Big Data on Contract Interpretation

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This Article introduces macro contract research, *a new methodology using big-data analytics to study private law. In doing so, it reveals significant trends that suggest the outsized role of corporations and the slide towards textualism*

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in the development of contract law. This Article thereby sheds new light on enduring questions in contract scholarship and offers a novel approach applicable to other contexts.

Using California contract disputes as a case study, this Article uncovers data suggesting that courts are tipping a long-held balance in contract interpretation toward textualism. Deploying machine learning and an original trained algorithm, this Article also uncovers data suggesting the diminishing role of individuals in contract litigation. At the same time, these findings suggest that corporations have played a central role in the development of contract law, a trend likely to increase in the future. In addition, these trends suggest that courts do not appear to be applying doctrine developed in certain contract contexts to other contract contexts in predictable ways. As such, the Article contributes much-needed quantitative evidence to contract scholarship, which has long debated the centrality of corporate entities in shaping contract law but lacked the relevant empirical data.

This Article also makes a significant theoretical contribution. Scholarship has tended to overlook the particular operation of canons of contract interpretation, notwithstanding contract law's distinct goal of enabling private ordering. The Article identifies the distinctive function of contract canons and offers a framework for their classification. Focusing on contract canons as a first step in gathering fundamental data on the development of contract law, this Article also presents a model for further large-scale empirical study.

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INTRODUCTION

Our legal tradition trains lawyers as close readers. Practitioners and scholars routinely scrutinize cases to distill relevant facts and identify holdings. This fundamental approach, essential for legal study and practice, has a drawback; it fails at times to present the big picture of the development of law. Due in part to the increasing availability of large datasets, lawyers, academics, and policymakers have become keenly interested in high-level trends, such as the role of big data in democratic ordering and participation. As a result, overarching shifts in public law have been well-documented and fastidiously analyzed. Yet far less attention has been paid to the development of private law.

This is especially true in the realm of contracts. Indeed, much remains unknown about the evolution and mechanics of contract law. For instance, little information has been gathered concerning the types of parties involved in contract disputes or the interpretive tools invoked by courts. Moreover, data concerning the relationship between party types and the development of contract law have not been previously available, notwithstanding the relevance of this information to enduring debates in contract law scholarship. Indeed, scholars have recognized the significance of empirical studies of contract law,[1] but the scholarship to date has largely elided analysis of broad, overarching — or macro — trends.

By introducing a new methodology, *macro contract research*,[2] this Article intervenes to fill this gap. It offers a big-data perspective as a critical complement to close-reading of cases. And, in doing so, it offers a new tool to enrich our current understanding of the development of private law.

Take, for example, the case of Wendy Ann Steller, who filed claims for both workers' compensation and disability payments against her former employer, the national retail chain Sears, Roebuck and Co.[3] Following a court-mandated settlement conference, Steller entered into a settlement agreement with her former employer.[4] Based on Steller's understanding that the agreement settled her claim for disability but not for workers' compensation (which remained subject to approval by

[1] As Zev Eigen notes, "[e]mpirical exploration of contracts is not a new thing." Zev J. Eigen, *Empirical Studies of Contract*, 8 ANN. REV. L. & SOC. SCI. 291, 291 (2012) (surveying a body of research that has "blossomed" at the turn of the twentieth century but can be traced to Stewart Macaulay's mid-twentieth century ground-breaking work on "contracts 'in action'"); *see also* Russell Korobkin, *Empirical Scholarship in Contract Law: Possibilities and Pitfalls*, 2002 U. ILL. L. REV. 1033, 1037 (surveying late twentieth-century empirical contract scholarship).

[2] Macro studies, or large-scale analysis boosted by big data, have been used to identify broad patterns and forecast trends in a range of fields, such as economics, finance, sociology, and healthcare, to name just a few. *See generally Macro Trends*, BAIN & CO., https://www.bain.com/insights/topics/macro-trends/ (last visited Dec. 21, 2023) [https://perma.cc/ZE38-DU3H] (featuring "Macro Trends" on demographics, automation, and inequality searchable by industry, services, and types, on global consultancy webpage).

[3] Steller v. Sears, Roebuck & Co., 116 Cal. Rptr. 3d 824, 827 (Ct. App. 2010).

[4] *See id.* at 827-28.

a state agency), Steller then filed for workers' compensation.[5] Sears, on the other hand, contended that the settlement agreement covered workers' compensation as well as disability payments.[6] In response, Steller argued that the relevant ambiguity in the contract should be read in her favor, thereby invoking a well-established canon of contract interpretation.[7]

Canons, or familiar "rules of thumb,"[8] direct courts as they parse the meaning of an agreement. Specifically, Steller pointed to the canon of *contra proferentem*, the rule that ambiguities in a contract should be construed against the drafting party[9] — here, the Sears corporation. Notwithstanding the power differential between the parties to this dispute, the California Court of Appeals rejected Steller's argument and held that the agreement settled the workers' compensation as well as disability claims.[10] In doing so, the court invoked precedent limiting the application of the canon of *contra proferentem* to cases where extrinsic evidence — that is, evidence beyond the written agreement — fails to resolve the uncertainty.[11]

Read on its own, *Steller v. Sears, Roebuck & Co.*[12] reflects the development of the common law around familiar maxims of contract interpretation, which may prove more nuanced in application. However, close reading of the case does not necessarily reveal the bigger picture. At the very least, examined on its own, the case does not provide a sense of broader trends in the development of the law. Instead, it leaves several open questions. For example, how often does the principle of

[5] *Id.* at 828.

[6] *Id.*

[7] *Id.* at 831.

[8] Varity Corp. v. Howe, 516 U.S. 489, 511 (1996).

[9] *See Contra proferentem*, BLACK'S LAW DICTIONARY (10th ed. 2014) ("In the interpretation of documents, ambiguities are to be construed unfavorably to the drafter."); CAL. CIV. CODE § 1654 (2024) (codifying the canon of *contra proferentem*). Section 1654 provides, "In cases of uncertainty not removed by the preceding rules, the language of a contract should be interpreted most strongly against the party who caused the uncertainty to exist." *Id.*

[10] *Steller*, 116 Cal. Rptr. at 833.

[11] *Id.* at 831 (citing Rainier Credit Co. v. Western Alliance Corp., 217 Cal. Rptr. 291, 293 (Ct. App. 1985)).

[12] *Id.*

contra proferentem play a role in litigation? Is this canon, which may reflect a substantive goal of the law to recognize a power imbalance between drafting and non-drafting parties, a rarity? Or is it sufficiently common so as to justify its study by law students and practitioners seeking to master the nuances of its application? If courts regularly invoke the canon, in what contexts do they tend to do so? And, if doctrine is developed in one contractual context, is it applied predictably in that context and/or others? Is the tendency of courts to invoke and develop the common law around this canon — or any other canons — increasing or decreasing over time?

Macro studies of private law have the potential to answer these questions and reveal overarching trends, thereby enriching our understanding of contract law.[13] Yet, to date, empirical studies on large-scale patterns in contract interpretation remain nearly nonexistent. For this reason, this Article initiates the development of what we call *macro contract research*.

Given the robust discussion in contract scholarship about best interpretive practices,[14] the dearth of empirical data concerning broad

[13] One of the authors has published several papers using computational law and empirical methods to uncover macro trends in private law using opinions and arbitral awards. *See* Farshad Ghodoosi, *Contracting Risks*, 2022 U. ILL. L. REV. 805, 841-50 [hereinafter *Contracting Risks*]; Farshad Ghodoosi, *Crypto Litigation: An Empirical View*, 40 YALE J. ON REGUL. 87, 93-97 (2022); Farshad Ghodoosi, *Fall of Last Safeguard in Global Dejudicialization: Protecting Public Interest in Business Disputes*, 98 OR. L. REV. 99, 117-28 (2020). Another common empirical method in private law is experimental research, which understands the trends and tendencies using survey-based methods. For example, one of the authors has used this method to understand individuals' tendencies in alternative dispute resolution selection and arbitration clauses in contracts. *See* Farshad Ghodoosi & Monica M. Sharif, *Arbitration Effect*, 60 AM. BUS. L.J. 235, 250-80 (2023); Farshad Ghodoosi & Monica M. Sharif, *Justice in Arbitration: The Consumer Perspective*, 32 INT'L J. CONFLICT MGMT. 626, 636-42 (2021). However, for uncovering major trends in courts and common law, the former method is more suited.

[14] Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, *Text* and *Context: Contract Interpretation as Contract Design*, 100 CORNELL L. REV. 23, 23 (2014) ("Contract interpretation remains . . . the most contentious area of contemporary contract doctrine and scholarship."); *see also* HANOCH DAGAN & MICHAEL HELLER, THE CHOICE THEORY OF CONTRACTS 13 (2017) (advocating for "prescribing distinct doctrinal tools tailored to the normative valences of particular contract types"); Alan Schwartz & Robert E. Scott, *Contract Theory and the Limits of Contract Law*, 113 YALE L.J. 541, 547 (2003) (arguing for textualist interpretation as the default for firm-to-firm contracts).

trends in contract interpretation is particularly surprising. Contract scholars, for example, have debated whether firm-to-firm transactions ought to be considered the defining "core" of contract law and, relatedly, what interpretive approach best furthers the goals of particular types of contracts.[15] However, no study has yet examined which types of transactions actually get litigated in practice and which contract types constitute the subject of the majority of caselaw.[16] Similarly, scholars regularly remark that "[c]ontract interpretation remains the most important source of commercial litigation,"[17] yet data regarding contract interpretation — including data to support this conventional wisdom — remain shockingly scant.

In addition to the lack of empirical research, from a theoretical perspective, legal scholarship has all but overlooked contract canons.[18] Take, for example, *expressio unius est exclusio alterius*, or the familiar rule

[15] DAGAN & HELLER, *supra* note 14, at 8.

[16] Scholars have, however, observed the decline of electronic and "shrinkwrap" cases adjudicated in state courts relative to federal courts, which has led to the failure of the law to be conclusively settled in a state's highest court. Samuel Issacharoff & Florencia Marotta-Wurgler, *The Hollowed Out Common Law*, 67 UCLA L. REV. 600, 623-24 (2020).

[17] Gilson et al., *supra* note 14, at 25; *see also* Alan Schwartz & Robert E. Scott, *Contract Interpretation Redux*, 119 YALE L.J. 926, 928 (2010). For more recent invocations of this assertion, see, for example, Kevin P. Tobia, *Testing Ordinary Meaning*, 134 HARV. L. REV. 726, 730 (2020). The commonsense assertion regarding the centrality of contract interpretation to contract litigation has largely been grounded in first-hand anecdotal evidence, such as Judge Richard Posner's "estimat[ion] that many of the contract cases he sees present interpretation disputes." Gilson et al., *supra* note 14, at 25 n.1 (citing Richard A. Posner, *The Law and Economics of Contract Interpretation*, 83 TEX. L. REV. 1581, 1582 (2005)).

[18] A recent study by Ethan Leib proves a notable exception to the rule that little empirical work (or theoretical work, for that matter) on canons of contract interpretation has been undertaken. Focusing on the invocation of three specific canons by name in New York and California courts, Leib astutely identifies the relative dearth of study of contract canons. Ethan J. Leib, *The Textual Canons in Contract Cases: A Preliminary Study*, 2022 WIS. L. REV. 1109, 1111; *see also* Joshua M. Silverstein, *Contract Interpretation Enforcement Costs: An Empirical Study of Textualism Versus Contextualism Conducted via the West Key Number System*, 47 HOFSTRA L. REV. 1011, 1026 (2019) (discussing why "law professors have produced so few empirical studies of contract interpretation"). At least one casebook explicitly identifies different types of contract canons. *See* CHRISTINA L. KUNZ, CAROL L. CHOMSKY, JENNIFER S. MARTIN & ELIZABETH R. SCHILTZ, CONTRACTS: A CONTEMPORARY APPROACH 552 (3d ed. 2018).

that the expression of one thing in a statute or contract signifies the exclusion of another.[19] Or, the principle that "the whole of a contract is to be taken together, so as to give effect to every part."[20] These interpretive rules inform the syntax of legal texts and have become embedded in our legal language. Although scholarship has accrued around canons of *statutory* interpretation,[21] little work has attended to how *contract* canons operate in the common law.

This Article therefore intervenes to make several contributions. It develops an original model of macro contract research to address existing empirical and theoretical gaps. Focusing on contract canons as a first step in deepening an understanding of the development of contract law, the Article reveals previously unavailable aggregate data that illuminate broad trends in contract law. In doing so, this Article develops a theoretical framework for the classification of contract canons, which have largely been overlooked by scholars. This Article thereby yields new large-scale empirical data on contract litigation and interpretation, with important implications. Specifically, the novel data presented in this Article suggest that corporate entities have an outsized impact on the development of contract doctrine, and that this is the case despite the finding that individuals constitute in aggregate the majority

[19] E. ALLAN FARNSWORTH, CAROL SANGER, NEIL B. COHEN, RICHARD R.W. BROOKS & LARRY T. GARVIN, CONTRACTS: CASES AND MATERIALS 527 (9th ed. 2019). Farnsworth points students to the example in Black's Law Dictionary: "For example, the rule that 'each citizen is entitled to vote' implies that noncitizens are not entitled to vote." *Id.* at n.c (citing BLACK'S LAW DICTIONARY (10th ed. 2014)).

[20] CAL. CIV. CODE § 1641 (2024).

[21] *See, e.g.*, WILLIAM N. ESKRIDGE, JR., INTERPRETING LAW: A PRIMER ON HOW TO READ STATUTES AND THE CONSTITUTION 407 (2016) (including an appendix of canons used by the Supreme Court from 1986–2016); ROBERT A. KATZMANN, JUDGING STATUTES 50-54 (2014) (discussing the role and limits of canons of statutory construction); ANTONIN SCALIA & BRYAN A. GARNER, READING LAW: THE INTERPRETATION OF LEGAL TEXTS 69-241 (2012) (categorizing and explicating "semantic canons," "syntactic canons," and "contextual canons" of statutory interpretation); Karl N. Llewellyn, *Remarks on the Theory of Appellate Decision and the Rules or Canons About How Statutes Are To Be Construed*, 3 VAND. L. REV. 395 (1950) (questioning the determinacy of canons of statutory construction); Geoffrey P. Miller, *Pragmatics and the Maxims of Interpretation*, 1990 WIS. L. REV. 1179, 1183 [hereinafter *Pragmatics*] (arguing that "maxims are integral to the process of interpretation"); Jacob Scott, *Codified Canons and the Common Law of Interpretation*, 98 GEO. L.J. 341, 342-401 (2010) (discussing the role of canons of statutory construction and surveying their codification).

of parties to contract litigation. Further, the Article identifies a trend in contract interpretation toward "textualism" — a focus by courts on the words in the text of an agreement rather than on the context or other substantive goals. In addition to the fact that the rise of textualism beyond the realm of statutory interpretation has been, for the most part, overlooked,[22] the appearance of this trend in California, a jurisdiction traditionally regarded as "contextualist," is particularly notable.[23] In addition, in light of the data, courts appear to be developing doctrine in the context of certain contract types and applying that doctrine unpredictably in other contexts.[24]

More broadly, this study introduces a methodological approach that complements the traditional focus on precedent and case studies in contract law. By developing the first empirical macro study of contract interpretation, it provides a model for further large-scale empirical studies of contract law. Finally, the Article highlights the significance for practitioners and students of attending to the operation of interpretive contract canons given the increasing invocation of textual canons in the caselaw.

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To date, there has been little empirical basis for discerning the answers to some fundamental questions about the development of private common law. Most basically, for example, who tends to litigate contract disputes? And, when courts invoke interpretive rules,[25] what

[22] As an exception, see Leib suggesting "an increased incidence of courts discussing textual canons in contract cases in recent decades" in light of his study of three textual canons. Leib, *supra* note 18, at 1113.

[23] *See* Geoffrey P. Miller, *Bargains Bicoastal: New Light on Contract Theory*, 31 CARDOZO L. REV. 1475, 1478 (2010) [hereinafter *Bargains Bicoastal*]; *see also* Pac. Gas & Elec. Co. v. G.W. Thomas Drayage & Rigging Co., 442 P.2d 641, 645 (Cal. 1968) ("The fact that the terms of an instrument appear clear to a judge does not preclude the possibility that the parties chose the language of the instrument to express different terms," thus allowing the introduction of extrinsic evidence.).

[24] The application of contract doctrine developed to serve the goals of one contract type to a different contract regime, where the doctrine might be inapposite can threaten to undermine the operation of contracts. Tal Kastner & Ethan J. Leib, *Contract Creep*, 107 GEO. L.J. 1277, 1287-1303, 1316-21 (2019).

[25] Recognizing the technical distinction between "interpretation" (as determining the meaning of language) and "construction" (as determining the legal significance of a

role do these rules play with respect to the common law of contract? Is a maxim such as the "whole contract" principle, which directs the interpreter to consider the whole text rather than an isolated provision,[26] mere boilerplate that courts use as a template for contract case opinions? Or, do courts invoke particular maxims in cases involving particular transaction types? Do courts mobilize contract interpretation canons in some contexts rather than others?

To begin to address these questions and pave the way for further macro contract research, the Article proceeds as follows.

Part I surveys existing scholarship on interpretive canons, highlighting the relative dearth of scholarship theorizing canons of contract interpretation. It identifies the under-explored distinction between contract and statutory canons and intervenes to offer a theoretical framework concerning the particular operations of canons of contract interpretation.

Part II offers a taxonomy of contract canons, dividing the canons into three types. Analyzing the canons codified in the California Civil Code, it identifies "textual canons," which operate as heuristics for reading contract language to ascertain the intent of the parties; "substantive canons," which direct courts based on substantive policy preferences, and "overarching goal (intent)" canons, which assert the goal of contract law to give effect to the intent of the parties.[27]

Part III outlines the original empirical methods and theoretical approaches of this study, which develops a rough heuristic using party names to identify transactional context in large-scale analysis. Using

text), we use "interpretation" broadly to refer to either. *See* William Baude & Stephen E. Sachs, *The Law of Interpretation*, 130 HARV. L. REV. 1079, 1086 (2017); Edwin W. Patterson, *The Interpretation and Construction of Contracts*, 64 COLUM. L. REV. 833, 833-36 (1964) (distinguishing between interpretation and construction); Lawrence B. Solum, *The Interpretation-Construction Distinction*, 27 CONST. COMMENT. 95, 100-09 (2010) (presenting "interpretation" as "yield[ing] semantic content," and "construction" as "determin[ing] legal content or legal effect").

[26] *See* CAL. CIV. CODE § 1641 (2024); *see also* ESKRIDGE, *supra* note 21, at 85-138 (discussing "whole act canons").

[27] *Cf.* ESKRIDGE, *supra* note 21, at 412 (classifying the maxim that "[s]tatutes should be interpreted to advance the statutory plan and legislative purpose" under "Textual canons"). In seeking more granularity, we have separated out provisions directing the interpreter to consider intent into a separate category, as discussed.

Harvard Law School's Caselaw Access Project database ("CAP"), the study employs natural language processing ("NLP"), machine learning, and statistical tools to analyze the likelihood that courts will invoke intent, textual, or substantive canons. As this Part shows, among other results, individuals comprise the majority of parties to litigation in California courts, but the data suggest that doctrine is being developed in cases involving disputes between organization entities and that courts are increasingly invoking textual canons.

As such, Part IV identifies normative implications of the study's results — including the potential for doctrine developed primarily in the context of firm-to-firm transactions to shape common law in inapposite contexts, such as disputes between consumers and firms or between individuals. In addition to these preliminary implications, this study opens the door for much more study of the development of the common law through its original empirical methodology.

I. CONTRACT INTERPRETATION AND SCHOLARSHIP — OVERLOOKING THE CANONS?

A trove of scholarship exists concerning the general operation and purpose of canons of interpretation. Yet, the scholarly discussion and theoretical frameworks engendered by interpretive canons tend to concern canons of *statutory* interpretation almost exclusively. For the most part, canons of *contract* interpretation at best earn a passing reference, and the few scholarly exceptions prove the rule that canons of contract interpretation have largely been overlooked.[28]

The discussion below briefly outlines the gap in current scholarship concerning canons of contract interpretation. In doing so, it begins with a fundamental, if largely elided, theoretical point — the distinction between canons of statutory interpretation, on the one hand, and canons of contract interpretation, on the other.

[28] *See e.g.*, SCALIA & GARNER, *supra* note 21, at 243 (acknowledging the existence of "rules specifically applicable to various categories of private legal instruments," such as *contra proferentem*, but distinguishing other textualist canons as "apply[ing] to all written legal instruments").

A. The Distinct Nature of Contract Interpretation

Despite the fact that certain canons may initially seem applicable across contexts,[29] canons play distinct roles in different frameworks — not least because different types of legal texts have distinct goals that, in turn, prompt particular interpretive regimes. Thus, for example, questions of construction of patents are considered a matter of law to be determined by courts.[30] The goals of intellectual property law thereby shape the admission of extrinsic evidence in disputes involving patent interpretation.[31] And, the legal framework specific to patents naturally differs from that encountered by a judge called upon to interpret the meaning of a statute. As Robert Katzmann, Chief Judge of the Second Circuit of the United States Court of Appeals, explained, "When a court interprets a statute, the court articulates the meaning of the words of the legislative branch."[32] This deceptively simple mandate calls attention to the significance of the particular context that shapes an approach to interpretation. As Judge Katzmann pointed out, in order to interpret federal statutes, judges must have, among other things, an understanding of "how Congress actually functions, how Congress signals its meaning, and what Congress expects of those interpreting its laws."[33] Thus, given the specific goals and interpretive regimes surrounding different types of legal texts, canons of interpretation cannot (indeed, should not) be expected to remain the same or to operate identically across interpretive regimes.[34]

Notwithstanding the trove of scholarship that has developed around statutory canons, no taxonomy of contract canons has been undertaken prior to this Article. Scholarship focused on either statutory

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[29] *See, e.g.*, discussion *infra* concerning "Whole Text" canons accompanying notes 44–46 (discussing the distinction between the operation of a "Whole Act" statutory canon and a contract canon that directs courts to consider the whole agreement).

[30] *See* Markman v. Westview Instruments, Inc., 517 U.S. 370, 372 (1996).

[31] *See id.*

[32] KATZMANN, *supra* note 21, at 8.

[33] *Id.*

[34] For a related discussion of the dangers of applying interpretive rules developed for one transactional context to a different context in contract disputes, see Kastner & Leib, *supra* note 24, at 1287-1303, 1316-21; *see also* Tal Kastner, *Systemic Risk of Contract*, 47 BYU L. REV. 451, 481-84 (2022).

interpretation or contract interpretation has, however, touched upon some of the limits of relying on a simple analogy between the two. Indeed, most scholars would agree that public law and private law pursue distinct normative goals, even if the precise nature of the goals of each remains a subject of debate.[35] As Daniel Farber has outlined, "[p]rivate law is largely dedicated to facilitating private ordering, so that people can enter into beneficial transactions . . . . Depending on what we think of legislators, we might or might not want to design interpretative rules that will further their purposes."[36] More pointedly, Mark Movsesian notes that while the private ordering of contract binds only the parties to the agreement, a statute serves as a "political document . . . designed to control the conduct of strangers to the transaction."[37] As such, the private law text of contract serves a role that differs markedly from that of a statute.[38]

Put simply, contract law rests on the premise that private ordering is the best way for parties to actualize their preferences.[39] Contract

[35] Advocating for the application of a "unifying" lens of principles underpinning the governing of economic content, Frank Easterbrook nonetheless acknowledged that there would be some disagreement about normative goals. Frank H. Easterbrook, *The Court and the Economic System*, 98 HARV. L. REV. 4, 59-60 (1984) ("Those who would prefer the Court to follow a path emphasizing moral rather than instrumental values find the Court's course distressing.").

[36] Daniel A. Farber, *Legislative Deals and Statutory Bequests*, 75 MINN. L. REV. 667, 669 (1991). Thus, for example, Jonathan Macey has advocated for interpreting statutes that result from special interest politics so as to frustrate rather than facilitate their purposes, Jonathan R. Macey, *Promoting Public-Regarding Legislation Through Statutory Interpretation: An Interest Group Model*, 86 COLUM. L. REV. 223, 224-27, 250-56 (1986), while Bill Eskridge has advocated for incorporating "[p]ublic values [that] appeal to conceptions of justice and the common good, not to the desires of just one person or group." William N. Eskridge, Jr., *Public Values in Statutory Interpretation*, 137 U. PA. L. REV. 1007, 1008 (1989).

[37] Mark L. Movsesian, *Severability in Statutes and Contracts*, 30 GA. L. REV. 41, 67 (1995) (quoting Frank H. Easterbrook, *What Does Legislative History Tell Us?*, 66 CHI. KENT L. REV. 441, 447 (1990)).

[38] *Id.* at 68-71.

[39] *See* Schwartz & Scott, *supra* note 14, at 544 ("[C]ontract law should facilitate the efforts of contracting parties to maximize the joint gains (the 'contractual surplus') from transactions.").

doctrine therefore aims to effectuate the manifested intent of parties.[40] This, in turn, forms the basis for doctrine and canons that privilege expressions of intent,[41] as well as those focusing on the primacy of the writing or contract language as evidence of parties' mutual intent.[42] Privileging the written text is a point of commonality for contract and statutory interpretation. However, statutory interpretation lacks a true analogue for the overarching directive of effectuating the "intent of the parties" in the private law context,[43] as Judge Katzmann's description suggests. Thus, due to the distinctions between the goals and operations of contracts, on the one hand, and statutes, on the other, seemingly analogous canons of interpretation cannot be presumed to function identically in each context.

The distinct goals and approaches of private law as opposed to public law may manifest even in the operation of the most seemingly analogous canons — the "textual" maxims, or maxims directing the grammar and language mechanics of reading a text.[44] Certain textual maxims appear

[40] *See, e.g.*, Hartford Cas. Ins. Co. v. Swift Distrib., Inc., 326 P.3d 253, 288 (Cal. 2014) ("The mutual intention of the parties at the time the contract is formed governs interpretation."); Greenfield v. Philles Recs., Inc., 780 N.E.2d 166, 170 (N.Y. 2002) ("The fundamental, neutral precept of contract interpretation is that agreements are construed in accord with the parties' intent."); *see also* John F. Coyle, *Interpreting Forum Selection Clauses*, 104 IOWA L. REV. 1791, 1794 (2019) [hereinafter *Forum Selection Clauses*].

[41] *See, e.g.*, CAL. CIV. CODE § 1636 (2024) ("A contract must be so interpreted as to give effect to the mutual intention of the parties as it existed at the time of contracting, so far as the same is ascertainable and lawful.").

[42] *See, e.g.*, *id.* § 1639 (2024) ("When a contract is reduced to writing, the intention of the parties is to be ascertained from the writing alone, if possible; subject, however, to the other provisions of this Title."); *see also id.* § 1638 (2024) ("The language of a contract is to govern its interpretation, if the language is clear and explicit, and does not involve an absurdity.").

[43] Movsesian, *supra* note 37, at 71-72.

[44] *See* ESKRIDGE, *supra* note 21, at 407-11 (including "language and grammar" canons, along with "whole act" canons under the heading "Textual Canons"); *cf.* SCALIA & GARNER, *supra* note 21, at 16 ("Textualism . . . begins and end with what the texts says and fairly implies."). Scholars have variously categorized canons focused on the words and interaction of the language of a text. Some refer to "semantic," "syntactic," and "contextual" canons. *See id.* at 69-241; *see also* KUNZ ET AL., *supra* note 18, at 552 ("'[S]emantic canons' [are] rules based on assumptions about ordinary language usage . . . ."). Others identify particular textual heuristics as "linguistic" canons, see, for

similar across contexts, but they may be applied differently in each regime. For example, the "whole act" rule that "[e]ach statutory provision should be read by reference to the whole act and the statutory scheme"[45] might seem on its face as the same maxim in practice as the "whole contract" canon.[46] However, these canons cannot be assumed to operate as perfect analogues to one another, given distinctions between the design and goals of contracts, on the one hand, and of statutes, on the other.

Among other things, scholars have identified the value of innovation in contract design — whether through the creation of a new term[47] or structure of a deal.[48] Innovation in the development of contract design plays a key role in allowing parties to achieve their desired contract goals through private ordering. For example, scholars have demonstrated how deals may be designed to allocate risk or enable confidentiality by using multiple ancillary contracts.[49] As such, the directive to read provisions as part of a "whole contract" may prompt a distinct analysis of ancillary contracts that has no clear analogue in statutory interpretation. Given the doctrinal presumption that courts seek to give effect to the intent of the parties to a contract, the parameters of what constitutes the

example, Leib, *supra* note 18, at 1110-11 — all of which we would include under the umbrella of "textual" in the rough taxonomy we discuss in Part II *infra*.

[45] ESKRIDGE, *supra* note 21, at 411.

[46] *See, e.g.*, CAL. CIV. CODE § 1641 (2024) ("The whole of a contract is to be taken together, so as to give effect to every part, if reasonably practicable, each clause helping to interpret the other.").

[47] *See* George G. Triantis, *Improving Contract Quality: Modularity, Technology, and Innovation in Contract Design*, 18 STAN. J.L., BUS. & FIN. 177, 192 (2013) ("[I]nnovation is the creation of a new term that can be redeployed in other transactions . . . ."); *see also* Afra Afsharipour, *Transforming the Allocation of Deal Risk Through Reverse Termination Fees*, 63 VAND. L. REV. 1161, 1164, 1167 (2010) (describing the development of reverse termination fee provisions as an example of how "parties use complex contractual provisions to engage in contractual innovation"). *See generally* Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting* (*Or "The Economics of Boilerplate"*), 83 VA. L. REV. 713, 729-50 (1997) (analyzing externalities that impact the balance of innovation, standardization, and customization in contract terms).

[48] *See* Cathy Hwang, *Unbundled Bargains: Multi-Agreement Dealmaking in Complex Mergers and Acquisitions*, 164 U. PA. L. REV. 1403, 1415 (2016) (describing the innovative use of ancillary agreements, such as employment agreements and leases, in mergers and acquisitions to establish rights and obligations that will survive after the deal closes).

[49] *Id.*

entirety of a contract may involve a different approach than that taken by courts to determine the "whole act" in the context of statutory interpretation, where there is no simple analogue to the question of whether to read ancillary contracts together.[50] Put simply, similar textual canons may operate differently in the context of contract interpretation than they do in the context of statutory interpretation.

Indeed, there is evidence in the common law that certain terms operate distinctly in the context of contracts, on the one hand, and that of statutes, on the other. As Tina Stark outlines, contrary to assertions that the use of the term "shall" introduces ambiguity in all contexts, the term serves an important purpose. It signals an obligation in a commercial contract.[51] Thus, in a review of cases litigating the significance of the term, Stark shows that questions involving the meaning of the word "shall" almost entirely involve statutory interpretation.[52] In the overwhelming majority of contract cases in which the term "shall" figures, courts seem to take for granted its particular function in contract law. Her study thereby indicates that courts recognize the distinctive operation of contract language as opposed to that of statutory language, even when the words happen to be the same.[53] And, as such, even if scholars have largely failed to differentiate between statutory and contract interpretation, the evidence suggests that courts are attuned to the distinction.

In addition, certain canons lack a correlative altogether in one regime or the other. Take, for example, the textual statutory canon referred to by Bill Eskridge as the "elephants in mouseholes" maxim.[54] According to this canon, "Congress usually does not alter the fundamental details of a regulatory scheme in vague or ancillary provisions"[55] — a principle that

[50] *See* Kastner, *supra* note 34, at 468-69, 500 (discussing potential interaction between innovative contract design and the whole contract rule).

[51] Tina L. Stark, *Shall — Beaten, Bloodied, but Unbowed* (Jan. 28, 2015) (draft manuscript) (on file with authors).

[52] *Id.*

[53] *Id.*

[54] ESKRIDGE, *supra* note 21, at 414.

[55] *Id.* (citing Fed. Energy Regul. Comm'n v. Elec. Power Supply Ass'n, 577 U.S. 260, 276-79 (2016); King v. Burwell, 576 U.S. 473, 491-94 (2016); Gonzales v. Oregon, 546 U.S. 243, 267 (2006); Whitman v. Am. Trucking Ass'ns, 531 U.S. 457, 468 (2001); *see* Food & Drug Admin. v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 160 (2000).

operates less robustly, if at all, in the context of contracts. Unlike statutory interpretation, in contracts, especially those drafted by sophisticated actors, a loophole or proviso may be presumed by courts to reflect the intent of the parties.[56] And, there are certain contract canons that have no precise analogue in statutory interpretation. Thus, as noted, contract doctrine includes the substantive canon of *contra proferentem*, or the "tie breaker" rule that an ambiguity in a contract should be construed against the drafter[57] — an interpretive canon that has no mate in the statutory interpretive framework.[58]

Despite the distinctive interpretive goals of private and public law, scholarship has primarily focused on statutory interpretation to the exclusion of consideration of canons of contract interpretation. The discussion below outlines this phenomenon.

B. Scholarly Focus on Canons of Statutory Interpretation

Canons of interpretation[59] boast a venerable and "impressive pedigree," going back centuries in the Anglo-American legal tradition alone.[60] Not only have interpretive maxims been traced by scholars to ancient principles,[61] they continue to permeate contemporary law. As such, a cache of scholarship has developed around categorizing and

[56] *See* Kenneth Ayotte & Christina Scully, *J. Crew, Nine West, and the Complexities of Financial Distress*, YALE L.J.F. 363, 368-70 (2021) (discussing a "trapdoor provision" that technically undermined the goals of a loan agreement and with respect to which the company sought a declaratory judgement indicating its confidence in the possibility of its being enforced in this way).

[57] *See, e.g.*, CAL. CIV. CODE § 1654 (2024) ("In cases of uncertainty not removed by the preceding rules, the language of a contract should be interpreted most strongly against the party who caused the uncertainty to exist.").

[58] Although certain statutory canons may direct courts in ways that resemble this approach, they have different substantive goals. For example, the "rule of lenity," or strict construction of penal statutes, can be seen as directing courts to interpret statutes in a manner that favors criminal defendants. *See* Shon Hopwood, *Restoring the Historical Rule of Lenity as a Canon*, 95 N.Y.U. L. REV. 918, 921 (2020).

[59] *See supra* text accompanying note 25, on the reference to "interpretation" to refer to either of the meaning-making modes of construction and interpretation.

[60] James J. Brudney & Corey Ditslear, *Canons of Construction and the Elusive Quest for Neutral Reasoning*, 58 VAND. L. REV. 1, 8 (2005).

[61] *See* Miller, *Pragmatics*, *supra* note 21, at 1183-91 (tracing maxims back to sacred Hindu texts, Christian interpretive principles, Talmudic commentary, and Roman law).

cataloguing the use of canons by courts — at least in the context of statutory interpretation.[62] And, notwithstanding Karl Llewellyn's famously "devastating critique"[63] of interpretive canons' ability to further determinate outcomes,[64] scholars have noted the enduring role of canons of interpretation.[65] As Geoffrey Miller remarked, "there is reason to believe that the maxims are making . . . a comeback."[66] And, along similar lines, Jacob Scott has documented how "[e]very legislature in the United States has codified canons [or] interpretive 'rules of thumb,'" at least with respect to statutory interpretation.[67] Yet, despite the distinctions between the interpretive goals of statutes and contracts, scholarship has focused almost exclusively on canons of statutory interpretation.

In fact, in the thirty years since Miller remarked on the persistence of interpretive canons, the study of canons of statutory interpretation has only become more robust.[68] Thus, for example, in their book *Reading*

[62] Scott, *supra* note 21, at 341; *see also* ESKRIDGE, *supra* note 21, at 407-45; SCALIA & GARNER, *supra* note 21.

[63] Miller, *Pragmatics*, *supra* note 21, at 1180.

[64] *See* Llewellyn, *supra* note 21, at 401-06 (cataloguing canons of statutory construction along with an "opposing canon[] on almost every point").

[65] Miller, *Pragmatics*, *supra* note 21, at 1225 ("the maxims survive").

[66] *Id.* at 1181.

[67] Scott, *supra* note 21, at 341, 344 (discussing the prevalence of "'canons of construction' . . . a set of background norms and conventions that are widely used by courts when interpreting statutes").

[68] *See, e.g.*, ESKRIDGE, *supra* note 21, at 407-45 (presenting a taxonomy of Supreme Court canons of statutory interpretation (1986–2016)); KATZMANN, *supra* note 21, at 50-54 (discussing the operation of statutory canons); SCALIA & GARNER, *supra* note 21, at 69-341 (identifying and classifying canons of statutory construction); Baude & Sachs, *supra* note 25 (considering the authority and validity of canons of statutory construction); Stephen Breyer, *On the Uses of Legislative History in Interpreting Statutes*, 65 S. CAL. L. REV. 845, 869-71 (1992) (assessing the efficacy of statutory canons as compared with legislative history in guiding statutory interpretation); Brudney & Ditslear, *supra* note 60 (undertaking empirical assessment of the application of canons of construction to workplace statutes); William N. Eskridge, Jr., *The New Textualism and Normative Canons*, 113 COLUM. L. REV. 531, 532-88 (2013) (reviewing *Reading Law* and questioning the ability of canons to ensure predictability and highlighting other normative considerations in the evaluation of canons) [hereinafter Eskridge, *The New Textualism and Normative Canons*]. And, of course, the more recent scholarship builds on an already significant theoretical engagement with the topic. *See, e.g.*, JAMES WILLARD HURST, DEALING WITH

Law, Justice Antonin Scalia and Bryan Garner touted the potential for certain interpretive canons to constrain judges and prevent them from making decisions based on their personal values.[69] To facilitate predictable judicial decision making, they argued, rather than looking to legislative history to interpret statutes, judges should focus on the canons for guidance.[70] In service of this goal, *Reading Law* identifies thirty-seven fundamental principles of interpretation and twenty more specifically related to governmental prescriptions.[71] Judge Richard Posner, in contrast, has expressed a more skeptical view of the role of canons in statutory interpretation, characterizing the maxims as "clichés"[72] and challenging their usefulness in disciplining judges.[73] And still other scholars, such as Bill Eskridge, have called into question whether the canons necessarily point toward a textualist rather than a purposivist approach to interpretation.[74] Arguing for a pragmatic use of canons that accounts for democratic norms, legislative history, and public values, among other inputs, Eskridge has identified how "canons-based textualism" that "reflect[s] judicial values and not legislative ones . . . can be expected to operate in antidemocratic ways."[75] Pointing to the possibility of judges "cherry-picking" canons, Eskridge warns that a textualist regime invites judges to impose their own normative analysis independent of legislative history and statutory purpose.[76] As such, the

STATUTES 62-65 (1982) (noting the abstraction of canons, which can create a rebuttable presumption and obscure judges' value preferences); T. Alexander Aleinikoff, *Updating Statutory Interpretation*, 87 MICH. L. REV. 20, 38 (1988) (identifying canons' role in helping an interpreter resolving the relationship between statutes enacted at different times); Richard A. Posner, *Statutory Interpretation — in the Classroom and in the Courtroom*, 50 U. CHI. L. REV. 800, 803-04, 805-16 (1983) (arguing for exposure of law students to the canons as well as the "debunking literature on the canons" and critiquing the canons as vacuous guideposts for judges); Macey, *supra* note 36, at 264-66 (analyzing which canons serve the public interest).

[69] SCALIA & GARNER, *supra* note 21.

[70] *Id.* at 6-7.

[71] *Id.* at 53-341.

[72] RICHARD A. POSNER, THE FEDERAL COURTS: CHALLENGE AND REFORM 147 (rev. ed. 1996).

[73] RICHARD A. POSNER, REFLECTIONS ON JUDGING 217 (2013).

[74] *See* Eskridge, *The New Textualism and Normative Canons*, *supra* note 68, at 544.

[75] *Id.* at 538.

[76] *Id.* at 586, 536-37.

scholarly debate reflects a deep engagement with the operation of statutory canons of interpretation. The question of the role of canons of interpretation has thus been described as one of "the hoariest and hottest debates in interpretation."[77]

Significant empirical studies have increasingly focused on interpretive maxims, adding further nuance to debates about the normative role of canons of statutory interpretation. In the words of James Brudney and Corey Ditslear, "[t]here has been a[n] . . . upsurge of interest among legal and social science scholars in analyzing judicial reasoning from an empirical perspective."[78] Overwhelmingly, however, the analysis of canons has focused on judges' interpretation of statutes rather than judges' approach to developing private law. Thus, for example, Jacob Scott's foundational paper taxonomizes canons of statutory interpretation in the fifty states to examine whether common law principles actually follow the will of the legislatures.[79]

In another "comprehensive . . . study,"[80]Abbe Gluck and Lisa Bressman examine the role played by canons in legislative drafting, raising important questions about how judges ought to apply the canons.[81] As Gluck and Bressman discovered, congressional drafters were unfamiliar with certain canons, were impacted by others in surprising ways, and failed to draft with an eye to other canons of which they were aware.[82] Such empirical information illuminates debates about the normative role of canons of interpretation and informs theories about the "judicial role" with respect to laws enacted by Congress.[83] More broadly, empirical scholarship considering the operation of canons of interpretation has proliferated in a range of

[77] Baude & Sachs, *supra* note 25, at 1084.

[78] James J. Brudney & Corey Ditslear, *The Decline and Fall of Legislative History? Patterns of Supreme Court Reliance in the Burger and Rehnquist Eras*, 89 JUDICATURE 220, 221 (2006).

[79] Scott, *supra* note 21.

[80] KATZMANN, *supra* note 21, at 52.

[81] Abbe R. Gluck & Lisa Schultz Bressman, *Statutory Interpretation from the Inside — An Empirical Study of Congressional Drafting, Delegation, and the Canons: Part I*, 65 STAN. L. REV. 901, 932-33 (2013).

[82] *Id.* at 907.

[83] *Id.* at 905-06.

contexts, including and beyond the practices of legislative drafters, [84] from Supreme Court decisions,[85] to federal courts of appeals,[86] to state courts of last resort,[87] to the codification of canons by states,[88] to name just a few. Similarly, the recent movement in corpus linguistics has opened new avenues in statutory interpretation, especially in identifying the "ordinary meaning" of words.[89]

In contrast to the robust scholarly engagement with statutory interpretation, little attention has been paid to the role of interpretive canons in the private law.[90] As such, there remains a significant

[84] *See id.*; *see also* Lisa Schultz Bressman & Abbe R. Gluck, *Statutory Interpretation from the Inside — An Empirical Study of Congressional Drafting, Delegation, and the Canons: Part II*, 66 STAN. L. REV. 725, 755 (2014).

[85] *See, e.g.*, Brudney & Ditslear, *supra* note 60, at 15-54 (focusing on the application of canons of construction to workplace statutes); Nina A. Mendelson, *Change, Creation, and Unpredictability in Statutory Interpretation: Interpretive Canon Use in the Roberts Court's First Decade*, 117 MICH. L. REV. 71 (2018) (gathering data on and analyzing the use of canons by the Roberts Court); *see also* William N. Eskridge, Jr. & Lauren E. Baer, *The Continuum of Deference: Supreme Court Treatment of Agency Statutory Interpretations from* Chevron *to* Hamdan, 96 GEO. L.J. 1083, 1120-54 (2008) (surveying Supreme Court deference to federal agencies' interpretation and identifying indications of ideological preference even when Justices draw on interpretive canons).

[86] *See* Abbe R. Gluck & Richard A. Posner, *Statutory Interpretation on the Bench: A Survey of Forty-Two Judges on the Federal Courts of Appeals*, 131 HARV. L. REV. 1298, 1300 (2018).

[87] *See* Abbe R. Gluck, *The States as Laboratories of Statutory Interpretation: Methodological Consensus and the New Modified Textualism*, 119 YALE L.J. 1750, 1771-1846 (2010).

[88] Scott, *supra* note 21, at 350-401.

[89] *See, e.g.*, Thomas R. Lee & Stephen C. Mouritsen, *Judging Ordinary Meaning*, 127 YALE L.J. 788 (2018) (applying corpus linguistics primarily in statutory interpretation); James C. Phillips, Daniel M. Ortner & Thomas R. Lee, *Corpus Linguistics & Original Public Meaning: A New Tool to Make Originalism More Empirical*, 126 YALE L.J.F. 212 (2016) (employing corpus linguistics to originalist interpretation); *see also* Lawrence M. Solan & Tammy Gales, *Corpus Linguistics as a Tool in Legal Interpretation*, 2017 BYU L. REV. 1311, 1337-56 (2017); Stephen C. Mouritsen, Note, *The Dictionary Is Not a Fortress: Definitional Fallacies and a Corpus-Based Approach to Plain Meaning*, 2010 BYU L. REV. 1915, 1919 (2010). For a survey-based approach distinct from computational corpus linguistics, see, for example, Omri Ben-Shahar & Lior Jacob Strahilevitz, *Interpreting Contracts via Surveys and Experiments*, 92 N.Y.U. L. REV. 1753 (2017); Tobia, *supra* note 17.

[90] Leib, *supra* note 18, at 1111.

theoretical and empirical gap in the current scholarship on interpretation.

C. Notable Exceptions: Close Readings of Contract Canons in Context

As outlined above, empirical scholarship on interpretive canons tend to focus almost exclusively on statutory interpretation. This Section outlines the few exceptions to this trend.

The small collection of empirical studies of canons of contract interpretation primarily includes scholarship that closely examines a specific canon or canons in a particular context. Thus, for example, John Coyle has intervened to classify canons used by courts to construe forum-selection clauses and choice-of-law clauses.[91] With respect to each contract-provision type, Coyle identifies instances where judges invoke applications of canons in ways not necessarily consistent with majoritarian preferences.[92] Coyle's research thereby calls into question whether the invocation of these canons furthers the goal of private law to facilitate the parties' intent.[93]

Other scholars have focused on the operation of canons of interpretation in circumscribed transactional contexts. For example, Jeffrey Stempel and Erik Knutsen have advocated for a contextually-sensitive application of "standard insurance canons of construction" to insurance terms subject to review.[94] Natural resource contracts are another particular transaction type that has prompted study by scholars.[95] Overall, we are aware of only a handful of empirical studies

[91] Coyle, *Forum Selection Clauses*, *supra* note 40; John F. Coyle, *The Canons of Construction for Choice-of-Law Clauses*, 92 WASH. L. REV. 631, 642-706 (2017) [hereinafter *Choice-of-Law Clauses*] (taxonomizing canons of construction used to construe contract choice-of-law clauses and analyzing outcomes).

[92] Coyle, *Forum Selection Clauses*, *supra* note 40, at 1847; Coyle, *Choice-of-Law Clauses*, *supra* note 91, at 691.

[93] Coyle, *Forum Selection Clauses*, *supra* note 40, at 1847; Coyle, *Choice-of-Law Clauses*, *supra* note 91, at 691.

[94] *See* Jeffrey W. Stempel & Erik S. Knutsen, *Rejecting Word Worship: An Integrative Approach to Judicial Construction of Insurance Policies,* 90 U. CIN. L. REV. 561, 577-80 (2021).

[95] *See, e.g.*, Daniel B. Kostrub & Roger S. Christenson II, *Canons of Construction for the Interpretation of Mineral Conveyances, Severances, Exceptions, and Reservations in Producing States*, 88 N.D. L. REV. 649 (2012) (analyzing canons of construction of agreements to convey minerals); Bruce M. Kramer, *The Sisyphean Task of Interpreting*

of the operation of canons of interpretation in the context of private law.[96] These, for the most part, have taken a fine-grained approach, focusing on relatively small data sets or using Westlaw's Key Number System.[97]

More recently, Ethan Leib has highlighted this gap in the literature, undertaking "to start studying more systematically how the textual canons of interpretation figure in contract interpretation."[98] Taking "[t]his first deep dive into the role textual canons play in contract interpretation,"[99] Leib engages in a close reading of cases to examine the operation of *expressio unius*,[100] *ejusdem generis*,[101] and *noscitur a sociis*[102] in New York and California courts. Demonstrating increased attention in

Mineral Deeds and Leases: An Encyclopedia of Canons of Construction, 3 OIL & GAS, NAT. RES. & ENERGY J. 135 (2017) (compiling an "'encyclopedia' of canons of construction of mineral deeds and leases").

[96] *See* Coyle, *Choice-of-Law Clauses*, *supra* note 91, at 642-706; Coyle, *Forum Selection Clauses*, *supra* note 40, at 1835-50; Leib, supra note 18, at 1110-37; Silverstein, *supra* note 18, at 1029-96; *see also* 11 WILLISTON ON CONTRACTS § 32:6 (4th ed.), Westlaw (database updated May 2023) (listing *noscitur a sociis* as a "primary rule" of contract interpretation); *id.* § 32:10 (listing *ejusdem generis* as a "secondary rule" of contract interpretation); BRYAN A. GARNER, GARNER'S COURSEBOOK ON DRAFTING AND EDITING CONTRACTS 556 (2020) (citing SCALIA & GARNER, *supra* note 21, at 107, 195, 199 (referencing *expressio unius*, *ejusdem generis*, and *noscitur a sociis* once)); Edwin W. Patterson, *The Interpretation and Construction of Contracts*, 64 COLUM. L. REV. 833, 852-55 (1964) (discussing "maxims" of contract "interpretation and construction"); Keith A. Rowley, *Contract Construction and Interpretation: From the "Four Corners" to Parol Evidence (and Everything in Between)*, 69 MISS. L.J. 73, 150-63 (1999) (discussing interpretive canons used by Mississippi courts to ascertain the mutual intent of parties in contract).

[97] *See, e.g.*, Coyle, *Choice-of-Law Clauses*, *supra* note 91 (relying on interviews with eighty-six attorneys); Silverstein, *supra* note 18 (relying on West Key Number system).

[98] Leib, *supra* note 18, at 1112.

[99] *Id.* at 1136.

[100] This canon asserts that "the inclusion of one term or concept in text suggests the exclusion of opposite or alternative terms and concepts not mentioned." Brudney & Ditslear, *supra* note 60, at 13.

[101] This canon directs that a general term should be interpreted "to reflect the class of objects reflected in more specific terms accompanying it." ESKRIDGE, *supra* note 21, at 408.

[102] This canon directs that a general term should be interpreted to be similar to more specific terms in a series. ESKRIDGE, *supra* note 21, at 408; *see also* Leib, *supra* note 18, at 1116 ("words are known by their associates").

the caselaw to these textual canons in the past four decades, Leib points to the remarkable dearth of empirical study of contract canons as the impetus for his preliminary study.[103] As he asserts, "[T]here is a lot more to learn."[104]

This Article takes up this challenge and offers an original empirical perspective and theoretical framework.[105] In doing so, it considers the contexts in which courts invoke canons of contract interpretation.

Given the conventional wisdom that courts routinely invoke interpretive maxims in contract disputes, and that disputes concerning contract interpretation have been identified as the largest driver of commercial litigation,[106] this Article undertakes to give a broad, high-level perspective on the operation of canons of contract interpretation. It aims to supplement the existing scholarship, which tends to examine the operation of particular contract canons on a relatively granular level, by providing a wide-lens perspective on the operation of contract canons. It thereby also lays a foundation to invite additional macro study of the operation of these enduring principles.[107]

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The next Part lays the theoretical groundwork for an empirical analysis of contract canons. Before turning to a description of the empirical methodology of our study, the discussion that follows offers a taxonomy of contract canons of interpretation. To do so, it examines the California Civil Code, which codifies a number of interpretive canons in a section dedicated to the "Interpretation of Contracts."[108]

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[103] Leib, *supra* note 18, at 1111.

[104] *Id.* at 1136.

[105] Indeed, we confirm some of Leib's findings on a macro level. Notably, examining three canons in New York and California, Leib notes the increased discussion by courts of textual canons in recent decades. *Id.* at 1113.

[106] Gilson et al., *supra* note 14, at 25.

[107] In fact, the novel methodology presented in this Article could further the study of statutory canons, as well.

[108] CAL. CIV. CODE §§ 1635-63 (2024) (Division 3, Obligations, Part 2, Contracts, Title 3 Interpretation of Contracts).

II. A TAXONOMY OF CONTRACT CANONS

To facilitate the macro study of how courts invoke canons of contract interpretation, this Part presents a taxonomy of canons of contract interpretation invoked in the California Civil Code. In addition, this Part outlines in broad strokes the fragmented model of contract law to provide the theoretical background for an application of macro contract study, undertaken in Part III.

A. Textual, Substantive, and Intent Canons: A New Taxonomy of California Contract Rules

As Jacob Scott asserts in his comprehensive review of statutory canons, "[c]anons are integral to the process of interpretation;" they serve as "a set of background norms and conventions that are widely used by courts" in interpreting legal texts.[109] Thus, in Scott's telling, "the canons form a body of interpretive common law that legitimizes sources and methods of legal reasoning."[110] And, to the extent that canons are codified in a state statute, they ought to have all the more significance for judges as reflections of the legislature's intent of how the law should be applied.[111]

As such, this Section turns to examine the California Civil Code, which explicitly codifies a number of canons of contract interpretation.[112] Drawing on scholarship engaging the classification of canons of statutory interpretation and the identification of some canon types by contract casebook authors,[113] this Section analyzes and classifies the canons included explicitly in Title 3 of Division 3, Part 2 (Contracts) of the California Civil Code.[114] The California Code, which

[109] Scott, *supra* note 21, at 344.

[110] *Id.* at 346.

[111] *See id.* at 349-50.

[112] *See* CAL. CIV. CODE §§ 1635-63 (2024) ("Interpretation of Contracts"); *see also id.* § 3534 (2024) ("Particular and general expressions: Particular expressions qualify those which are general.").

[113] *See* KUNZ ET AL., *supra* note 18, at 552.

[114] This study uses California Civil Code Sections 1635-63 collected in the statute under the title, "Interpretation of Contracts," as a statistical sample. As we note, there are other codified interpretive canons in the California Civil Code that relate to contract interpretation. Thus, for example, Section 3534, which is not included in our sample,

dedicates a Title to the "Interpretation of Contracts,"[115] offers a felicitous data set. A majority of the sections in this Title has not been amended since the enactment of the Code in 1872, facilitating large-scale analysis of the invocation of the provisions over time.[116]

A focus on state courts necessarily excludes potentially high-stakes contract cases litigated in federal courts as a result of diversity jurisdiction. Yet, given the fact that contract law is state law, a focus on state cases is nonetheless "appropriate"[117] — especially given the presumption that federal courts follow state law in deciding contract disputes.[118]

As such, the discussion that follows offers a theoretical framework to classify the contract canons codified under "Interpretation of

approximates the maxims of *ejusdem generis* and *noscitur a sociis*, or the rule that a general term is understood to reflect more specific terms in the provision and the rule that more comprehensive words should be understood in light of the more specific enumerated items in a series, respectively. *See* Leib, *supra* note 18, at 1122. A preliminary examination of interpretive canons collected under the title, "Maxims of Jurisprudence," in Sections 3509-48 of the Code suggests a pattern consistent with our findings, that the invocation of textual canons by California courts is on the rise and that Sections 3509-48 play a relatively limited role in contract interpretation, at least with respect to the number of cases invoking these maxims. Consistent with this, Leib's recent study focusing on the explicit discussion of "*ejusdem generis*" and "*noscitur a sociis*" in California courts identified only seventeen and four cases invoking each, respectively. *See id.* at 1125.

[115] *See* CAL. CIV. CODE §§ 1635-63 (2024) (Title 3: Interpretation of Contracts).

[116] *See* discussion *infra* Part III.B. The majority of Title 3 has never been amended since being enacted in 1872. *See* CAL. CIV. CODE §§ 1635-63 (2024) (Title 3: Interpretation of Contracts). Of those that have been added only Sections 1657.1 (Contract of adhesion; time for performance shall be reasonable) (enacted in 2021) and 1662 (Uniform Vendor and Purchaser Risk Act) (enacted in 1947) are relevant to our taxonomy. *See id.* § 1657.1 (2024) (Westlaw through Ch. 997 of 2022 Reg. Sess.) (enacted in 2021); *id.* § 1662 (2024) (Westlaw through Ch. 997 of 2022 Reg. Sess.) (enacted in 1947). Section 1654 (Uncertainty; interpretation against person causing) — a *contra proferentem* provision — was streamlined when amended in 1982. *See id.* § 1654 (2024) (Westlaw through Ch. 997 of 2022 Reg. Sess.) (enacted in 1872 and amended in 1982).

[117] Leib, *supra* note 18, at 1116.

[118] *See* Molinos Valle Del Cibao, C. por A. v. Lama, 633 F.3d 1330, 1348 (11th Cir. 2011) ("Where the highest court — in this case, the Florida Supreme Court — has spoken on the topic, we follow its rule. Where that court has not spoken, however, we must predict how the highest court would decide this case."); *cf.* Issacharoff & Marotta-Wurgler, *supra* note 16 (identifying the absence of a developed state contract case law of browsewrap, clickwrap, and shrinkwrap contracts).

Contracts" in the California Code based on their operation and purpose. Following the model of taxonomies of statutory canons,[119] this Section identifies canons that serve as heuristics for ascertaining the intent of the parties from the text, which we refer to as "textual canons,"[120] and canons that direct courts based on substantive policy preferences, which we refer to as "substantive canons." It also identifies canons that establish the overarching objective of judicial interpretation to effectuate the intent of the parties as manifested in the contract, labelling them as "overarching goal (intent)" canons.[121]

In this way, this study builds on the rich collection of literature concerning statutory interpretation.[122] Scholars have identified canons that "address grammar rules and the arrangement of words or phrases,"[123] or that "rest on normal uses of language by educated

[119] *See, e.g.*, ESKRIDGE, *supra* note 21, at 407-45 (distinguishing "textual" canons from "substantive" canons, among others).

[120] *See supra* note 46. We use the term "textual" to include the types of canons others have identified as "semantic." *See, e.g.*, KUNZ ET AL., *supra* note 18, at 552 (referring to "rules based on assumptions about ordinary language usage" as "semantic canons"). While "semantic" might prove more accurate in some contexts, as not all contract terms are necessarily expressed as written text, we chose the terminology of textualism in part because of the broader conversation around interpretation involving this term and we intend it to include directives concerning the language or expressed terms of the contract.

[121] Canons can also have elements of textual or "semantic" directives, on one hand, and substantive or "policy-based" directives, on the other. *See* KUNZ ET AL., *supra* note 18, at 552. For the purposes of tracking the invocation of canon types, we have imposed a typology that distinguishes between the two based on our assessment of the predominant goal of the provision.

[122] In the rare discussion of contract canons we have found, *Contracts, A Contemporary Approach* notably distinguishes between "semantic canons," or "rules based on assumptions about ordinary language usage, leading to presumptions about what the parties likely intended particular language to mean in the absence of contrary evidence regarding the parties' actual intent," and "substantive canons," or "rules that construe contract meaning in light of public policy concerns," and also notes that some combine both. *Id.*; *see also* Brian G. Slocum & Kevin Tobia, *The Linguistic* and *Substantive Canons*, 137 HARV. L. REV. F. 70, 81-96 (2023) (arguing based on empirical study of American laypeople's understanding that certain statutory canons are understood as both substantive and linguistic).

[123] Brudney & Ditslear, *supra* note 60, at 5 n.16 (distinguishing "language" canons from substantive canons in the context of statutory construction).

speakers,"[124] which they often refer to as "language"[125] or "textual canons,"[126] distinguishing them from other canons, such as those that point to policy preferences. Although scholars of statutory construction include more complex taxonomies of the canons,[127] for our purposes it is sufficient to note, as Scalia and Garner do, that there are particular canons that serve particular structural goals based on "various factors depending on the context and the field of law."[128] Borrowing from this approach, this study offers a taxonomy of the canons included under the heading "Interpretation of Contracts" in the California Civil Code.[129] The discussion below describes the three categories and the canons that comprise them.[130]

1. Textual Contract Canons

"Textual" canons constitute the first category in this proposed taxonomy of codified canons of contract interpretation. As noted above, these provisions offer guidance on how to achieve the interpretive goal — discerning the intent of the parties — from the language of the contract. In this way, the textual contract canons resemble but are not

[124] SCALIA & GARNER, *supra* note 21, at 243.

[125] *See* Brudney & Ditslear, *supra* note 60, at 5 & n.16.

[126] *See, e.g.*, ESKRIDGE, *supra* note 21, at 407-17 (including the "Ordinary meaning rule" along with canons identified as belonging in the categories of "Language and Grammar," "Whole Act," and "Whole Code" as "Textual Canons"); Scott, *supra* note 21, at 352-70 (including canons identified as "Linguistic Inferences," "Grammar and Syntax," "Textual Integrity," and "Technical Changes" under the category of "Textual Canons").

[127] *See, e.g.*, ESKRIDGE, *supra* note 21, at 417-25 (taxonomizing canons relating to "Agency Interpretations," such as Chevron deference, "Statutory Precedents," such as the *stare decisis* rule, and canons relating to "Extrinsic Legislative Sources," such as the legislative history rule, under the category of "Extrinsic Source Canons," and canons such as "Separation of Powers," under the category of "Substantive Policy Canons").

[128] SCALIA & GARNER, *supra* note 21, at 241, 243 (distinguishing broadly applicable canons regarding semantics, syntax, and context, from canons they collect under the heading "Principles Applicable Specifically to Governmental Prescriptions").

[129] As the Code Chart below reflects, for purposes of classification, six provisions of this Title, which did not express interpretive canons, were excluded.

[130] Unlike the canons collected by scholars in a purely conceptual taxonomy, codified canons at times combine principles or reflect more than one goal or operation. In the interest of identifying broad trends, this taxonomy places each statute in one category. This process, however, enables and invites closer and further study of particular canons.

necessarily identical to the canons identified as textual in the context of statutory interpretation. Thus, for example, pursuant to the taxonomy suggested by this study, we categorize the canon that establishes that the "language of a contract . . . govern[s] its interpretation" when it is "clear and explicit, and does not involve an absurdity" (Section 1638), as a textual canon.[131] This canon points to the text of the contract as the starting point for determining intent.[132] Along similar lines, the provision (Section 1639) asserting that "[w]hen a contract is reduced to writing, the intention of the parties is to be ascertained from the writing alone, if possible," subject to the other provisions in the Title,[133] serves as a textual guide that directs the court to focus first on the written text.[134] Similarly, we classify the provision establishing that original terms govern over form provisions (Section 1651), as textual,[135] viewing it of a piece with textual canons that offer linguistic inferences as to what the parties intended.[136]

Other provisions hew more closely to their analogues in statutory interpretation. For example, Section 1641's directive that courts consider the whole of a contract "together, so as to give effect to every part"[137] and Section 1642's instruction that "[s]everal contracts relating to the same matters, between the same parties, and made as parts of

[131] CAL. CIV. CODE § 1638 (2024) ("Ascertainment of intention; language").

[132] *See* Williams v. IHS Markit Ltd., No. SA CV 18-02064, 2023 WL 316976, at *11 (C.D. Cal. Jan. 19, 2023) (invoking Section 1638 and citing to the principle that a "court must first look to the plain meaning of the agreement's language").

[133] CAL. CIV. CODE § 1639 (2024) ("Ascertainment of intention; written contracts").

[134] *See, e.g.*, LaBarbera v. Sec. Nat'l Ins. Co., 303 Cal. Rptr. 3d 256, 264-65 (Ct. App. 2022) (looking to the contract language to discern whether the agreement was intended to benefit a third party).

[135] CAL. CIV. CODE § 1651 (2024) ("Printed forms; insertions under special directions; written parts"); *see, e.g.*, Fid. & Deposit Co. v. Charter Oak Fire Ins. Co., 78 Cal. Rptr. 2d 429, 433 (Ct. App. 1998) ("Where a contract is partly written or printed under the special direction of the parties, and the remainder is copied from a form prepared without reference to the particular contract in question, the parts which are original control those which are not.").

[136] *See* Scott, *supra* note 21, at 352 (discussing "[l]inguistic inference canons," which "provide guidelines about what the legislature likely meant, given its choice of some words and not others").

[137] CAL. CIV. CODE § 1641 (2024) ("Whole contract, effect to be given").

substantially one transaction, are to be taken together"[138] find their analogues in statutory canons focusing on "textual integrity."[139] As discussed above, these canons may function in practice somewhat differently than their statutory counterparts given the distinct goals of contract and statute.[140] Nonetheless, these canons appear on their face to resemble textual statutory canons that direct courts to read "[e]ach statutory provision . . . by reference to the whole act"[141] and fit comfortably in the category of textual canons.

Other textual provisions include those that direct courts to read the "words of a contract . . . in their ordinary and popular sense," absent a special meaning in usage,[142] and that establish that "[t]echnical words are to be interpreted as usually understood by persons in the profession or business to which they relate, unless clearly used in a different sense."[143] These canons also find analogues in textual canons of statutory interpretation in the "ordinary meaning rule" of statutory interpretation and the canon that directs interpreters to apply a specialized meaning to a "term of art."[144] Similarly, certain provisions echo the directive of the statutory "whole act rule" discussed above, charging courts to find consistency within the parameters of an apparent unit or whole.[145] Thus for example, one provision directs courts to reconcile any inconsistency or illogical outcome by giving

[138] *Id.* § 1642 (2024) ("Several contracts as parts of one transaction").

[139] Scott, *supra* note 21, at 361.

[140] As discussed in Part I, *supra*, contract design values innovation, at the level of the transaction as well as the documentation, as a means of effectuating parties' intent. This goal of contract could also impact the application of a "whole contract" or "one transaction" rule. *See* Kastner & Leib, *supra* note 24, at 1281 ("[P]arties innovate in creating new deal structures and documentation . . . ."); Kastner, *supra* note 34, at 455-65, 490-99 (discussing innovation through modular design); Matthew Jennejohn, *The Architecture of Contract Innovation*, 59 B.C. L. REV. 71, 76 (2018); Triantis, *supra* note 47, at 202-06 (identifying modularity as an innovative contract design). *See generally* Kahan & Klausner, *supra* note 47 (discussing innovation as a potentially valuable feature of contract design).

[141] ESKRIDGE, *supra* note 21, at 411; Scott, *supra* note 21, at 414.

[142] CAL. CIV. CODE § 1644 (2024) ("Sense of words").

[143] *Id.* § 1645 (2024) ("Sense of words; technical words").

[144] *See* ESKRIDGE, *supra* note 21, at 408.

[145] *See id.* at 411 ("Each statutory provision should be read by reference to the whole act and the statutory scheme. Statutory interpretation is a 'holistic' endeavor.").

effect to the terms "subordinate to the general intent and purpose of the whole contract" (Section 1652).[146] Another instructs courts to reject "words in a contract . . . wholly inconsistent with its nature, or with the main intention of the parties" (Section 1653).[147] Of a piece with this approach, a third provision directs interpreters to subordinate a particular clause to the contract's general intent (Section 1650).[148]

In short, a number of contract canons offer instructions and language rules as heuristics for discerning intent, which we classify as "textual" canons. And although some of these contract canons resemble counterparts in textual statutory canons, and might at times operate similarly, given the distinct goals of public and private law, they cannot be presumed to operate in identical ways.

2. Substantive Contract Canons

"Substantive canons" comprise the second category of this proposed taxonomy of canons of contract interpretation. These canons appear to direct courts based on policy or other principles beyond the "four corners" of the text.[149] While some resemble directives expressed in statutory canons, the particular goals of private law and context of contract drafting precipitate certain canons that are altogether unique to contract interpretation. Thus, for example, Section 1654 sets out the principle of *contra proferentem*,[150] directing courts, in "cases of uncertainty" to interpret "the language of a contract . . . most strongly against" the drafter.[151] Reflecting the distinctive context and goals of

[146] CAL. CIV. CODE § 1652 (2024) ("Reconcilement of repugnancies"); *see* Just Goods, Inc. v. Eat Just, Inc., No. 20-15809, 2022 WL 614053, at *1 n.2 (9th Cir. Mar. 2, 2022) (citing Section 1652 to reject an "illogical reading of the agreement").

[147] CAL. CIV. CODE § 1653 (2024) ("Inconsistent words"); *see, e.g.*, Lawrence Block Co. v. Palston, 266 P.2d 856, 863 (Cal. Ct. App. 1954) (reading words of contract "in conjunction with the next line").

[148] CAL. CIV. CODE § 1650 (2024) ("Particular clauses; general intent").

[149] *See* KUNZ ET AL., *supra* note 18, at 552.

[150] For a discussion of the policy rationale for *contra* proferentem, see Ethan J. Leib & Steve Thel, Contra Proferentem *and the Role of the Jury in Contract Interpretation*, 87 TEMP L. REV. 773, 776-77 (2015); *see also* Joanna McCunn, *The* Contra Proferentem *Rule: Contract Law's Great Survivor*, 39 OXFORD J. LEGAL STUD. 483, 483-506 (2019) (providing a history of the evolution of this principle in English law since the medieval period).

[151] CAL. CIV. CODE § 1654 (2024) (enacted in 1872; amended in 1982).

contract interpretation, this provision suggests a policy position "specifically applicable to . . . private legal instruments,"[152] which has no clear analogue in statutory interpretation.

Other provisions reflect a broader policy goal of enabling the effectuation of lawful agreements. For example, one provision instructs that a "contract must receive such an interpretation as will make it lawful, operative, definite, reasonable, and capable of being carried into effect," consistent with the intention of the parties (Section 1643).[153] Another implies stipulations when needed to make a contract reasonable (Section 1655),[154] and yet another implies terms incidental or necessary to carry a contract into effect, "unless some of them are expressly mentioned therein, when all other things of the same class are deemed to be excluded" (Section 1656).[155] As such, this provision of Section 1656 also contains a textualist component, but one that guides the application of the policy-driven directive.[156] To some extent, these provisions might be seen to resemble the "ordinary meaning rule" in statutory interpretation, which seeks, among other things, to avoid an absurd result from the interpretation of a text and which is typically classified as a textual canon.[157] However, the distinctive goal of contract, to facilitate private ordering, suggests that these provisions serve as a substantive directive to courts to seek to make contracts operative. Relatedly, we classify as substantive provisions that imply times for performance if none is specified (Section 1657),[158] and that direct that performance times specified in contracts of adhesion must be reasonable (Section 1657.1).[159] The former serves the policy goal of effectuating contracts with reasonable provisions, likely to reflect the intent of the parties, while the latter protects parties to so-called "take-

[152] SCALIA & GARNER, *supra* note 21, at 243.

[153] CAL. CIV. CODE § 1643 (2024) ("Interpretation in favor of contract").

[154] *Id.* § 1655 (2024) ("Implied stipulations").

[155] *Id.* § 1656 (2024) ("Implied incidents").

[156] *See, e.g.*, Eastwood Homes, Inc. v. Hudson, 327 P.2d 29 (Cal. Ct. App. 1958) (applying the substantive component of Section 1656).

[157] *See* ESKRIDGE, *supra* note 21, at 407.

[158] CAL. CIV. CODE § 1657 (2024) ("Performance; time").

[159] *Id.* § 1657.1 (2024) ("Contract of adhesion; time for performance shall be reasonable").

it-or-leave-it" agreements from unreasonable terms. In a similar vein, a provision directing courts to follow the "law and usage" of the place of performance or where the contract was made (Section 1646)[160] also fills in substantive terms to effectuate likely understandings of the parties as well as the operation of the private law framework.

A directive to courts to disregard provisions in a written contract that fail "to express the real intention of the parties" as a result of fraud, mistake, or accident (Section 1640)[161] reflects the substantive interest in protecting the parties from being unfairly bound to terms inconsistent with their intent. Provisions that set forth the presumption of joint and several liability and responsibility (Sections 1659[162] and 1660[163]) reflect a substantive default rule, as does a provision that imposes a default rule of certain rights and duties in the purchase and sale of real property (Section 1662).[164]

Several provisions speak to the context that ought to guide interpretation of the contract. Thus, for example, the Code provides that a contract "may be explained by reference to the circumstances under which it was made" (Section 1647),[165] thereby identifying substantively relevant context beyond the four corners of the contract. The Code also limits the contract, "[h]owever broad" its terms, to "those things concerning which it appears that the parties intended to contract" (Section 1648).[166] We classify this provision as substantive because it directs courts to consider extrinsic evidence, along with the text.[167] Section 1649 similarly points beyond the express terms of a promise, directing, in the event of ambiguity or uncertainty, that the interpreter be guided by the "sense in which the promisor believed, at

[160] *Id.* § 1646 (2024) ("Law and usage of place").

[161] *Id.* § 1640 (2024) ("Writing disregarded; unexpressed intention").

[162] *Id.* § 1659 (2024) ("Joint and several promise; presumption; promisors benefiting from consideration").

[163] *Id.* § 1660 (2024) ("Joint and several promise; presumption; several persons executing promise in singular number").

[164] *Id.* § 1662 (2024) ("Uniform Vendor and Purchase Risk Act").

[165] *Id.* § 1647 (2024) ("Circumstances").

[166] *Id.* § 1648 (2024) ("Restriction to object").

[167] *See, e.g.*, Badie v. Bank of Am., 79 Cal. Rptr. 2d 273 (Ct. App. 1998) (looking to extrinsic evidence in assessing the intended scope of a credit card agreement).

the time of making [the promise], that the promisee understood it."[168] As such, this provision also operates in service of the substantive goal of interpreting contracts to facilitate the realization of the parties' intent.

3. Canons Reflecting the Overarching Goal (Intent)

In addition to the above categories, this taxonomy separately classifies two provisions that establish the overarching goal of contract interpretation under the law. Thus, the directive of Section 1636 to interpret a contract so "as to give effect to the mutual intention of the parties as it existed at the time of contracting, so far as the same is ascertainable and lawful"[169] establishes the overarching objective of judicial interpretation particular to contracts — to effectuate the intent of the parties as manifested in the contract.[170] Similarly, Section 1637's mandate that courts apply the rules of the statute "[f]or the purpose of ascertaining the intention of the parties to a contract"[171] reflects the overarching goal of contract law. These provisions appear substantive on their face but we suspected that courts might invoke them as code for a textual analysis or an examination of the provisions in the four

[168] CAL. CIV. CODE § 1649 (2024) ("Ambiguity or uncertainty; promise").

[169] *Id.* § 1636 (2024) ("Mutual intention to be given effect"). Courts invoke this provision in establishing their interpretive goal. *See, e.g.*, The H.N. & Frances C. Berger Found. v. Perez, 159 Cal. Rptr. 3d 434, 440 (Ct. App. 2013) ("In interpreting a contract, we give effect to the parties' intent as it existed at the time of contracting."); Grey v. Am. Mgmt. Servs., 139 Cal. Rptr. 3d 210, 212 (Ct. App. 2012) (asserting that the "basic goal of contract interpretation is to give effect to the parties' mutual intent at the time of contracting" and citing to Section 1636 as the starting point for the court's interpretation of a contract); Armstrong v. Sacramento Valley Realty Co., 198 P. 217, 220 (Ct. App. 1921) ("It is fundamental that a contract must be so interpreted as to give effect to the mutual intention of the parties as it existed at the time of contract.").

[170] Scholars may disagree as to whether the "intent" canons ought to be considered textual, as they may be understood to direct courts in the reading of the text, or substantive, as they assert the substantive goal of the law to give effect to the intent of the parties, or both at the same time. *Cf.* ESKRIDGE, *supra* note 21, at 412 (classifying the maxim that "[s]tatutes should be interpreted to advance the statutory plan and legislative purpose" under "Textual canons."). Moreover, the application of these canons may differ across contexts. As such, we have separately identified these canons as overarching goal (intent) canons to increase transparency and granularity and facilitate further study.

[171] CAL. CIV. CODE § 1637 (2024) ("Ascertainment of Intention").

corners of the contract. We have therefore classified them separately to allow us to better track their operation.

The chart below provides an outline of the provisions in Title 3 along with their classification for this study.

Code Section	**Category**	**Brief Description**[172]
1635	* Excluded from analysis (descriptive)	Public and private contracts; uniformity of interpretation
1636	Overarching Goal (Intent)	Mutual intention to be given effect
1637	Overarching Goal (Intent)	Ascertainment of intention — apply rules of this Chapter
1638	Textual	Ascertainment of intention — language of contract governs
1639	Textual	Ascertainment of intention — from the writing of written contracts
1640	Substantive	Writing disregarded; unexpressed intention (due to fraud, mistake, accident)
1641	Textual	Interpret contract as a whole
1642	Textual	Several contracts as parts of one transaction
1643	Substantive	Interpretation in favor of contract
1644	Textual	Apply ordinary and popular meaning of terms

[172] The descriptions draw on summary headings provided by Westlaw, with some additions and adaptations for the sake of clarity.

1645	Textual	Interpret technical words as understood in relevant context
1646	Substantive	Law and usage of place
1646.5	* Excluded from analysis (descriptive)	Governing law
1647	Substantive	Contract may be explained by reference to circumstances
1648	Substantive	Broad contract terms only relate to object of contract
1649	Substantive	Ambiguous terms construed in accordance with intent
1650	Textual	Particular clauses subordinate to general intent
1651	Textual	Bespoke or handwritten provisions control over form
1652	Textual	Reconcile inconsistent clauses with intent and contract purpose
1653	Textual	Reject words inconsistent with contract or intent
1654	Substantive	Interpretation against person causing uncertainty (*contra proferentem*) (amended 1982)
1655	Substantive	Imply stipulations necessary to make contract reasonable
1656	Substantive	Imply anything incidental or necessary in law or usage

1656.1	* Excluded from analysis (irrelevant or marginally relevant)	Sales tax
1656.5	* Excluded from analysis (irrelevant or marginally relevant)	Personal property tax
1657	Substantive	Implied reasonable time of performance or instant time
1657.1	Substantive	Contract of adhesion; reasonable time for performance (Added by Stats.2021, c. 222 (S.B.762), § 1, eff. Jan. 1, 2022.)
1658	* Excluded from analysis (descriptive)	Licensee requirements. Repealed
1659	Substantive	Joint and several promise; presumption; promisors benefiting from consideration
1660	Substantive	Presumption of joint and several promise – execution by several
1661	* Excluded from analysis (descriptive)	Executed and executory contracts defined
1662	Substantive	Uniform Vendor and Purchaser Risk Act (Rights and duties concerning real property) (enacted in 1947)
1663	* Excluded from analysis (irrelevant or marginally relevant)	Currency definitions

B. Area of Research: The Impact of Transactional Contexts on Contract Interpretation

The above discussion offered a taxonomy of canons of contract interpretation, classifying the canons codified in Title 3: Interpretation of Contracts of Division 3, Part 2 of the California Civil Code. Before describing the empirical method of this study in Part III below, this Section briefly sets the theoretical groundwork for one preliminary application of macro contract study — the broad differentiation of types of contracts and contract disputes.

As demonstrated by the overarching goal of contract law of effectuating parties' intent, the proverbial "meeting of the minds" distinctively permeates contractual interpretation.[173] And, just as distinctions between the operation of authoritative texts, such as contracts, on the one hand, and statutes, on the other, can affect the appropriate interpretive approach, so too, contractual context, transaction type, and party type shape contract interpretation. Indeed, contract scholarship "reflecting a variety of methodological approaches, embraces the idea of a fragmented or otherwise tracked system of contract law to facilitate its multiple purposes and values."[174] In doing so, contract scholarship and caselaw recognize that different transactional contexts and contract types ought to precipitate different doctrinal approaches.

Most basically, scholars and courts often point to transactions between so-called "sophisticated parties" as a distinctive contractual context — one that can be contrasted, for example with consumer contracts (or business-to-individual transactions).[175] Scholars have explored varied definitions of what constitutes a sophisticated party,[176] and courts do not tend to identify in clear terms how contracts might be

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[173] *See* Tal Kastner, *The Persisting Ideal of Agreement in an Age of Boilerplate*, 35 L. & SOC. INQUIRY 793, 800 (2010) (discussing the persisting ideal of agreement in scholarly approaches).

[174] Kastner & Leib, *supra* note 24, at 1278.

[175] *See, e.g.*, Schwartz & Scott, *supra* note 14, at 544-45 (distinguishing between firm-to-firm transactions and other resulting transaction categories, such as consumer contracts "between a firm as seller and an individual as buyer").

[176] Kastner & Leib, *supra* note 24, at 1283-85.

distinguished based on transaction type.[177] At a certain level of generality, however, it has become almost commonplace to presume a distinction between rough categories of contract type. Thus, Alan Schwartz and Robert Scott identify the category of contracts "between firms" as the central contract type, as contrasted with "contracts involving individuals."[178] Other scholars, such as Victor Goldberg, similarly identify "contracts of sophisticated parties" as a distinct transaction type.[179] Still others, such as Hanoch Dagan and Michael Heller, who offer a pluralistic vision of contract law, circle back to distinctions between "consumer transactions" and "commercial contracts."[180] As such, on a high level, courts and scholars tend to think differently about transactions involving only sophisticated actors or corporate entities and other types of transactions, such as those largely between individuals or those between entities and individuals. Thus, notwithstanding the potential challenges of distinguishing between contract types at the level of the individual case,[181] the discussion by courts and scholars of these categories suggests that implicit distinctions between types of transactions in the law are baked in, at least in very broad strokes.

Given the broad-brush distinction between contract types, implicitly understood in scholarship and law, if not clearly defined at the level of the case, this Article proposes an initial application of macro contract research. It undertakes to track the operation of canons on the basis of broad distinctions between transaction types. Specifically, it looks at distinctions among contract disputes (i) between organizational

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[177] Meredith R. Miller, *Contract Law, Party Sophistication and the New Formalism*, 75 MO. L. REV. 493, 518-35 (2010).

[178] Schwartz & Scott, *supra* note 14, at 544-45, 550. Schwartz and Scott note the distinction between small business owners and "sophisticated economic actors," but nonetheless cast a relatively wide net including any "entity that is organized in the corporate form and that has five or more employees, (2) a limited partnership, or (3) a professional partnership such as a law or accounting firm." *Id.* at 545. See Kastner & Leib, *supra* note 24, at 1280, for a discussion of the porousness of the boundaries.

[179] VICTOR P. GOLDBERG, RETHINKING CONTRACT LAW AND CONTRACT DESIGN 1 (2015). Victor Goldberg defines sophisticated parties somewhat differently than Schwartz and Scott as parties who can "be expected to have access to counsel." *Id.*

[180] DAGAN & HELLER, *supra* note 14, at 73.

[181] Kastner & Leib, *supra* note 24, at 1287-1303.

entities on both sides of the dispute, (ii) between individuals and entities, and (iii) between individuals on both sides of the dispute. This study acknowledges the limitations of using party type as a proxy for contract type. At the most basic level, for example, individuals may be sophisticated actors, while small businesses, by some definitions, may be unsophisticated. In addition, this study uses organizational entities as a rough proxy for sophisticated actors, though this approach is broad and may capture other organizational entities, such as government agencies. Nonetheless, as described in Part III, the use of party type enables a broad view of interpretative practices and thereby sheds light on significant trends. Moreover, the macro approach modeled by this study paves the way for future study of large-scale patterns, which can further refine our initial findings regarding contract context.

The ability to trace patterns in contract cases based on contract types thereby facilitates significant empirical research on the interpretation of contracts. As such, the next Part describes the original empirical approach to codified canons of contract interpretation in California undertaken in this study.

III. MACRO CONTRACT RESEARCH: A NEW PERSPECTIVE ON CORPORATE TEXTUALISM

As demonstrated above, the California Civil Code presents a felicitous opportunity to study contracts cases from a macro perspective. The codification of interpretive canons in Code provisions, the section numbers of which are easily searchable, facilitates large-scale empirical study. In addition, most of the interpretive provisions in Title 3 have not been amended since their enactment by the California legislature in 1872 and therefore enable the study of trends over time. California law thereby lends itself to the study of contract interpretation and the development of canon law in contracts. This Part presents an overview of our empirical method followed by the results of our empirical studies.

A. An Overview of the Empirical Methods of the Study

1. Database, Data Processing, and Weighted Scores

The first step of this Article's empirical inquiry pertains to the use of contract canons in caselaw. This Article uses Harvard Law School's Caselaw Access Project database ("CAP") and employs computational law that is comprised of natural language processing ("NLP"), machine learning, and statistical tools.[182] CAP includes all official and book-published state and federal United States case law through 2018 that have been digitized and made machine readable.[183] NLP is a subfield of artificial intelligence and machine learning that aims to convert text into numerical values thereby allowing for statistical and machine learning analysis. In sum, this Article converts texts into numbers so that authors can run statistical analysis and data visualization.

Drawing from the application programing interface ("API") of CAP, we narrowed the cases to those that contained the terms "contract" or "agreement" resulting in 28,238 cases spanning from 1837 to 2018.[184] The search terms were deliberately broad to assure that all contract cases were included in our dataset. Following the initial collection of cases, Python's machine learning library Sklearn[185] and natural language toolkit ("NLTK")[186] were used to process the corpus (texts) of these court opinions.

This study used NLTK and Python's machine learning tools to process (clean) the court opinions. This step includes removing special

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[182] One of the authors previously used a similar method in an analysis of *force majeure* clauses. *See* Ghodoosi, *Contracting Risks*, *supra* note 13, at 841-50.

[183] *About*, CASELAW ACCESS PROJECT, https://case.law/about/ (last visited Jan. 5, 2024) [https://perma.cc/EXM8-S8RV].

[184] API that has been used: *Case Document List*, CASELAW ACCESS PROJECT, https://api.case.law/v1/cases/?page_size=10&search=%22Contract%22+OR+%22Agreement%22+&jurisdiction=cal&ordering=relevance (last visited Jan. 5, 2024) [https://perma.cc/A56W-QE5P].

[185] Scikit-learn or (Sklearn) is one of the most commonly used Python libraries for machine learning techniques.

[186] NTLK is one of the most commonly used Python libraries for text processing including tokenization, parsing, classification, and stemming.

characters and stop words.[187] Then, the study used the bag-of-words model for parsing through the text allowing for both unigrams and bigrams of words in the opinion.[188]

Next, this study created a dictionary for the database by calculating the weight (score) of the terms used in the opinions. In particular, a dictionary of terms was created in order to determine a weighted score for each term. This score is determined by the frequency in which these terms appear in the text, calculated from the number of times the word appears in the text over the text's total word count. This dictionary includes California Civil Code Sections 1635 to 1663, thereby providing insight on the frequency with which these Code sections are invoked.

2. Entity Recognition Using Machine Learning

This study also demonstrates a preliminary application of macro contract studies. In doing so, it breaks ground by being the first to use machine learning to identify the parties in each case. For purposes of this Article, this study focuses on the entities to disputes in cases in which courts invoke canons of contract interpretation. As discussed in the preceding Part, scholarship has explored how contract context, including the nature of the parties to a contract, impacts the appropriate interpretive approach. And, as noted, though scholarship commonly refers to a distinction between sophisticated and unsophisticated

[187] Text processing is comprised of tokenization, normalization, and noise removal. In tokenization, strings of texts are split into smaller pieces. For example, sentences are tokenized into words. Normalization puts all text on a level playing field (*e.g.*, converting all characters into lower case). Noise removal cleans up text by, for example, removing extra white spaces. *See generally* Jiahao Weng, *NLP Text Preprocessing: A Practical Guide and Template*, MEDIUM (Aug. 30, 2019), https://towardsdatascience.com/nlp-text-preprocessing-a-practical-guide-and-template-d80874676e79 [https://perma.cc/GBQ8-DBCN] (providing an overview of text processing techniques such as tokenization and normalization).

[188] N-Gram is a set of one or two more consecutive words that occur next to each other. In unigram, words are separated individually. In bigram, a vocabulary of two-word pairs is created. Here are some examples: Unigram: court, contract, jurisdiction. Bigram: Court holds, Contract stipulates, lacks jurisdiction. *See generally* Farhad Malik, *NLP: Text Mining Algorithms*, MEDIUM (June 28, 2019), https://medium.com/fintechex- plained/nlp-text-mining-algorithms-4546c6ca30a [https://perma.cc/YT6R-ZKWD] (explaining widely-used text mining algorithms such as N-Grams, Bag of Words, and Term Frequency-Inverse Document Frequency ("TF-IDF")).

parties, determining the level of sophistication remains a challenge. Given the value of gaining information concerning contract contexts, this Article applies NLP's entity recognition technique to case names as a preliminary heuristic to begin to classify contract types.

Named entity recognition ("NER") refers to a two-step process using artificial intelligence: (a) detecting a named entity and (b) categorizing the entity. For example, if the name Elvis Presley is mentioned in a text, the AI can categorize it as "person," whereas the name Google is categorized as "organization." NER has many applications, including question answering, text summarization, and machine translation.[189] Even though this method cannot fully capture whether a party is sophisticated in a particular context, it can impart a broad sense of contract types by distinguishing between individuals and organizations. Using entity recognition in this fashion for the first time, this Article thereby provides an overview of the parties who are involved in contract litigation. And, in doing so, it is the first to begin to sketch a broad empirical picture of contract interpretation in different contexts.

To start, this study used the pre-trained machine learning model developed by Amazon Comprehend.[190] Following the application, we noted that the accuracy of Amazon's NER in determining individuals versus organization is satisfactory but could probably be improved. To provide a more accurate entity recognition model, we decided to train the model using Amazon Comprehend's custom entity recognition. The dataset used to train the custom entity recognizer thus relies on annotations, which act as labels for a specific entity type in a document.[191] For example, labeling a case name like *Kevin A. Copeland*

[189] *See generally* Jing Li, Aixin Sun, Jianglei Han & Chenliang Li, *A Survey on Deep Learning for Named Entity Recognition*, 34 IEEE TRANSACTIONS ON KNOWLEDGE & DATA ENG'G 50 (2022) (reviewing deep learning approaches in named entity recognition, charting the progress from early rule-based to advanced methods, and outlining current challenges and future research directions).

[190] Amazon Comprehend, which is one of the services offer by Amazon Web Services, is an NLP service that uses machine learning "to uncover valuable insights and connections in text." *See* AMAZON COMPREHEND, https://aws.amazon.com/comprehend/(last visited Jan. 5, 2024) [https://perma.cc/98VW-HW74].

[191] *Annotations*, AMAZON COMPREHEND, https://docs.aws.amazon.com/comprehend/latest/dg/cer-annotation.html (last visited Dec. 6, 2023) [https://perma.cc/XVY8-AMKV].

(Plaintiff and Appellant) v. *Baskin Robbins U.S.A. et al.*, (Defendants and Respondents) involved manually labeling Kevin A. Copeland as "person" for its entity type and Baskin Robbins as "organization."[192] In so doing, the research team also identified and labeled each entity's "role" in each case. In the previous example, this entailed labeling the role that is listed in parentheses (*e.g.*, Plaintiff and Appellant). In this process, we labeled the documents for the following: Person, Organization, Role, Versus, and Trustee. To achieve prediction quality, Amazon Comprehend's models require a minimum of 250 documents and 100 annotations per entity type for training.[193] In our case, our labeling job includes 323 case names (so called "documents") for training and over 100 instances of the entity types listed above (*i.e.*, person, organization, role, versus, and trustee) across all documents. To increase accuracy and to streamline the annotation process, a custom labeling job was created on the data labeling service, Amazon Sagemaker Ground Truth.[194] Our research team, as human labelers and to meet inter-rater reliability,[195] were assigned to annotate all 323 documents for the specified entity types listed above. After the labeling task was completed, the output was generated in the form of an augmented manifest file (a JSON lines format file) that was used during the training of our custom entity recognition as explained below.[196]

[192] *See* Copeland v. Baskin Robbins U.S.A., 117 Cal. Rptr. 2d 875 (Ct. App. 2002).

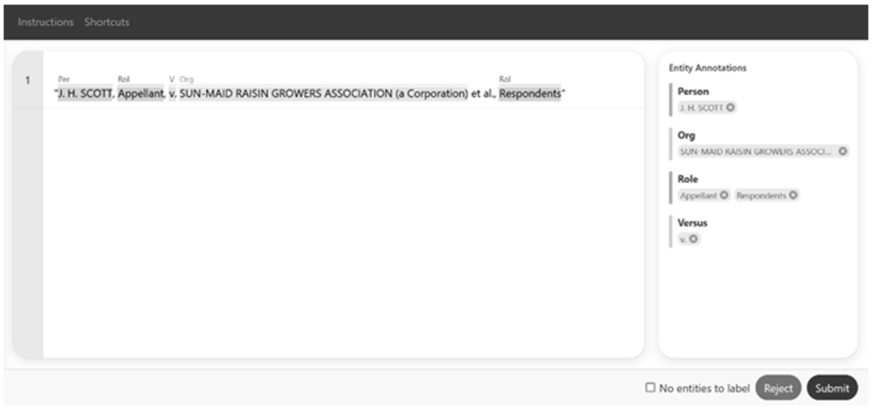
[193] *See Annotations, supra* note 191.

[194] "Amazon SageMaker enables you to identify raw data, such as images, text files, and videos; add informative labels; and generate labeled synthetic data to create high-quality training datasets for your machine learning (ML) models." *Amazon Sagemaker Data Labeling*, AMAZON SAGEMAKER, https://aws.amazon.com/sagemaker/data-labeling/ (last visited Apr. 13, 2023) [https://perma.cc/8AX5-C7HU].

[195] Inter-rater reliability, in statistics, refers to a measure of consistency and the degree to which different observers (researchers) rate, code, or assess the same phenomenon (here, labeling the case names).

[196] This JSON file contained the annotated dataset labeled by the human workforce.

Figure I. Amazon Sagemaker Ground Truth Labeling Example



Subsequently, training for the custom entity recognizer was performed asynchronously using Amazon Comprehend's API[197] and the annotated data contained in the augmented manifest file. An entities detection job[198] was then created, with all case names from our original dataset to be processed by our custom entity recognizer.[199] To estimate the performance of our model, Amazon Comprehend provides the following metrics: Precision, Recall, and F1 score.[200] These metrics are

[197] *Comprehend API Reference*, AMAZON COMPREHEND, https://docs.aws.amazon.com/comprehend/latest/dg/API_Reference.html (last visited Dec. 6, 2023) [https://perma.cc/TW4U-B8NS].

[198] *StartEntitiesDetectionJob*, AMAZON COMPREHEND, https://docs.aws.amazon.com/comprehend/latest/dg/API_StartEntitiesDetectionJob.html (last visited Dec. 6, 2023) [https://perma.cc/SQP7-DRFK].

[199] The number of cases from our original dataset had been filtered down from 28,238 to 27,273 after removing all cases which contained "THE PEOPLE" as a party because they are largely if not exclusively comprised of criminal cases. Thus, only 27,273 cases were processed by our custom entity recognizer.

[200] The F1 score of the model measures the accuracy of the model over the specific dataset. This measure combines the Precision and Recall metrics and weighs them equally to provide a better (less misleading) understanding of the model's accuracy. Precision is a measure based on true positives and false positives, while recall is a measure based on true positives and false negatives (true positives + false negatives = number of relevant entity identifications). *See* AMAZON WEB SERVS., INC., AMAZON COMPREHEND: DEVELOPER GUIDE 124 (2023), https://docs.aws.amazon.com/comprehend/latest/dg/comprehend-dg.pdf [https://perma.cc/365S-6H3K]. The proportion of the true positives over the total number of positive entity identifications is the precision (*i.e.*, percentage of the positive entity identifications which are actually correct), while the

collected during the training of the custom entity recognizer. Our custom entity recognizer metrics show a calculated F1 score of 96.41%, thus indicating the model's overall high accuracy over the dataset.

3. Categorizing the Entities

In total, 27,273 cases were labeled by our Amazon Comprehend custom entity recognizer. However, for the purposes of easier formatting, these 27,273 cases were eventually narrowed down to cases that were identified as involving disputes between a single entity versus another single entity.[201] This narrowing process was necessary because case names with the following formats created challenges for formatting the data:

1) Multiple entities on either side of the "v." (4,527 cases)

Case names where more than one entity is present either on one side of the "v." or both sides of the "v.". Example: *Best Interiors, Inc.*, Plaintiff and Respondent, v. *Millie and Severson, Inc.*, Defendant and Appellant; *Presbyterian Intercommunity Hospital, Inc.*, Defendant and Respondent.

2) Multiple "versus" labels in case names (921 cases)

Case names identified by our model to have multiple versus labels. Example: *Marjorie Harper*, Plaintiff and Respondent v. *John L. Raya et al.*, Defendants and Appellants; *John L. Raya*, Plaintiff and Appellant, v. *Marjorie Harper*, Defendant and Respondent.

3) No versus label (289 cases)

Case names identified by our model to have no versus label. Having a versus label is important so we can distinguish one party from another,

proportion of the true positives over the number of true positives and false negatives (*i.e.*, percentage of relevant entity identifications which are actually correct) is the recall. Combining both metrics, a high F1 score thus indicates high precision and recall, a low F1 score indicates low precision and recall. *See* Thomas Wood, *What Is the F-Score?*, DEEPAI, https://deepai.org/machine-learning-glossary-and-terms/f-score (last visited Dec. 6, 2023) [https://perma.cc/X33C-ENS9].

[201] Examples: Union Oil Company of California (a Corporation), Appellant v. Pacific Surety Company (a Corporation), et al. Respondents; Freed H. Walther, Respondent, v. Occidental Insurance Company (a Corporation), Appellant; Edward E. McKeon, Respondent, v. Ben L. Giusto, Appellant. Multiple parties are typical in commercial transactions and litigation and as such there may be more disputes between commercial actors than reflected in the data of this study.

Party One from Party Two. Example: In the Matter of the Estate of *Joel Noah*, Deceased

This narrowed down our initial set of 27,272 cases to 21,515.

Subsequently, each of these cases were then grouped into sixteen preliminary categories, with the parties in each category being coded 1–4 with these values:

1 = person, 2 = org, 3 = person et. al., 4 = org et. al.,

As such the following sixteen categories were created:

Case category 1: 1 v. 1 (person v. person)
Case category 2: 1 v. 2 (person v. org)
Case category 3: 1 v. 3 (person v. person et. al)
Case category 4: 1 v. 4 (person v. org et. al)
Case category 5: 2 v. 1 (org v. person)
Case category 6: 2 v. 2 (org v. org)
Case category 7: 2 v. 3 (org v. person et. al)
Case category 8: 2 v. 4 (org v. org et. al)
Case category 9: 3 v. 1 (person et. al v. person)
Case category 10: 3 v. 2 (person et. al v. org)
Case category 11: 3 v. 3 (person et. al v. person et. al)
Case category 12: 3 v. 4 (person et. al v. org et. al)
Case category 13: 4 v. 1 (org et. al v. person)
Case category 14: 4 v. 2 (org et. al v. org)
Case category 15: 4 v. 3 (org et. al v. person et. al)
Case category 16: 4 v. 4 (org et. al v. org et. al)

Category 1, person v. person stood out as containing the most cases, with over 4,000 cases in this category with the next largest, Category 3, person v. person et. al closest behind with over 2,500 cases.[202] Ultimately, these categories were consolidated into three consolidated categories: cases involving individuals as parties on both sides of a dispute; cases involving an individual on one side and an organization on the other side of a dispute; and cases involving organizations as parties on both sides of a dispute.

The Section that follows discusses our findings.

[202] See Appendix II for a chart of the breakdown of cases by these sixteen categories.

B. The Findings

1. Canons in Caselaw

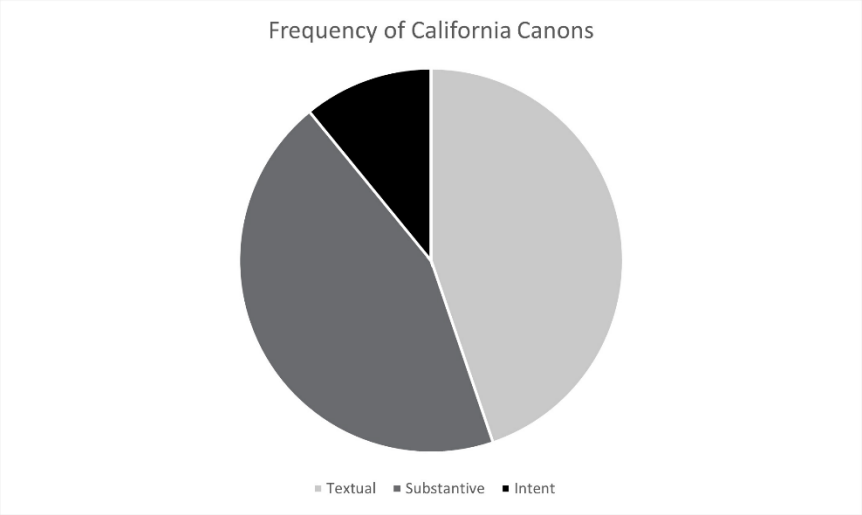
The results of this study provide empirical support for the significance of contract canons in caselaw as well as for the influence of textualism in the realm of private law. As our data reveal, 1,841 cases invoke at least one codified canon. Thus, approximately one in fourteen — or more than seven percent — of the contract cases identified in California discuss at least one codified contract canon. In addition, the data likely underrepresent the significance of canons given the breadth of the criteria used to identify cases discussing contracts as well as the fact that there are instances in which courts invoke interpretive canons without citing to the relevant statutory provision. As such, regardless of whether canons are favorably or unfavorably invoked by courts, we can confirm their significance in the syntax and development of the common law.

2. The Prevalence and Rise of Textual Canons in Contract Caselaw

Our data show that overarching goal (intent) canons and textual canons together constitute the majority of canons invoked by California courts collectively over time, with textual canons just slightly more prominent than substantive canons.

The chart below color codes these canons according to the taxonomy proposed in Part II, indicating textual canons in light gray, substantive canons in dark gray, and overarching goal (intent) canons in black. As shown in the chart below, the data suggest a near-balance in the overall distribution of the types of canons, notably in California, a traditionally contextualist regime:

Chart I. Frequency of Invocation of California Contract Canons by Category



3. Most Invoked Canons on an Individual Basis

Our study also revealed which specific canons are invoked most often by California courts.[203] The five most commonly invoked canons include each type of canon identified in our taxonomy and reflect the same rough balance between textual and substantive canons revealed in the cumulative data. As shown in the chart below, the canons discussed most by courts are, in the order of frequency: (1) the canon directing courts to give effect to the mutual intention of the parties (Section 1636),[204] an overarching goal (intent) canon; (2) the canon directing courts to consider the whole contract in giving effect to provisions (Section 1641), a textual canon;[205] (3) *contra proferentem* (Section 1654),

[203] The frequency of invoked provisions is measured by their weight of citation in all cases as an aggregate, rather than the number of cases in which they appear.

[204] CAL. CIV. CODE § 1636(2024) ("A contract must be so interpreted as to give effect to the mutual intention of the parties as it existed at the time of contracting, so far as the same is ascertainable and lawful.").

[205] *Id.* § 1641 (2024) ("The whole of a contract is to be taken together, so as to give effect to every part, if reasonably practicable, each clause helping to interpret the other.").

a substantive canon;[206] (4) the canon allowing courts to interpret contracts in light of the circumstances (Section 1647),[207] a substantive canon; and (5) the canon directing courts that, for ascertaining intent, the language of the contract governs (Section 1638), a textual canon.[208] The next most highly-cited sections direct courts to construe a contract as lawful and operative (Section 1643) (substantive);[209] apply ordinary meanings of terms (Section 1644) (textual);[210] discern intention from the writing (Section 1639) (textual);[211] and interpret contracts relating to the same matters between parties as a whole (Section 1642) (textual).[212]

The chart below indicates the number of cases that invoke each of the interpretive canons in Title 3 (Interpretation of Contracts) of the California Civil Code. The chart color codes these canons, indicating textual canons in light gray, substantive canons in dark gray, overarching goal (intent) canons in black, and excluded irrelevant provisions in lightest gray.

[206] *Id.* § 1654 (2024) ("In cases of uncertainty not removed by the preceding rules, the language of a contract should be interpreted most strongly against the party who caused the uncertainty to exist.").A search of cases that invoke the "against the drafter" language but do not make explicit reference to Section 1654 reveals 43 additional cases from the original data set that discuss this notion.

[207] *Id.* § 1647 (2024) ("A contract may be explained by reference to the circumstances under which it was made, and the matter to which it relates.").

[208] *Id.* § 1638 (2024) ("The language of a contract is to govern its interpretation, if the language is clear and explicit, and does not involve an absurdity.").

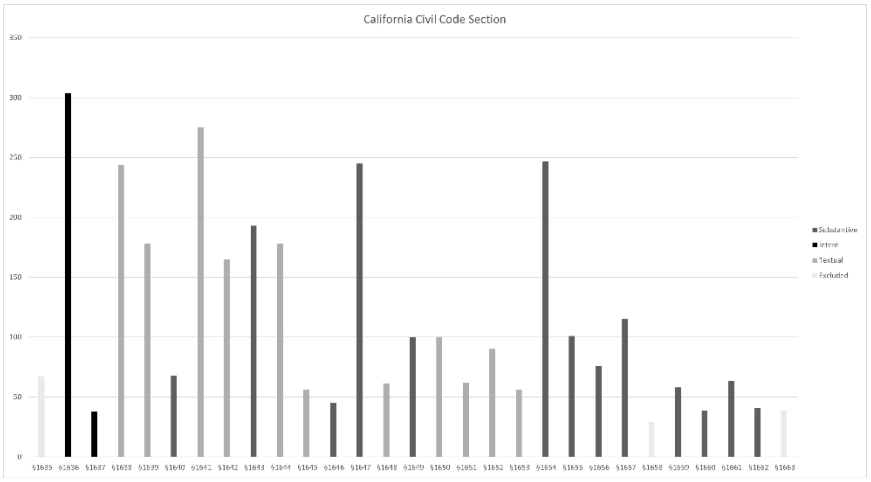
[209] *Id.* § 1643 (2024) ("A contract must receive such an interpretation as will make it lawful, operative, definite, reasonable, and capable of being carried into effect, if it can be done without violating the intention of the parties.").

[210] *Id.* § 1644 (2024) ("The words of a contract are to be understood in their ordinary and popular sense, rather than according to their strict legal meaning; unless used by the parties in a technical sense, or unless a special meaning is given to them by usage, in which case the latter must be followed.").

[211] *Id.* § 1639 (2024) ("When a contract is reduced to writing, the intention of the parties is to be ascertained from the writing alone, if possible; subject, however, to the other provisions of this Title.").

[212] *Id.* § 1642 (2024) ("Several contracts relating to the same matters, between the same parties, and made as parts of substantially one transaction, are to be taken together.").

Chart II. Frequency of Invocation of Specific California Civil Code Sections



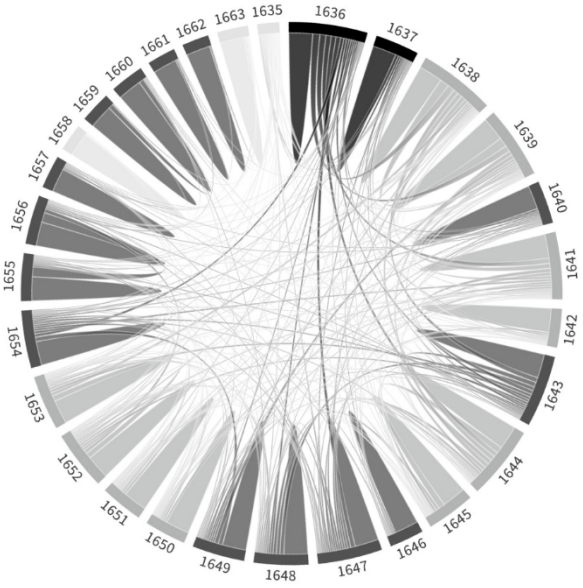
Our study also revealed statistically significant correlations among certain provisions.

Chart III below presents a static image of the correlations among provisions, and an interactive chart allows users to view how individual provisions correlate with others.[213] The numbers below refer to each California Code section. Consistent with the other charts in this Article, it represents textual canons in light gray, substantive canons in dark gray, and intent provisions in black. The length of the base of each Code section, which is a result of the number of associated strings, indicates the relative importance of that Code section in the web of contract citation. Put simply, the longer the base, the more likely it is to be cited along with other sections. Predictably, perhaps, the greatest correlation between provisions can be found between Section 1636, an overarching goal (intent) canon, and the textualist directive in Section 1638 that the language of the contract governs its interpretation. This correlation lends support to our hypothesis that courts treat the overarching goal (intent) canons as a mandate to consider the expressed terms of the

[213] *See* Icess Nisce, *Autonomy in Law — Strong Correlations*, FLOURISH (Jan. 19, 2023), https://public.flourish.studio/visualisation/12486633/ [https://perma.cc/8E4D-NXAT]. In this interactive chart, we use green to represent textual canons, blue to represent substantive canons, and orange to represent intent provisions.

agreement. Other highly interactive provisions are also textual, with the exception of Section 1643 (construe contract as lawful and operative), which has a substantive aim to effectuate a contract. Sections 1636 (intent of the parties), Section 1638 (the language of the contract governs its interpretation), Section 1639 (ascertaining the intent based on the language of the contract), Section 1641 (considering the contract as a whole), Section 1644 (applying the ordinary meaning to contract interpretation), and Section 1654 (construing uncertainty against the drafting party) are among the most correlated with other provisions of Title 3 of the California Code. As the chart reflects, there are also strong correlations among provisions categorized as textual, lending support to the proposed taxonomy in this Article.

Chart III. Strong Correlations Between Provisions[214]

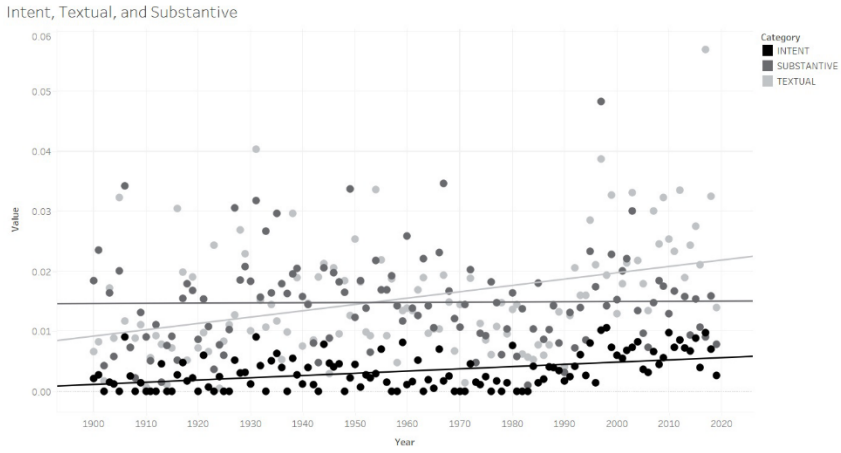


[214] Chart III, an interactive color version of which is available in the preceding footnote, shows the correlation between the canons (the higher the correlation, the more likely the sections are to be cited together), rather than the frequency of citation, which is the subject of Chart II above. As noted, in the color version, we use green to represent textual canons, blue to represent substantive canons, and orange to represent intent provisions.

4. Trends Revealed by the Data

Notably, especially given the fact that California is traditionally considered a contextualist jurisdiction, our data suggest that textualism is on the rise and projected to increase in contract cases that involve contract canons. While substantive canons have remained roughly in equilibrium over time, the chart below demonstrates a trend in which the invocation of textual canons by courts across contract cases is increasing.

Chart IV. Histogram and Trendline of California Contract Canons



Thus, our study provides evidence that textualism is on the rise in contract interpretation. In addition, it projects that the invocation of textual canons collectively by courts will continue to increase and that textualist canons are likely to become the most frequently invoked canon type in contract cases in California.

As such, this study provides evidence of the increased prevalence of textualism in the private law, a phenomenon that parallels the turn toward textualism in statutory interpretation.[215] Moreover, these

[215] There has been a paucity of data considering the role of textualism in contract interpretation, notwithstanding the conventional understanding that textualism has been on the rise in the interpretation of statutes. Perhaps most famously, in an oft-cited comment, Supreme Court Justice Elena Kagan stated, "we're all textualists now." Harvard Law School, *The 2015 Scalia Lecture: A Dialogue with Justice Elena Kagan on the*

findings are especially suggestive of a shift toward textualism in California, a jurisdiction that is traditionally inclined to allow extrinsic evidence and apply substantive rules to contract interpretation.[216]

In addition to these findings, a macro view of contract cases can reveal other forms of information about the development of contract law. The subsections that follow demonstrate some applications of this approach. In particular, they use a macro approach to identify the types of parties that tend to litigate contract cases and the way and extent to which party type seems to have impacted the development of private law.

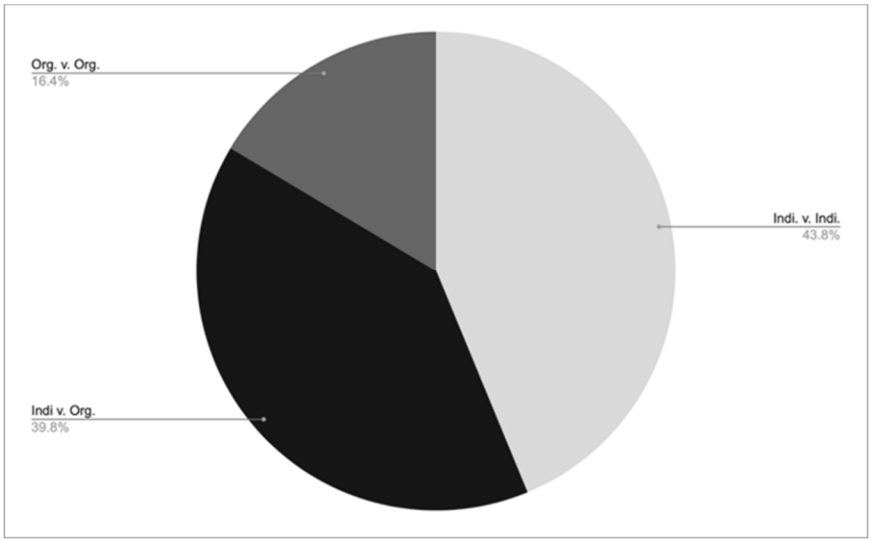
5. Party Types in Contract Cases: Most of the Parties to California Contract Cases Are Individuals

Using the novel entity recognition developed by this study, we divided the California contract cases into three major categories: cases involving (1) disputes between individuals as parties on both sides; (2) disputes between an organization and an individual; and (3) disputes between organizations as parties on both sides. Overall, as illustrated by the diagram below, this study reveals that individuals constitute the majority of the parties involved in all published California contract cases from 1837 to 2018. In addition, our data show that there is no meaningful difference in the distribution of individuals by role when they are a party to a litigation, with instances in which the individual appears as the plaintiff being just slightly higher than those in which the individual is a defendant.

Reading of Statutes, YOUTUBE, at 08:29 (Nov. 25, 2015), https://www.youtube.com/watch?v=dpEtszFTOTg [https://perma.cc/YVG2-D9MX]; *see also* William N. Eskridge, Jr., *All About Words: Early Understandings of the "Judicial Power" in Statutory Interpretation, 1776–1806*, 101 COLUM. L. REV. 990, 1090 (2001); Leib, *supra* note 18, at 1110 ("[T]extualism has gained ascendancy as a common method of statutory interpretation . . . .").

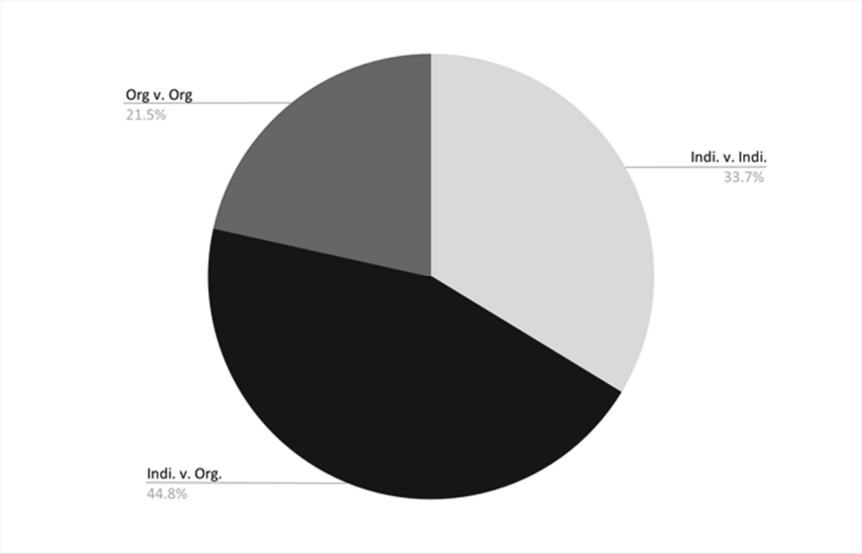
[216] Leib, *supra* note 18, at 1113 (identifying California as a "more contextualist and pragmatic" contract regime); *see also* Miller, *Bargains Bicoastal*, *supra* note 23, at 1478.

Chart V. Distribution of All California Contract Cases by Party Type (1837–2018)



When we applied the same framework of analysis to California cases invoking contract canons codified in the "Interpretation of Contracts" Title of the Code from 1872, the year the statute was enacted, through 2018, we found a similar distribution. Again, the data reveal that most cases that invoke contract canons involve individuals as parties. In other words, individuals have been the most prevalent party-type in contract cases that invoke interpretative canons over time, whether in disputes between individuals or between an individual and an organization. The chart below illustrates the distribution of litigant party-types in cases involving contract canons in California.

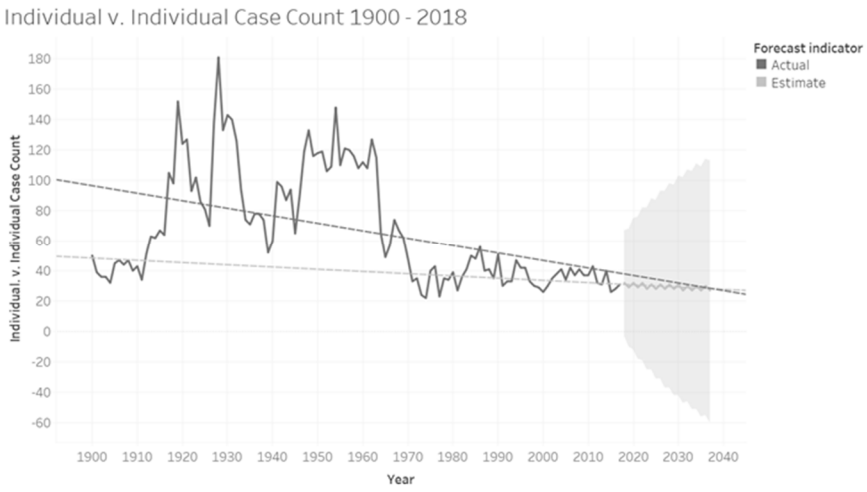
Chart VI. Distribution of California Contract Canon Cases by Party Type (1842–2018)



As such, at least seventy-eight percent of the cases invoking codified canons involve an individual litigant. Despite the fact that the common law of contract interpretation overwhelmingly implicates individual parties, as the subsection that follows shows, the data we have collected suggest a diminishing involvement of individuals in the development of the common law of contract interpretation. In addition, the data show a correlation between cases involving organizational entities and the invocation by courts of certain contract canons, suggesting the impact of these cases on the development of interpretative principles in the common law.

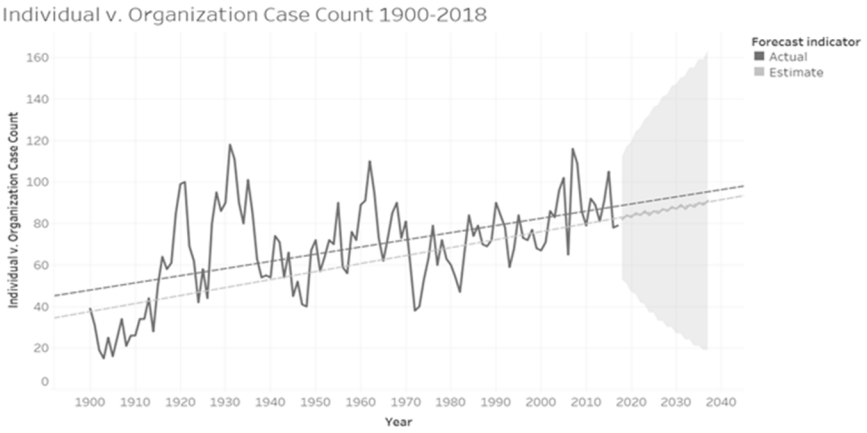
The data also reveal trends in party types in cases invoking canons of contract interpretation. Historically, the greatest number of contract cases with individuals as parties on both sides to a dispute can be seen in the late 1920s, the 1930s, and the early 1960s. Perhaps unsurprisingly given the prevalence of corporate actors in contemporary life, the historical data also suggest that the peak of cases involving disputes between individuals is behind us. Based on this data, cases reflecting disputes between individual parties are trending downwards.

Chart VII. Histogram and Trendline of Cases Involving Individuals as Parties on Both Sides



The trend regarding contract canon cases involving a dispute between an organization and an individual differs from that of contract canon cases involving individuals on both sides of the dispute. As indicated in Chart VII above, cases invoking canons of contract interpretation in disputes between individuals are declining, while cases invoking canons of contract interpretation in disputes between an organizational entity and an individual are increasing (Chart VIII), as are cases invoking canons of contract interpretation involving disputes between organizational entities on both sides (Chart IX).

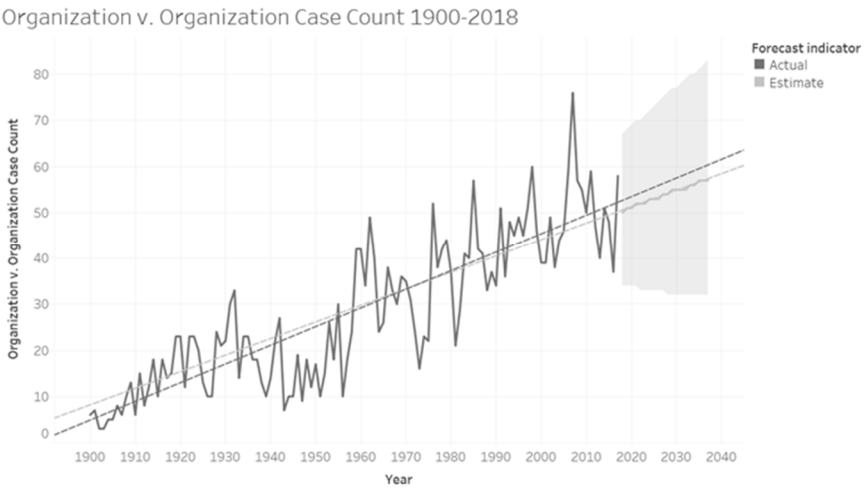
Chart VIII. Histogram and Trendline of Cases Involving Individuals and Organizational Entities



Again, perhaps expectedly,[217] the data regarding cases invoking contract canons in which both parties to the dispute are organizational entities reveal a strong trend (and forecast) upwards, as shown in the chart below, compared to cases involving individuals.

[217] A number of factors could explain this rise, including the prevalence of corporate entities generally as well as the availability of tools for and benefits of incorporation for transacting individuals.

Chart IX. Histogram and Trendline of Cases Involving Organizational Entities



As noted, while individuals collectively constitute the overwhelming majority of parties to contract disputes involving interpretive canons, the trend in the data suggests that contract interpretation disputes involving organizations are on the rise.

6. Party Type and Impact on the Development of the Private Law

Despite the lower number of cases overall involving contract interpretation disputes between organizational entities, the data suggest that cases between organizations involve the most invocations of the most highly-cited canons. This, in turn, suggests that the development of the common law with respect to these canons occurs primarily in the context of cases involving organizations as parties on both sides of the dispute.

Put differently, only cases involving organizations on both sides of the dispute have a statistically meaningful relationship with certain contract canon provisions. Most notably, these cases involve one intent canon, four textual canons, and the maxim of *contra proferentem*, which we have classified as a substantive canon. Specifically, a statistically meaningful relationship exists between cases involving disputes between organizational entities and the following canons: the canon

directing courts to give effect to the mutual intention of the parties (Section 1636),[218] an overarching goal (intent) canon; the canon directing courts that, for ascertaining intent, the language of the contract governs (Section 1638), a textual canon;[219] the canon directing courts to ascertain intent from the writing of a contract (Section 1639), a textual canon;[220] the canon directing courts to consider the contract as a whole in giving effect to provisions (Section 1641), a textual canon;[221] the canon directing courts to apply ordinary meanings of terms (Section 1644), a textual canon,[222] and the canon directing courts to construe uncertainty against the drafting party (Section 1654), a substantive canon.[223]

[218] CAL. CIV. CODE § 1636 (2024) ("A contract must be so interpreted as to give effect to the mutual intention of the parties as it existed at the time of contracting, so far as the same is ascertainable and lawful.").

[219] *Id.* § 1638 (2024) ("The language of a contract is to govern its interpretation, if the language is clear and explicit, and does not involve an absurdity.").

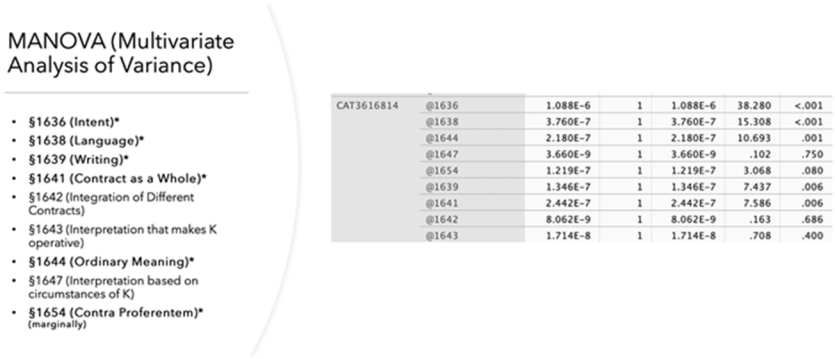
[220] *Id.* § 1639 (2024) ("When a contract is reduced to writing, the intention of the parties is to be ascertained from the writing alone, if possible; subject, however, to the other provisions of this Title.").

[221] *Id.* § 1641 (2024) ("The whole of a contract is to be taken together, so as to give effect to every part, if reasonably practicable, each clause helping to interpret the other.").

[222] *Id.* § 1644 (2024) ("The words of a contract are to be understood in their ordinary and popular sense, rather than according to their strict legal meaning; unless used by the parties in a technical sense, or unless a special meaning is given to them by usage, in which case the latter must be followed.").

[223] *Id.* § 1654 (2024) ("In cases of uncertainty not removed by the preceding rules, the language of a contract should be interpreted most strongly against the party who caused the uncertainty to exist.").

Table I. Correlation Between Party Types and Invoked Contract Canons[224]



CAT3616814	@1636	1.088E-6	1	1.088E-6	38.280	<.001
	@1638	3.760E-7	1	3.760E-7	15.308	<.001
	@1644	2.180E-7	1	2.180E-7	10.693	.001
	@1647	3.660E-9	1	3.660E-9	.102	.750
	@1654	1.219E-7	1	1.219E-7	3.068	.080
	@1639	1.346E-7	1	1.346E-7	7.437	.006
	@1641	2.442E-7	1	2.442E-7	7.586	.006
	@1642	8.062E-9	1	8.062E-9	.163	.686
	@1643	1.714E-8	1	1.714E-8	.708	.400

Thus, our study shows a significant relationship between cases involving disputes between organizations and the textual and intent provisions. In addition, a significant relationship exists between intent provisions and textual provisions, meaning that the appearance of one can predict the appearance of the other — further suggesting that courts privilege a textual approach in determining intent. These data also suggest that cases involving organizations have influenced the discussions related to intent and textual maxims in California. As such, the textualist interpretive doctrine is more likely being shaped by disputes between businesses. This is despite the much lower number of cases that involve organizations on both sides of a contractual dispute.

It is also notable that no other statistically significant correlation could be discerned, especially given the prevalence of form contracts and contracts of adhesion, which are increasingly available to individuals entering into contracts with each other. The prevalence of "take-it-or-leave-it" terms in consumer and employment contracts, for example, might lead one to expect a negative correlation between textual provisions, which direct a court to the particular words of a contract, and cases involving disputes between individuals and

[224] MANOVA statistical technique is used where the effect of several independent variables on their own or in combination with one another are determined in relation to dependent variables. Here, MANOVA allows us to understand the effect of various contract canons on party types. Note in our analysis CAT3616814 (which refers to the numerical associated with each 16 categories described above) represent cases involving organizations v. organizations.

organizational entities. One might also expect to see a negative correlation between textual provisions and disputes between individuals, who are increasingly able to access form contracts.[225] Yet, the absence of these correlations in these findings suggests that courts are not consistently or systematically differentiating between contract types when applying the doctrine that has been developed in the context of disputes likely to involve business entities.

In addition, although various rationales for the maxim of *contra proferentem* have been offered by scholars, including the goal of encouraging clarity in drafting, [226] a pro-consumer rationale has been identified, at least in the insurance context.[227] As such, the development of this principle in the context of disputes between organizational entities invites further research, in particular.[228]

More generally, the correlations revealed suggest that courts may be developing doctrine in the particular context of business-to-business disputes, which they then apply across cases irrespective of party or case type. Given the absence of a predictable pattern beyond the correlation of certain terms with cases most likely to involve disputes between businesses, these findings add empirical weight to the concern that courts are not distinguishing between contract types in predictable ways.[229] Moreover, the data suggest that courts may be developing doctrine with respect to one type of contract and applying it to another contract type, where it may be inapposite.[230]

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[225] We see that textual provisions in cases involving disputes between individuals (case category 1) and disputes between an individual and an individual et al. (case category 3) are typically less discussed but not to the extent of a statistically significant relationship between a provision and the case type.

[226] *See* RESTATEMENT (SECOND) OF CONTRACTS § 206 cmt. a (AM. L. INST. 1981); Kenneth S. Abraham, *A Theory of Insurance Policy Interpretation*, 95 MICH. L. REV. 531, 533 (1996); *see also* Kastner & Leib, *supra* note 24, at 1299 ("[I]f drafters can reliably expect contracts to be construed against them, they will draft clearer contracts.").

[227] Kastner & Leib, *supra* note 24, at 1299.

[228] As discussed in Kastner & Leib, *supra* note 24, at 1301, *contra proferentem* has been applied far beyond the insurance context, and caselaw includes applications to disputes between sophisticated parties as well as rejections of the principle, either of which approach could be represented by these data.

[229] *See id.* at 1280-82.

[230] *See id.* at 1316-21 (analyzing the costs of contract doctrine developed in one contract context when it is applied to other contract types).

Table II. Correlation Between Party Types and Contract Canon Categories[231]

Correlations

		Textual	Substantive	Intent	CAT113911	CAT2254137101215	CAT3616814
Textual	Pearson Correlation	1	-.026	.155**	.025	-.015	-.010
	Sig. (2-tailed)		.258	<.001	.290	.525	.654
	N	1840	1840	1840	1840	1840	1840
Substantive	Pearson Correlation	-.026	1	.015	.095**	-.056*	-.041
	Sig. (2-tailed)	.258		.525	<.001	.017	.078
	N	1840	1840	1840	1840	1840	1840
Intent	Pearson Correlation	.155**	.015	1	-.029	-.039	.081**
	Sig. (2-tailed)	<.001	.525		.211	.096	<.001
	N	1840	1840	1840	1840	1840	1840
CAT113911	Pearson Correlation	.025	.095**	-.029	1	-.642**	-.373**
	Sig. (2-tailed)	.290	<.001	.211		<.001	<.001
	N	1840	1840	1840	1840	1840	1840
CAT2254137101215	Pearson Correlation	-.015	-.056*	-.039	-.642**	1	-.472**
	Sig. (2-tailed)	.525	.017	.096	<.001		<.001
	N	1840	1840	1840	1840	1840	1840
CAT3616814	Pearson Correlation	-.010	-.041	.081**	-.373**	-.472**	1
	Sig. (2-tailed)	.654	.078	<.001	<.001	<.001	
	N	1840	1840	1840	1840	1840	1840

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

IV. MACRO CONTRACT RESEARCH: A NEW PERSPECTIVE

As discussed above, a remarkable lacuna exists in empirical and theoretical contract scholarship. This Article begins the project of filling this gap by offering a theoretical framework for classifying contract canons and introducing a new perspective on empirical study — a high-level big-data view.

As this preliminary study shows, a macro approach can provide as-yet unavailable data that touch on some of the most basic information concerning the interpretation of contracts by courts. Thus, as we show, the increasing invocation of textual canons by courts and the prevalence of textual canons in cases involving disputes between organizational entities give new empirical weight to the oft-mentioned common-sense belief that textualism is on the rise.[232] Moreover, these findings suggest that the trend toward textualism can be seen not only in courts'

[231] As explained above, in our analysis CAT3616814 represents cases involving organizations v. organizations. CAT2254137101215 represents cases involving individuals v. organizations. CAT 113911 represents cases involving individuals v. individuals.

[232] *See* discussion in *supra* note 215.

approach to statutory interpretation but in their approach to contract interpretation, as well.[233]

This macro perspective thereby facilitates the collection of information to complement the traditional approach of case studies and close reading. Even when scholars and courts trace precedent in the context of a particular case, that approach can distort or fail to accurately capture the overarching trends in the development of the law.

Return, for example, to the case of Wendy Ann Steller, the Sears employee whose claim for workers compensation under a settlement agreement proved unsuccessful when the appellate court rejected her argument that ambiguous language in the settlement agreement should be construed against Sears, the drafting party.[234] Considering *contra proferentem*, the canon that directs uncertainty to be interpreted against the drafter,[235] the court invoked a precedent limiting the application of this canon to cases where so-called extrinsic evidence — that is, evidence beyond the written agreement — fails to resolve the uncertainty.[236] The case invoked by the court, however, grew out of a notably different transactional context. That case, *Rainier Credit Co. v. Western Alliance Corp.*,[237] involved a dispute over the word "compensation" between two sophisticated financial institutions that entered into an agreement to create a collateral insurance system for Rainier National Bank. Thus, in markedly distinct circumstances, the appellate court in *Ranier Credit* held that California Civil Code Section

[233] As discussed, this study is limited to California cases, but this finding is all the more notable given the contextualist tradition of California common law. *See* Leib, *supra* note 18, at 1113; Miller, *Bargains Bicoastal*, *supra* note 23, at 1478.

[234] *See* Steller v. Sears, Roebuck & Co., 116 Cal. Rptr. 3d 824, 831-33 (Ct. App. 2010). The relevant language in the settlement offer stated that payment of the $95,000 "includes, and shall operate as a satisfaction of all claims for, [appellant's] alleged damages, costs and expenses, attorneys' fees and interest asserted or that could have been asserted by [appellant] in this action, *as well as all demands, actions, liabilities, obligations, damages and/or causes of action arising from this lawsuit or relating to* [*appellant's*] *employment with* [*respondent*]." *Id.* at 827.

[235] CAL. CIV. CODE § 1654 (2024). Section 1654 provides, "In cases of uncertainty not removed by the preceding rules, the language of a contract should be interpreted most strongly against the party who caused the uncertainty to exist." *Id.*

[236] *Steller*, 116 Cal. Rptr. 3d at 831 (citing to Rainier Credit Co. v. W. All. Corp., 217 Cal. Rptr. 291, 293 (Ct. App. 1985)).

[237] Rainier Credit Co. v. W. All. Corp., 217 Cal. Rptr. 291, 293 (Ct. App. 1985).

1654 does not apply because the trial court failed to examine drafts of the agreement and accompanying correspondence.[238]

Steller v. Sears demonstrates the importance of attending to contract interpretation and the context in which it is developed. Indeed, it calls into question the tendency of courts to import rules developed in one transaction context to resolve a dispute arising from a markedly different transaction context.[239] Examined on its own, one case might not show us the big picture that macro study begins to reveal. Thus, for example, by zooming out to a macro view, we see that although individuals constitute the majority of litigants, cases more likely to involve businesses seem to be shaping the development of interpretive principles in the common law. Moreover, a macro view suggests that courts import doctrine developed in the context of disputes between organizational entities to other contexts, where it may be inapposite, and that this threatens to impact many individuals beyond Wendy Ann Steller.

Although the identification of party types serves as a rough heuristic for determining the nature of the transaction, it nonetheless allows us to see broad patterns in the mobilization of canons by courts. While data concerning the invocation of canons do not, at this level, reveal whether the invocation was favorable or dismissive, the invocation of a canon, whether applied or not by courts, serves to develop the common law. As such, the ability to identify correlations on a macro scale helps us to see a new empirical landscape of the development of contract doctrine.

This Article thereby also invites further study, including a more refined categorization of contract dispute types.[240]

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[238] *Id.* at 293-94.

[239] *See* Kastner & Leib, *supra* note 24, at 1278 (identifying the phenomenon of doctrinal creep and examining its operation and negative implications through case studies).

[240] More nuanced trends could be revealed through machine-learning classification of contract type, for example. A preliminary study involving over 200 hand-coded California cases reflecting the most robust invocation of contract canons suggests that cases involving real estate transactions and construction comprise the largest transaction type in contract interpretation disputes.

CONCLUSION

When we undertook to study the empirical operation of contract canons of interpretation, we were surprised by the dearth of literature on the topic. Aside from a few important interventions, little attention has been paid to canons of contract interpretation. This Article attempts to begin to fill this gap by offering the first theoretical framework for classifying canons of contract interpretation. In addition, it offers a new perspective on the development of private law through a novel empirical methodology. Intended as a complement to case studies that engage in close readings, a macro perspective enables the identification of previously unconfirmed or unrecognized broad trends in the development of the law. This study is the first to empirically confirm the rising influence of textualism in private law on a large scale, notably in a regime traditionally viewed as contextualist. In addition, it reveals the significance of certain contract-specific canons, such as *contra proferentem*, in the development of the private law. As such, this study provides a model for the large-scale study of the common law, and in particular the underappreciated dynamics of interpretation in the private-law realm.

These findings not only illuminate a significant and otherwise overlooked source of information about the development of private law, but they also have normative significance. This Article alerts courts to the risk of applying precedent pertaining to contract interpretation — which the Article suggests has likely been developed in the business-to-business context — to consumer and employment contracts. It calls attention to the potentially outsized role of disputes between organizational entities in shaping common law generally. Finally, this Article highlights the significance for practitioners and students of attending to the operation of interpretive contract canons given the increasing invocation of textual canons in the caselaw.

APPENDIX I. CALIFORNIA CIVIL CODE, PART 2 CONTRACTS, TITLE 3 — INTERPRETATION OF CONTRACTS

Code Section	Text
§ 1635	All contracts, whether public or private, are to be interpreted by the same rules, except as otherwise provided by this Code.
§ 1636	A contract must be so interpreted as to give effect to the mutual intention of the parties as it existed at the time of contracting, so far as the same is ascertainable and lawful.
§ 1637	For the purpose of ascertaining the intention of the parties to a contract, if otherwise doubtful, the rules given in this Chapter are to be applied.
§ 1638	The language of a contract is to govern its interpretation, if the language is clear and explicit, and does not involve an absurdity.
§ 1639	When a contract is reduced to writing, the intention of the parties is to be ascertained from the writing alone, if possible; subject, however, to the other provisions of this Title.
§ 1640	When, through fraud, mistake, or accident, a written contract fails to express the real intention of the parties, such intention is to be regarded, and the erroneous parts of the writing disregarded.
§ 1641	The whole of a contract is to be taken together, so as to give effect to every part, if reasonably practicable, each clause helping to interpret the other.
§ 1642	Several contracts relating to the same matters, between the same parties, and made as parts of substantially one transaction, are to be taken together.
§ 1643	A contract must receive such an interpretation as will make it lawful, operative, definite, reasonable, and capable of being carried into effect, if it can be done without violating the intention of the parties.
§ 1644	The words of a contract are to be understood in their ordinary and popular sense, rather than according to

their strict legal meaning; unless used by the parties in a technical sense, or unless a special meaning is given to them by usage, in which case the latter must be followed.

§ 1645 Technical words are to be interpreted as usually understood by persons in the profession or business to which they relate, unless clearly used in a different sense.

§ 1646 A contract is to be interpreted according to the law and usage of the place where it is to be performed; or, if it does not indicate a place of performance, according to the law and usage of the place where it is made.

§ 1646.5 Notwithstanding Section 1646, the parties to any contract, agreement, or undertaking, contingent or otherwise, relating to a transaction involving in the aggregate not less than two hundred fifty thousand dollars ($250,000), including a transaction otherwise covered by subdivision (a) of Section 1301 of the Commercial Code, may agree that the law of this state shall govern their rights and duties in whole or in part, whether or not the contract, agreement, or undertaking or transaction bears a reasonable relation to this state. This section does not apply to any contract, agreement, or undertaking (a) for labor or personal services, (b) relating to any transaction primarily for personal, family, or household purposes, or (c) to the extent provided to the contrary in subdivision (c) of Section 1301 of the Commercial Code.

This section applies to contracts, agreements, and undertakings entered into before, on, or after its effective date; it shall be fully retroactive. Contracts, agreements, and undertakings selecting California law entered into before the effective date of this section shall be valid, enforceable, and effective as if

this section had been in effect on the date they were entered into; and actions and proceedings commencing in a court of this state before the effective date of this section may be maintained as if this section were in effect on the date they were commenced.

§ 1647 A contract may be explained by reference to the circumstances under which it was made, and the matter to which it relates.

§ 1648 However broad may be the terms of a contract, it extends only to those things concerning which it appears that the parties intended to contract.

§ 1649 If the terms of a promise are in any respect ambiguous or uncertain, it must be interpreted in the sense in which the promisor believed, at the time of making it, that the promisee understood it.

§ 1650 Particular clauses of a contract are subordinate to its general intent.

§ 1651 Where a contract is partly written and partly printed, or where part of it is written or printed under the special directions of the parties, and with a special view to their intention, and the remainder is copied from a form originally prepared without special reference to the particular parties and the particular contract in question, the written parts control the printed parts, and the parts which are purely original control those which are copied from a form. And if the two are absolutely repugnant, the latter must be so far disregarded.

§ 1652 Repugnancy in a contract must be reconciled, if possible, by such an interpretation as will give some effect to the repugnant clauses, subordinate to the general intent and purpose of the whole contract.

§ 1653 Words in a contract which are wholly inconsistent with its nature, or with the main intention of the parties, are to be rejected.

§ 1654 In cases of uncertainty not removed by the preceding

	rules, the language of a contract should be interpreted most strongly against the party who caused the uncertainty to exist.
§ 1655	Stipulations which are necessary to make a contract reasonable, or conformable to usage, are implied, in respect to matters concerning which the contract manifests no contrary intention.
§ 1656	All things that in law or usage are considered as incidental to a contract, or as necessary to carry it into effect, are implied therefrom, unless some of them are expressly mentioned therein, when all other things of the same class are deemed to be excluded.
§ 1656.1	[Sales tax]
§ 1656.2	[Repealed]
§ 1656.5	[property tax]
§ 1657	If no time is specified for the performance of an act required to be performed, a reasonable time is allowed. If the act is in its nature capable of being done instantly — as, for example, if it consists in the payment of money only — it must be performed immediately upon the thing to be done being exactly ascertained.
§ 1657.1	Any time specified in a contract of adhesion for the performance of an act required to be performed shall be reasonable.
§ 1658	[Repealed]
§ 1659	Where all the parties who unite in a promise receive some benefit from the consideration, whether past or present, their promise is presumed to be joint and several.
§ 1660	A promise, made in the singular number, but executed by several persons, is presumed to be joint and several.
§ 1661	An executed contract is one, the object of which is fully performed. All others are executory.
§ 1662	Any contract hereafter made in this State for the

purchase and sale of real property shall be interpreted as including an agreement that the parties shall have the following rights and duties, unless the contract expressly provides otherwise:

(a) If, when neither the legal title nor the possession of the subject matter of the contract has been transferred, all or a material part thereof is destroyed without fault of the purchaser or is taken by eminent domain, the vendor cannot enforce the contract, and the purchaser is entitled to recover any portion of the price that he has paid;

(b) If, when either the legal title or the possession of the subject matter of the contract has been transferred, all or any part thereof is destroyed without fault of the vendor or is taken by eminent domain, the purchaser is not thereby relieved from a duty to pay the price, nor is he entitled to recover any portion thereof that he has paid.

This section shall be so interpreted and construed as to effectuate its general purpose to make uniform the law of those states which enact it.

This section may be cited as the Uniform Vendor and Purchaser Risk Act.

§ 1663 (a) As used in this section, the following terms shall have the following meanings:

(1) "Euro" means the currency of participating member states of the European Union that adopt a single currency in accordance with the Treaty on European Union signed February 7, 1992, as amended from time to time.

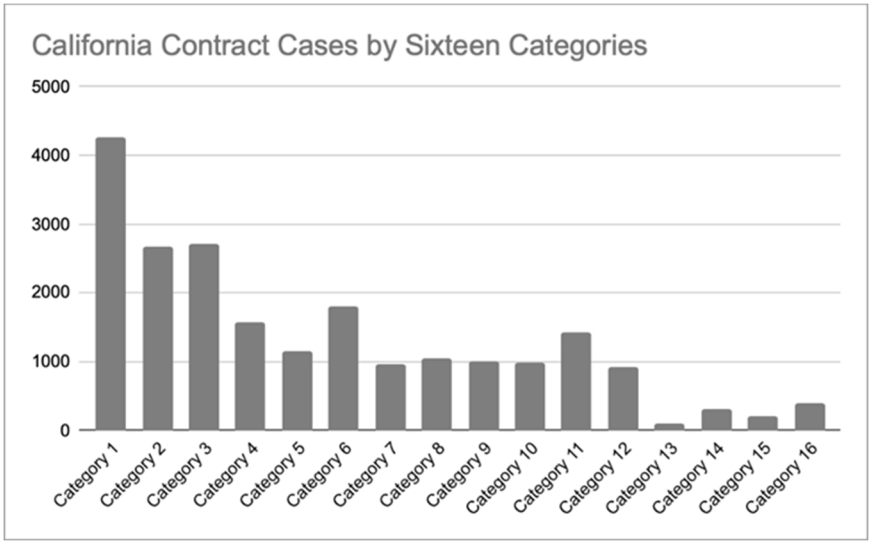
(2) "Introduction of the euro" includes, but is not limited to, the implementation from time to time of economic and monetary union in member states of the European Union in accordance with the Treaty on European Union signed February 7, 1992, as amended from time to time.

(3) "ECU" or "European Currency Unit" means the

currency basket that is from time to time used as the unit of account of the European community, as defined in European Council Regulation No. 3320/94.
(b) If a subject or medium of payment of a contract, security, or instrument is the ECU or a currency that has been substituted or replaced by the euro, the euro shall be a commercially reasonable substitute and substantial equivalent that may be either tendered or used in determining the value of the ECU or currency, in each case at the conversion rate specified in, and otherwise calculated in accordance with, the regulations adopted by the Council of the European Union.
(c) The introduction of the euro, the tendering of euros in connection with any obligation in compliance with subdivision (b), the determining of the value of any obligation in compliance with subdivision (b), or the calculating or determining of the subject or medium of payment of a contract, security, or instrument with reference to an interest rate or other basis that has been substituted or replaced due to the introduction of the euro and that is a commercially reasonable substitute and substantial equivalent, shall neither have the effect of discharging or excusing performance under any contract, security, or instrument, nor give a party the right unilaterally to alter or terminate any contract, security, or instrument.
(d) This section shall be subject to any agreements between parties with specific reference to, or agreement regarding, the introduction of the euro.
(e) Notwithstanding the Commercial Code or any other law of this state, this section shall apply to all contracts, securities, and instruments, including contracts with respect to commercial transactions, and shall not be deemed to be displaced by any other law of this state.

(f) In the event of other currency changes, the provisions of this section with respect to the euro shall not be interpreted as creating any negative inference or negative presumption regarding the validity or enforceability of contracts, securities, or instruments denominated in whole or part in those other currencies.

APPENDIX II. CALIFORNIA CONTRACT CASES BY PARTY CATEGORY



This chart reflects the number of published California cases from 1837 to 2018 invoking contracts included in each of the following sixteen (16) categories:

Case category 1: 1 v. 1 (person v. person)
Case category 2: 1 v. 2 (person v. org)
Case category 3: 1 v. 3 (person v. person et. al)
Case category 4: 1 v. 4 (person v. org et. al)
Case category 5: 2 v. 1 (org v. person)
Case category 6: 2 v. 2 (org v. org)
Case category 7: 2 v. 3 (org v. person et. al)
Case category 8: 2 v. 4 (org v. org et. al)
Case category 9: 3 v. 1 (person et. al v. person)
Case category 10: 3 v. 2 (person et. al v. org)

Case category 11: 3 v. 3 (person et. al v. person et. al)
Case category 12: 3 v. 4 (person et. al v. org et. al)
Case category 13: 4 v. 1 (org et. al v. person)
Case category 14: 4 v. 2 (org et. al v. org)
Case category 15: 4 v. 3 (org et. al v. person et. al)
Case category 16: 4 v. 4 (org et. al v. org et. al)