “PNTL”) CONTRACTS: CUMULATIVE NUMBER OF CASES



An analysis of citations reinforces the impression of *ProCD*'s influence. Table 2 reports the most influential cases in this area according to citations by out-of-state and out-of-circuit courts and lists cases that have been cited at an average rate of at least two out-of-state citations per year. (Focusing on the citation rate, rather than the total number of citations, controls for the fact that some cases have simply been around longer.) Cases accepting the shrinkwrap formation procedure (listed as “Shrinkwrap Adopted”) are much more likely to get cited out of state in a given year. Indeed, citations to *ProCD* alone account for a substantial fraction of citations. These findings also hold under alternative citation measures, including measures taking into account within-jurisdiction citations (for which the data are unreported). The only reasonably influential case that did not

enforce shrinkwrap terms, *Klocek*, is cited an average of just twice per year.

TABLE 2. MOST INFLUENTIAL SHRINKWRAP CASES: OUT-OF-STATE CITATIONS BY SHRINKWRAP ADOPTION; CASES WITH AT LEAST TWO CITATIONS PER YEAR*

	Decided	Out-of-State Citations Total	Out-of-State Citations per Year
Shrinkwrap Adopted			
<i>ProCD, Inc v Zeidenberg</i> ⁴⁴	1996	169	9
<i>Hill v Gateway 2000, Inc</i> ⁴⁵	1997	92	5
<i>Brower v Gateway 2000, Inc</i> ⁴⁶	1998	52	3
<i>Marsh v First USA Bank, NA</i> ⁴⁷	2000	48	3
<i>Bowers v Baystate Technologies, Inc</i> ⁴⁸	2003	34	3
<i>Bischoff v DirecTV, Inc</i> ⁴⁹	2002	21	2
Shrinkwrap Not Adopted			
<i>Klocek v Gateway, Inc</i> ⁵⁰	2000	27	2

* Through August 2014

As noted previously, a limitation of the citation methodology is that it fails to account for court hierarchy. What would we learn if we restricted the analysis to published state high court and federal appellate court cases, as in the traditional approach?

⁴⁴ 86 F3d 1447 (7th Cir 1996).

⁴⁵ 105 F3d 1147 (7th Cir 1997).

⁴⁶ 246 AD2d 246 (NY App 1998).

⁴⁷ 103 F Supp 2d 909 (ND Tex 2000).

⁴⁸ 320 F3d 1317 (Fed Cir 2003).

⁴⁹ 180 F Supp 2d 1097 (CD Cal 2002).

⁵⁰ 104 F Supp 2d 1332 (D Kan 2000).

Broadly speaking, a similar picture appears, but not as sharply. Fifteen state high courts and federal appellate courts have ruled on the enforceability of shrinkwrap contracts. In eleven of those decisions, or over two-thirds of those with shrinkwrap decisions, the most recent decision endorses shrinkwraps.⁵¹ No cases have been decided in the remaining four jurisdictions since 2005.⁵² And with one exception, no state high court case has received even two out-of-state citations per year. The influence of state supreme court cases beyond their own jurisdiction has been modest. Essentially all the activity is happening in federal courts, even as they decide state law questions. In short, courts have generally embraced shrinkwrap contracts and the logic of *ProCD*.

In light of this finding—that shrinkwrap contracts are enforced by a great majority of courts—we drafted the following black-letter rule in § 2(b) of the Restatement:

When the standard contract terms are available for review only after the consumer signifies assent to the transaction, the standard contract terms are adopted as part of the consumer contract if

- (1) the consumer receives reasonable notice regarding the presence of standard contract terms before signifying assent to the transaction, and
- (2) the consumer has a reasonable opportunity to avoid or terminate the transaction after the standard contract

⁵¹ For cases in which courts adopted shrinkwraps, see *Schnabel*, 697 F3d at 126–31 (adopting shrinkwraps but declining to enforce the contract because e-mailed notice was inadequate); *DeFontes*, 984 A2d at 1067–68 (applying Texas state law in a Rhode Island state court); *Rico v Cappaert Manufactured Housing, Inc.*, 903 S2d 1284, 1289–90 (La App 2005); *1-A Equipment Co v Icode, Inc.*, 2003 WL 549913, *2 (Mass App) (applying Virginia state law); *M.A. Mortenson Co v Timberline Software Corp.*, 998 P2d 305, 313 (Wash 2006) (en banc); *James v McDonald's Corp.*, 417 F3d 672, 677–78 (7th Cir 2005) (applying Kentucky state law); *Goode v Franklin Welding & Equipment Co.*, 50 Va Cir 441, 446–48 (1999) (available on Westlaw at 1999 WL 33722385); *Hill*, 105 F3d at 1148–49; *Brower*, 246 AD2d at 250, 254; *Tiger Motor Co v McMurtry*, 224 S2d 638, 643, 647 (Ala 1969); *Marion Power Shovel Co v Huntsman*, 437 SW2d 784, 787 (Ark 1969).

⁵² For cases in which courts refused to adopt late-arriving terms, see *Rogers v Dell Computer Corp.*, 138 P3d 826, 832–34 (Okla 2005); *A.B.C. Home & Real Estate Inspection, Inc v Plummer*, 500 NE2d 1257, 1261–62 (Ind App 1986); *Whitaker v Farmhand, Inc.*, 567 P2d 916, 921 (Mont 1977); *Deering, Milliken & Co v Drexler*, 216 F2d 116, 119 (5th Cir 1954).

terms are made available for review, and does not exercise that power.⁵³

2. Are privacy policies contracts?

The second illustration of the empirical approach comes from another fundamental problem that is clouded with some doctrinal uncertainty: Are online privacy notices that businesses post on their websites treated by courts as contracts? These notices, often appearing as hyperlinks at the bottom of home pages, declare what information the business collects, how the information is used or shared, and what data-security measures the business applies.

With the rapid rise of information collection by businesses, the number of consumer actions for violation of data privacy has been growing sharply.⁵⁴ Many of these actions rise or fall depending on whether the privacy notices are treated as contracts. Remarkably, however, this classification question has yet to receive a clear answer. Commentary in the privacy-law area has left some confusion regarding the enforceability of privacy notices as contracts.

This confusion is perhaps the result of the eclectic foundations of data-privacy law. For example, the recent draft of the Principles of the Law of Data Privacy counts numerous sources for the regulation of data privacy, including constitutional law, privacy statutes, Federal Trade Commission law, and tort law.⁵⁵ It recognizes that some of these background rules are merely “gap-fillers” by saying that “consent” can expand the permission of businesses to collect, use, and share users’ data.⁵⁶ But it views consent as arising from the informed consent doctrine of tort law, rather than as the exercise of contractual capacity in the marketplace.⁵⁷ It further articulates *sui generis* consent and “heightened notice” rules, not founded in general contract law doctrine, which apply only to agreements over data privacy.⁵⁸

⁵³ Restatement of Consumer Contracts § 2(b) (ALI Council Draft No 2, 2016) (on file with authors).

⁵⁴ Eric C. Bosset, et al, *Private Actions Challenging Online Data Collection Practices Are Increasing: Assessing the Legal Landscape*, 23 *Intel Prop & Tech L J* 3, 6–7 (Feb 2011) (discussing the “wave of recent lawsuits” brought about by “new concerns about consumer privacy”).

⁵⁵ See Principles of the Law: Data Privacy § 1 at 7–10 (ALI Council Draft No 1, 2016).

⁵⁶ *Id.* at 44–45.

⁵⁷ See *id.* § 4 at 31–33.

⁵⁸ *Id.* § 4 at 30–32.

Our analysis sought to clarify whether courts indeed apply such *sui generis* rules, or whether standard, garden-variety contractual consent is all that is required to enforce privacy policies. More generally, we asked whether courts enforce privacy practices as contracts.

The answer to this question—whether privacy notices are contracts—has evolved over time.⁵⁹ In a very early case, *Dyer v Northwest Airlines Corp*,⁶⁰ a federal district court held that Northwest Airlines’ posted privacy policy was *not* a contract.⁶¹ The court stated that “broad statements of company policy do not generally give rise to contract claims.”⁶² Despite the fact that other courts have reached the opposite conclusion,⁶³ the view in *Dyer* has been emphasized in prominent academic treatments.⁶⁴

To establish whether privacy notices are classified as contracts, we began by dividing the universe of cases into two categories: (i) “sword” cases, in which *consumer-plaintiffs* sought to enforce promises and representations made in privacy policies (as in the *Dyer* case above); and (ii) “shield” cases, in which *business-defendants* sought to enforce their own policies, arguing that they constitute contracts and that consumers’ assent to them is a defense against the alleged privacy violations. Again,

⁵⁹ The question whether privacy notices should be classified as contracts has been conflated with the question whether plaintiffs should win lawsuits alleging violation of privacy. In particular, there are other reasons why plaintiffs lose, even if the privacy notices are contracts. First, many cases have been dismissed for plaintiffs’ failure to establish damages, even when courts explicitly recognized privacy policies as contracts. See, for example, *In re American Airlines, Inc, Privacy Litigation*, 370 F Supp 2d 552, 567 (ND Tex 2005). Second, many businesses sued for breaches of their privacy policies, such as Google or Facebook, use novel business models in which their services are advertisement based or offered for free in exchange for access to consumer personal information. This has led some courts to question whether consideration exists. See, for example, *Austin-Spearman v AARP and AARP Services Inc*, 119 F Supp 3d 1, 11–12 (DDC 2015). Finally, some privacy policies have not been conspicuously presented, leading courts to deny their enforcement on the basis of generic assent rules (for example, lack of sufficient notice). See, for example, *Be In, Inc v Google Inc*, 2013 WL 5568706, *9 (ND Cal). Issues such as these underscore the importance of identifying the relevant parameters in coding cases to correctly elicit the relevant legal principle.

⁶⁰ 334 F Supp 2d 1196 (D ND 2004).

⁶¹ *Id* at 1199–1200.

⁶² *Id* at 1200.

⁶³ See, for example, *In re JetBlue Airways Corp Privacy Litigation*, 379 F Supp 2d 299, 325–26 (EDNY 2005) (holding that privacy policies give rise to contractual obligations).

⁶⁴ See, for example, Daniel J. Solove and Woodrow Hartzog, *The FTC and the New Common Law of Privacy*, 114 Colum L Rev 583, 595–97 (2014) (surveying a small number of cases and reporting that courts do not enforce privacy policies as contracts); Daniel J. Solove and Paul M. Schwartz, *Privacy Law Fundamentals* 101 (IAPP 2011) (reporting that courts do not recognize privacy policies as contracts).

we used the search methodology to assemble a comprehensive database of all decided cases.⁶⁵ Table 3 summarizes some of the findings and case characteristics.

TABLE 3. PRIVACY POLICIES (“PP”) SAMPLE, 2004–2015

Court		Claim Type	
Federal District	48	Sword	24
State Appellate	2	Shield	22
State Trial	1	Consent for Statutory Liability	5
Date		Transaction Type	
2011–2015	33	Service	35
2006–2010	12	Sale of Goods	6
2004–2005	6	Privacy	5
		Software	2
Class Action		Credit	1
Yes	33	Leasing	1
No	18	Real Estate	1
Published		Finding	
Yes	17	PP Recognized	35
No	34	PP Not Recognized (Because Not Contracts)	5
		PP Not Recognized (Other)*	11

* Insufficient Notice, Cannot Ascertain Damages, Lack of Mutuality and Consideration, etc.

n = 51

⁶⁵ We searched using natural language and different Boolean combinations of “privacy policy,” “contract,” “enforce,” “breach,” “privacy notice,” “consent,” “consumer,” “state recording statute,” etc. This generated an initial list of several hundred cases. An iterative process of shepardizing and searching, similar to that described previously, led us to a final body of fifty-one cases, beginning with *Dyer* in 2004 and ending with *Austin-Spearman* in 2015.

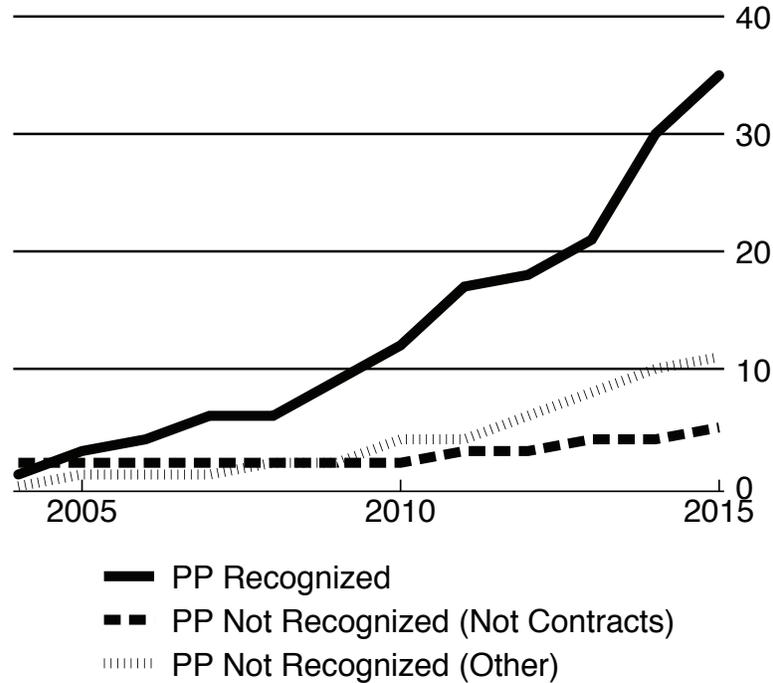
By enlarging the scope of the analysis to include all cases, some clear patterns arise. The most important pattern is the answer to our basic question: *privacy policies are typically recognized as contracts*. The original *Dyer* case, which reached the opposite result and which continues to inform many claims by privacy scholars, has in fact been rejected by a large majority of courts. Among all cases deciding this issue, courts are seven times more likely to recognize privacy policies as contracts than they are not to recognize them as contracts (thirty-five cases versus five cases). An approach that focuses on the decisions of higher courts leads to the same conclusion: the two state appellate courts to address this issue have suggested that privacy policies could be contracts.

Plaintiffs' difficulty in ultimately succeeding in these claims is demonstrated by the eleven cases in which courts concluded that the plaintiffs failed to establish an element of their contract claims, such as an inability to ascertain damages.⁶⁶ In these cases, the question whether privacy policies are contracts was side-stepped, but the willingness of courts to address issues internal to contract enforcement—such as the measure of damages for breach—provides further evidence for the rejection of the original *Dyer* case.

The evolution of the case law over time shows a drift away from the *Dyer* position. Figure 2 illustrates the cumulative number of cases in which courts recognized privacy notices as contracts, those in which courts concluded that they are not contracts, and those in which the privacy notice was not enforced because plaintiffs failed to establish one or more elements of a contract claim. In 2004 and 2005, courts were evenly split in their treatment of privacy policies as contracts. After 2005, however, courts have predominantly recognized privacy policies as contracts, evidencing a trend in favor of enforcement.

⁶⁶ See note 59.

FIGURE 2. RECOGNITION OF PRIVACY POLICIES (“PP”) AS CONTRACTS



This conclusion is further supported by an analysis of citations. Cases recognizing privacy notices as contracts are not only more numerous but also more influential. Cases recognizing privacy policies as contracts are more likely to get cited out of state. The same is true based on a narrower measure of influence, the number of times a case is followed. The dominant case is *In re JetBlue Airways Corp Privacy Litigation*,⁶⁷ with a total of thirty-nine out-of-state citations and an average of four citations per year. *Dyer* heads the list of cases refusing recognition, but its sixteen out-of-state citations amount to an average of just over one citation per year.

The picture that comes out of this empirical inquiry is, again, clear. Privacy notices are regarded by a great majority of courts as the subject matter of contracts, to be evaluated by the same assent rules that are applied to other contract terms. Courts do not require a *sui generis* consent or notice element.

⁶⁷ 379 F Supp 2d 299 (EDNY 2005).

Accordingly, we drafted the following comment 8 to § 1 of the Restatement:

Privacy notices included. The definition of “Consumer Contract” includes agreements about privacy—standard terms relating to information collected, used, shared, protected, or otherwise handled by the business, including but not limited to consumers’ personal information. All rules of contract law, including the specific rules in this Restatement, as well as remedial rules not included in this Restatement, apply to agreements about privacy. For the purpose of this definition, “personal information” means any data that refers to an identified person or that can be used to identify a person.⁶⁸

III. POTENTIAL OBJECTIONS

A. Legal Reasoning

One could conceive of the quantitative approach to measuring the common law as delegating the resolution of conflicting arguments and judicial splits to a formula or an algorithm. The approach would thus diminish the role of legal reasoning in reconciling such debates. Rather than *analyzing* the comparative merits of different positions and exercising tailored discretion, the approach relies on a preconfigured *measurement* method. Accordingly, the first line of opposition to this approach bemoans the replacement of traditional legal reasoning by robotic analytics. Restatements require *thinking, not counting*.

This objection raises an important and even profound issue. Law is not mathematics: it is a rich body of knowledge, fleshed out through pragmatic deliberation about values.⁶⁹ Legal reasoning requires intuition and prudence.⁷⁰ Practical wisdom acquired by experience matters, as it sharpens the insight and recognizes tone and nuance.⁷¹ Thus, legal thinking appears to be inconsistent

⁶⁸ Restatement of Consumer Contracts § 1, comment 8 (ALI Council Draft No 2, 2016) (on file with authors).

⁶⁹ See Aristotle, *Nicomachean Ethics* 1139b19–36 (Chicago 2011) (Robert C. Bartlett and Susan D. Collins, trans).

⁷⁰ See Bent Flyvbjerg, *Making Social Science Matter: Why Social Inquiry Fails and How It Can Succeed Again* 56–57, 59 (Cambridge 2001) (Steven Sampson, trans).

⁷¹ See Helen Xanthaki, *Drafting Legislation: Art and Technology of Rules for Regulation* 13–14 (Hart 2014).

with a methodological shift toward a value-neutral, nonpragmatic method of aggregation.

This critique is conceptually misguided. The quantitative approach does not replace thinking with counting, nor does it eliminate the role of legal reasoning in the practice and development of the law. Instead, it provides both a less manipulable starting point for this traditional enterprise and a more accurate summary of the output.

Consider the value of the quantitative approach as a starting point for legal reasoning. Legal reasoning is applied, not in determining what the baseline legal rule is, but rather in applying it to a particular dispute or new circumstances. When the baseline rule is clear and undisputed—for example, when it is a bright-line command articulated in a statute—legal reasoning is the only methodological exercise necessary in applying it to a new scenario. But when the baseline rule is ambiguous or disputed, the quantitative approach helps identify it. In a common-law system that relies on broader principles and vague standards, the starting point for legal reasoning has to be the up-to-date aggregation of the prior applications of the standard.⁷² It is this survey of prior art that traditional methods perform only partially through nonrandom sampling, and in which the quantitative approach offers a more representative snapshot.

The quantitative approach supports the exercise of legal discretion in another manner—by providing a more accurate summary of its output. It counts cases in which traditional forms of discretion were applied. It presents a comprehensive aggregation of the collective effort by various courts to apply legal reasoning. The empirical method eliminates ad hoc discretion in only one respect—how to count. Moreover, a good quantitative algorithm would place greater weight on decisions in which reasoning was applied, such as decisions by courts that felt unconstrained by prior precedent and thus free to exercise independent discretion, and less weight on decisions in which reasoning was either not explicitly applied or not explained.

It is true that the quantitative method has to be implemented with skills that are not traditionally acquired by lawyers. Cases have to be coded and patterns have to be detected using some simple quantitative tools. But the method is just as transparent, and perhaps more so, than traditional methods of identifying

⁷² See, for example, Kornhauser, 65 *Chi Kent L Rev* at 90–92 (cited in note 10).

precedent, which are prone to relying on a subset of prior decisions selected subjectively and often appear more inclusive than they really are. The quantitative method applies a selection rule that is transparent, and the results are replicable in a way that allows reporters to explain their methodology and readers to verify it.

B. Stifling Law Reform

The second major objection to the quantitative approach is normative. What if the outcome of the analysis yields rules that are undesirable? This objection might be particularly sharp when the approach is applied in the context of a reevaluation of the law. At such pivotal times, the opportunity to chart a new direction and reform the law could be lost.

The bulk of the specific objections that we have received over the course of drafting the Restatement of Consumer Contracts have been along these normative lines, and have been delivered by scholars who oppose the *substance* of the rules that the analysis yielded. For example, as detailed in Part II, the methodology identified the dominant prevalence of permissive assent rules, which we thereby incorporated into § 2 of the Restatement. Critics who view the § 2 rules as normatively undesirable rejected the empirical methodology that produced these rules. These critics find the reasoning in the leading cases (the shrinkwrap cases that the quantitative approach identified as most influential⁷³) to be substantively unpersuasive. They argue that the “easy assent rules” produce lengthy contracts that harm consumers, and they prefer strict assent rules that would render most standard contract terms unenforceable.⁷⁴

This objection to the *conclusion* of the quantitative approach is important and legitimate. But it is not a critique of our methodology. The quantitative approach was used to identify the majority rule, and we were criticized by those who believe that the majority rule is undesirable.⁷⁵ The same critics would object to this majority rule regardless of the methodology used to identify

⁷³ See Table 2. The cases identified as influential in Table 2 were *ProCD* and *Hill v Gateway 2000, Inc.*, 105 F3d 1147 (7th Cir 1997).

⁷⁴ For examples of this negative view of shrinkwrap cases, see note 35.

⁷⁵ The ALI describes Restatements as generally favoring majority holdings over normative evaluations: “[W]hile views of which competing rules lead to more desirable outcomes should play a role in both inquiries, the choices generally are constrained by the need to find support in sources of law.” *ALI Style Manual* at *6 (cited in note 11).

it. Their argument is that we should reject the majority rule and promote the “better-reasoned” minority rule. There are good reasons for a Restatement project not to stray too far from the majority rule.⁷⁶ Still, in appropriate cases, an argument can be made for preferring the minority position.⁷⁷ In any event, these important debates are orthogonal to the methodological approach used to identify the majority rule.

Moreover, the claim that the quantitative approach shuts down the cogwheels of law reform is fundamentally misguided. Innovations in common law happen primarily in courts. The quantitative approach serves only to detect and highlight such innovations, which might otherwise go unnoticed by some members of the legal community. Indeed, the *raison d'être* for the Restatement of Consumer Contracts were the perception that the common-law rules governing consumer transactions have branched out and the ambition of the ALI to document the emerging trends and broaden their recognition. A loyal reflection of these novel patterns through an empirical approach would only bolster the common law's innovation machinery. Ironically, a principal complaint voiced by critics who object to the substantive aspects of the shrinkwrap assent rule—which our methodology identified as the prevailing precedent—is that the shrinkwrap rule is itself a reform of the law.⁷⁸ They correctly

⁷⁶ Pragmatically, the influence of a Restatement is likely to diminish the further it strays from accepted principles and precedents. In fact, prominent judges have voiced increasing skepticism about attempts by Restatement reporters to draft provisions not grounded in prior precedent. See, for example, *Kansas v Nebraska*, 135 S Ct 1042, 1064 (2015) (Scalia concurring in part and dissenting in part).

⁷⁷ The ALI can point to some earlier Restatements that have allegedly triggered significant reform in American law. Foremost among the reform-oriented Restatement provisions are § 90 of the Restatement (First) of Contracts (introducing promissory estoppel) and § 402A of the Restatement (Second) of Torts (introducing strict liability for defective products as a tort concept). Grant Gilmore, *The Death of Contract* 68 (Ohio State 2d ed 1995) (Ronald K.L. Collins, ed) (discussing the unconventional nature of § 90 when introduced); Marshall S. Shapo, *In Search of the Law of Products Liability: The ALI Restatement Project*, 48 Vand L Rev 631, 636–37 (1995) (claiming § 402A “proved itself in the final marketplace for juridical ideas: the courts”). It should be pointed out that, at least in the case of § 90, there is skepticism about its influence. See, for example, Robert A. Hillman, *Questioning the “New Consensus” on Promissory Estoppel: An Empirical and Theoretical Study*, 98 Colum L Rev 580, 588–95 (1998) (demonstrating courts' reluctance to allow recovery under § 90).

⁷⁸ See, for example, Stewart Macaulay, *Freedom from Contract: Solutions in Search of a Problem?*, 2004 Wis L Rev 777, 805–06 (claiming that it is difficult for “contract purist[s]” to accept shrinkwrap agreements as contracts); Pitet, Note, 31 Loyola LA L Rev at 340–41 (cited in note 34) (remarking that *ProCD*'s enforcement of shrinkwrap was “wholly inconsistent” with the UCC).

note that, in adopting the shrinkwrap rule, courts have expanded the domain of acceptance by silence beyond the traditional scope of this rule in general contract law. Critics would like to see such reform rolled back, restoring the old conception of contract formation.⁷⁹

CONCLUSION

The empirical study of law has blossomed in recent years, adding important realism to legal scholarship. But the vast majority of this undertaking focuses on the empirical evaluation of the *effects* of laws. This Essay contributes, instead, to a budding, but as of yet much smaller, project—the empirical evaluation of *what the law is*.

In the Restatement project, our quantitative method was relatively labor-intensive. It relied on an actual reading of each case in our database and careful discretionary coding of many aspects of each case. This was a manageable effort because the number of cases was not prohibitive. We can imagine that a similar method could be applied to resolve a host of other issues, in which the answer to “what is the law” is clouded with some uncertainty. For example, it could resolve the long-standing debate over whether the reasonable-expectations doctrine in contract law can override unambiguous fine print terms. Our quantitative method could also resolve questions regarding the application of comparative negligence in tort law, of market power tests in antitrust law, of capacity to deceive (or likelihood of confusion) in the law of false advertising and unfair competition, and in many more areas.

When the relevant body of case law is too large to be comprehensively read and coded, other statistical methods would have to complement the empirical approach. Sampling may be one solution. Machine reading and text search may be another.

Finally, it is worth reiterating that the application of a quantitative approach to the search of law does not make the traditional qualitative approach obsolete. Cases cannot be read and coded without a fundamental understanding of the underlying issues. Their rationales need to be isolated and compared, and discretion has to be exercised in identifying contrasts or similarities across decisions. Moreover, the empirical model

⁷⁹ “The activist judges of the Seventh Circuit have struck again,” lamented one leading critic of *ProCD*. Macaulay, 2004 Wis L Rev at 806 (cited in note 78).

would be pointless unless the results could be interpreted and the justifications drawn out. This has long been the method of the common law—reading a few older cases and learning from them. The main novelty of the quantitative approach is in relying not on a few past cases but on many (or all). As in any empirical methodology, the larger n provides greater accuracy and reliability.