

Article

Redundancy: When Law Repeats Itself

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The idea that law should generally be understood or designed to minimize redundancy informs much legal reasoning. Judges frequently invoke anti-redundancy principles in the interpretation of legal language, whether it appears in classic private-law documents such as contracts or classic public-law documents such as constitutions and statutes. Such invocations of anti-redundancy principles merit scrutiny. The canon against surplusage, an interpretive canon commonly deployed in the interpretation of constitutions, statutes, and contracts, provides an example of both an anti-redundancy principle and the capacity of such a principle to run contrary to actual practice. Among fields of law, modern patent law offers particularly dramatic examples of how excessive adherence to anti-redundancy can lead to perverse or otherwise unintended results. Patent law also illustrates how, despite frequent invocation of anti-redundancy principles, legal redundancy in the form of functionally overlapping language, doctrines, processes, and institutions remains ubiquitous.

The pervasiveness of legal redundancy has at least one straightforward explanation. Redundancy has much to offer. As engineers, biologists, linguists, and information theorists have long appreciated, redundancy can help secure key interests, prevent or correct errors, enable nuance, and foster evolutionary potential. Hence, in a complex society, redundancy is a crucial tool of legal design. Of course, redundancy can be overdone. But instead of

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enjoying presumptive hegemony, anti-redundancy principles should generally be contextually confined to condemnation of excessive or otherwise problematic redundancy, rather than redundancy per se. In the development and application of law, anti-redundancy should often be no more than a factor, as opposed to a source of general presumption. Particularly when law mediates between competing interests of comparable social weight, anti-redundancy can have merit. Nonetheless, even in such situations, smart legal design, as through the layering of rule-like “safe harbors” over comparatively vague standards, can employ redundancy while satisfying anti-redundancy concerns. Generally speaking, opportunities for intelligent design mean that legal policy makers and decision makers should not seek to banish redundancy, but instead work to optimize its use.

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Introduction

The idea that law should generally be understood or designed to minimize redundancy is a force in legal reasoning. Judges frequently cite anti-redundancy principles in interpreting legal documents, opining on the structure of legal doctrine or objecting to “relitigation” of issues under ostensibly different legal headings.¹ These principles, which are instances of what this Article terms “anti-redundancy,” can operate not only to determine results in individual cases but also to shape the form and scope of legal doctrines themselves. In fields ranging from constitutional law to contracts, anti-redundancy can support hostility to doctrines such as substantive due process² or unconscionability³ that serve—or could serve—as at least partially redundant “backups” for other legal principles.⁴

The too-easy hold of anti-redundancy rhetoric is both troubling and peculiar. For decades, information theory, data compression, and ordinary persons’ success concise communication via modern “text” or historical telegram have made clear that standard human communication tends to be full of redundancy⁵ and often desirably so.⁶ Further, attention to the actual

1. See, e.g., *Gustafson v. Alloyd Co.*, 513 U.S. 561, 574 (1995) (invoking as a “sensible rule [e] of statutory construction” the rule that “the Court will avoid a reading which renders some words altogether redundant”); Melville B. Nimmer, *Introduction—Is Freedom of the Press a Redundancy: What Does It Add to Freedom of Speech?*, 26 HASTINGS L.J. 639, 640 (1975) (“As nature abhors a vacuum, the law cannot abide a redundancy.”); F. Andrew Hessick, *Doctrinal Redundancies*, 67 ALA. L. REV. (forthcoming) (manuscript at 2), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2664135 [<http://perma.cc/H5Z2-UBYD>] (“Courts and commentators usually argue against redundancy in the law.”).

2. *Graham v. Connor*, 490 U.S. 386, 395 n.10 (1989) (“Any protection that ‘substantive due process’ affords convicted prisoners against excessive force is, we have held, at best redundant of that provided by the Eighth Amendment.”).

3. See Larry A. DiMatteo & Bruce Louis Rich, *A Consent Theory of Unconscionability: An Empirical Study of Law in Action*, 33 FLA. ST. U. L. REV. 1067, 1082 (2006) (noting that in various cases “the unconscionability analysis is either ancillary to the application of a more specific policing doctrine or is a purely redundant and unnecessary support for voiding an offending clause or contract”); Paul Thomas, Note, *Conscionable Judging: A Case Study of California Courts’ Grapple with Challenges to Mandatory Arbitration Agreements*, 62 HASTINGS L.J. 1065, 1082 n.109 (2011) (“Many arbitration agreements are invalidated for lack of offer and acceptance, rendering defenses to acceptance, such as unconscionability, redundant.”).

4. Cf. Peter J. Rubin, *Square Pegs and Round Holes: Substantive Due Process, Procedural Due Process, and the Bill of Rights*, 103 COLUM. L. REV. 833, 834 (2003) (arguing that the rule “that substantive due process may not be invoked where a claim is ‘covered by’ another, more explicit, constitutional provision . . . reinforce[s] questions about [the substantive due process doctrine’s] very legitimacy”).

5. C. E. Shannon, *Prediction and Entropy of Printed English*, 30 BELL SYS. TECHNICAL J. 50, 50 (1951) (noting a prior finding that “when statistical effects extending over not more than eight letters are considered[,] . . . the redundancy [of language is] about 50 per cent,” and suggesting “that, in ordinary literary English, the long range statistical effects (up to 100 letters)” raise “redundancy [to] roughly 75%”); cf. JOHN F. MANNING & MATTHEW C. STEPHENSON, *LEGISLATION AND REGULATION* 248 (2010) (“[I]t is probably *not* true that redundancy is exceedingly rare in everyday communication.”).

results of legal drafting and the motivations of legal drafters suggests that drafters of legal documents ranging from statutes to contracts pay no more than limited heed, if any, to concerns with avoiding redundancy.⁷ To the extent one considers the generation of legal documents or doctrines as a problem of “legal engineering”—a practical process of harnessing human artifacts “to better achieve objectives”⁸—the desirability of a general rule against redundancy is highly questionable.⁹ Mechanical, electrical, and civil engineers are commonly advised (or even required) to build redundancy into systems so that important ends such as safety are not compromised if one element fails.¹⁰ Consistent with conclusions about

6. See, e.g., Jeanne C. Fromer, *An Information Theory of Copyright Law*, 64 EMORY L.J. 71, 81 (2014) (“The key to noise detection and correction by a message recipient is redundancy in a message.”); Martin Shapiro, *Toward a Theory of Stare Decisis*, 1 J. LEGAL STUD. 125, 126 (1972) (noting that a communications engineer “finds it wise . . . to introduce redundancy . . . because otherwise any loss of information due to malfunctions in the transmission system would be undetectable and irremediable”).

7. E.g., Royce de R. Barondes, *Side Letters, Incorporation by Reference and Construction of Contractual Relationships Memorialized in Multiple Writings*, 64 BAYLOR L. REV. 651, 704 (2012) (noting that the “commonly applied principle” disfavoring “a construction that causes some provision to be ‘surplusage’ (alternatively referenced as ‘redundant’ or ‘meaningless’ or ‘superfluous’) . . . seems somewhat at odds with what is involved in negotiating a large, complicated contract”); 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, 934 (2013) (reporting that a survey of 137 congressional staffers indicated that drafters of statutory provisions “intentionally err on the side of redundancy”); Mark A. Lemley, *The Limits of Claim Differentiation*, 22 BERKELEY TECH. L.J. 1389, 1394 (2007) (“Patent applicants who draft multiple claims quite often are trying to be redundant.”); see also *Marx v. Gen. Revenue Corp.*, 133 S. Ct. 1166, 1177 (2013) (“[R]edundancy is ‘hardly unusual’ in statutes addressing costs.”).

8. HENRY PETROSKI, *INVENTION BY DESIGN: HOW ENGINEERS GET FROM THOUGHT TO THING 2* (1996); see also Sheri Sheppard et al., *What Is Engineering Practice?*, 22 INT’L J. ENGINEERING EDUC. 429, 430 (2006) (“Engineering work is focused on resolving an undesirable condition through the application of technologies.”).

9. But see Hessick, *supra* note 1 (manuscript at 36) (concluding that “courts should generally avoid creating doctrinal redundancies”).

10. E.g., PATRICK D.T. O’CONNOR & ANDRE KLEYNER, *PRACTICAL RELIABILITY ENGINEERING* 146 (5th ed. 2012) (“In aircraft, dual or triple active redundant hydraulic power systems are often used, with a further emergency (standby) back-up system”); see also, e.g., IGOR BAZOVSKY, *RELIABILITY THEORY AND PRACTICE* 97 (Dover ed., 2004) (1961) (“If very high system reliabilities are required, the designer must duplicate components, and sometimes whole circuits”); CHARLES E. EBELING, *AN INTRODUCTION TO RELIABILITY AND MAINTAINABILITY ENGINEERING* 164 (Eric M. Munson & John M. Morriss eds., 1997) (“When it is impossible to achieve the desired component reliability through inherent component design, redundancy may provide the only alternative.”); *In Praise of Celestial Mechanics*, ECONOMIST TECH. Q., June 1, 2013, at 16, 18, <http://www.economist.com/news/technology-quarterly/21578513-space-technology-fixing-unmanned-spacecraft-thousands-or-millions> [<http://perma.cc/V8ZQ-WGVS>] (“[R]edundancy, resiliency, adaptability and programmability, along with human ingenuity, seem to be the keys to keeping distant hardware going, years or even decades longer than planned.”).

“high-reliability organizations”¹¹ in business or government, the U.S. Constitution enshrines a governmental system of “checks” that falls far short of an ideal of minimalist design.¹² Indeed, in many respects, recognition of the desirability of redundancy to protect against human limitations pervades the law.¹³ Yet somehow when fallible, limited humans or human institutions generate legal documents or doctrines, there is a persistent tendency to view—or at least presumptively to view—these artifacts of human endeavor as heroically lacking in redundancy.¹⁴

This Article explores the puzzle of legal anti-redundancy and examines how legal doctrine can be designed to obtain important benefits from redundancy while substantially mitigating anti-redundancy concerns. The potential desirability of such mitigation reflects acknowledgment that, although redundancy often provides positive value, there can be strong interests in limiting redundancy in various contexts. In law as in other areas, negative trade-offs can counterbalance any positive value that redundancy provides.¹⁵ Most obviously, redundancy can lead to inefficiency, with repetition adding less value than it costs. More subtly, overlaps between doctrines or areas of law can promote uncertainty and even confusion, leading to unpredictable or inappropriate application of corollary principles associated with one doctrine or area but not another. In

11. ROBERT POOL, *BEYOND ENGINEERING: HOW SOCIETY SHAPES TECHNOLOGY* 265–66 (1997) (observing that “high-reliability organizations” generally appear to feature a “layered organizational structure” and “constant communication . . . far in excess of what would be thought useful in normal organizations”).

12. *See, e.g.*, CASS R. SUNSTEIN, *DESIGNING DEMOCRACY: WHAT CONSTITUTIONS DO* 41 (2001) (discussing “the American constitutional framework” and its “system of checks and balances”); 1 LAURENCE H. TRIBE, *AMERICAN CONSTITUTIONAL LAW* § 2-1, at 118 (3d ed. 2000) (discussing how “[t]he Madisonian clockwork would enable the forces and counterforces of government . . . to check one another as needed”); Robert M. Cover, *The Uses of Jurisdictional Redundancy: Interest, Ideology, and Innovation*, 22 WM. & MARY L. REV. 639, 639–40 (1981) (noting the frequently overlapping jurisdictions of state courts and the common “concurrency or overlap of jurisdiction” between state and federal courts); Adam B. Cox, *Enforcement Redundancy and the Future of Immigration Law*, 2012 SUP. CT. REV. 31, 36 (2013) (observing that, under the U.S. federal system, “enforcement redundancy [of federal law] is the norm”).

13. *See* Adrian Vermeule, *Second Opinions and Institutional Design*, 97 VA. L. REV. 1435, 1435 (2011) (contending “that many institutional structures, rules, and practices have been justified as mechanisms for requiring or permitting decision makers to obtain second opinions”).

14. Kathryn E. Kovacs, *Revealing Redundancy: The Tension Between Federal Sovereign Immunity and Nonstatutory Review*, 54 DRAKE L. REV. 77, 119 (2005) (“Courts generally interpret statutes and the Constitution to avoid redundancy and apply the same rule at the doctrinal level.”); *cf.* Peter Goodrich, *Maladies of the Legal Soul: Psychoanalysis and Interpretation in Law*, 54 WASH. & LEE L. REV. 1035, 1072 (1997) (“Love of texts . . . is a symptom . . . of an image of temporal distance and an aura of mystical authority.”).

15. *See* EBELING, *supra* note 10, at 164 (noting that in designing a physical system for optimal redundancy “trade-off analysis should consider the increased costs of additional components, the size or weight added to the system, and possibly the increase in repair and preventive maintenance”).

contrast, clear definition and distinction of legal doctrines—aspects of law commonly associated with anti-redundancy—can channel the efforts of courts and lawyers in ways that facilitate more precise and self-consistent legal reasoning as well as the development of a deeper and more instructive case law and body of experience.

U.S. patent law offers particularly fertile ground for consideration of such concerns of redundancy and anti-redundancy. Patent law's fertility in this regard reflects its technical nature, its reliance on a largely privately drafted document to define rights against the world, and its possession of three decades of case law under a national court of first appeal, the United States Court of Appeals for the Federal Circuit. The technical nature of patent law and its subject matter,¹⁶ as well as the frequent complexity of associated legal disputes,¹⁷ can lead judges to grope for legal tools, such as anti-redundancy doctrines, that at least superficially promise to ease decision making.¹⁸ Hence, anti-redundancy might be predictably prominent in the technical process of construing patent claims, the numbered clauses of a patent document that are the primary determinants of patent scope.¹⁹ Further, heavy demands for predictability in patent law²⁰ might help explain its historical trends toward increased doctrinal differentiation and compartmentalization, trends that have both fed and fed off anti-redundancy.²¹

The Federal Circuit has played a significant role in patent law's investment in anti-redundancy. Although the Federal Circuit has suffered a hailstorm of criticism for its performance as a centralized appellate tribunal

16. See *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 838 (2015) (“[P]atent law is ‘a field where so much depends upon familiarity with specific scientific problems and principles not usually contained in the general storehouse of knowledge and experience.’”).

17. FED. JUDICIAL CTR., 2003–2004 DISTRICT COURT CASE-WEIGHTING STUDY 5 tbl.1 (2005), [http://www.fjc.gov/public/pdf.nsf/lookup/CaseWts0.pdf/\\$file/CaseWts0.pdf](http://www.fjc.gov/public/pdf.nsf/lookup/CaseWts0.pdf/$file/CaseWts0.pdf) [<http://perma.cc/KN7W-NWTE>] (assigning patents a “Case Weight” for judicial workload that was fourth highest among forty-two categories of civil cases, following only “Death Penalty Habeas Corpus,” “Environmental Matters,” and “Civil RICO” cases).

18. See Jonathan R. Macey & Geoffrey P. Miller, *The Canons of Statutory Construction and Judicial Preferences*, 45 VAND. L. REV. 647, 658 (1992) (contending that “often judges use the canons to avoid having to immerse themselves in highly complex, technical areas of the law where the probability of error is particularly high”).

19. John M. Golden, *Construing Patent Claims According to Their “Interpretive Community”*: A Call for an Attorney-Plus-Artisan Perspective, 21 HARV. J.L. & TECH. 321, 322 (2008) (“Claims—numbered clauses at the end of a patent—are meant to provide notice of what a patent covers and to describe a patented invention in a way that distinguishes it from prior art.”); *id.* at 325–26 (noting that the Federal Circuit has “reemphasized the importance of the rule that claims must be construed from the perspective of one having ordinary skill in the relevant technological art”).

20. *Cf. id.* at 322 (“Patents play a critical role in modern business planning and finance.”).

21. See *infra* section II(B)(1).

for patent law,²² the circuit has commonly—if sometimes grudgingly—received praise for success in clarifying various aspects of patent law’s content and application.²³ Part of this success has come naturally from the centralization of first-level appellate review in a single national tribunal. But the Federal Circuit’s success in clarifying various aspects of patent law has also derived at least partly from its provision of crisper definitions of the bounds of legal doctrines.²⁴

The sort of doctrinal refinement and distinction that patent law has experienced under the Federal Circuit’s watch might commonly be a good thing. But compartmentalization of legal doctrines can also multiply opportunities for loophole seekers and can help distance the daily operation of law from its constitutional or statutory aims. In patent law, the United States Supreme Court’s recent interventions on questions of subject-matter eligibility are partly understandable as a reaction against efforts to delineate the law in parsimonious ways that sacrifice richness in favor of at least superficially clearer direction.²⁵ In like vein, the Federal Circuit itself has sometimes reacted against anti-redundancy in patent law—for example, by rejecting district courts’ conclusions that arguments for infringement by equivalence constituted improper efforts to relitigate questions about patent claims’ literal scope.²⁶

This Article proceeds as follows. Part I provides a taxonomy of redundancy forms and discusses redundancy and anti-redundancy in relation to legal processes and institutions, the interpretation of legal documents, and the structural design of legal doctrine. Part II narrows the focus by discussing redundancy and anti-redundancy in U.S. patent law, particularly in relation to patent claim construction and the structure of patent law doctrine. Part III returns the Article to a broader focus. This Part acknowledges that anti-redundancy can have especially strong justification in situations where the law seeks to mediate between conflicting interests of comparable social weight. Part III contends, however, that even in situations where anti-redundancy’s justifications are particularly strong, the interests that anti-redundancy seeks to protect can often be substantially

22. John M. Golden, *The Supreme Court as “Prime Percolator”: A Prescription for Appellate Review of Questions in Patent Law*, 56 UCLA L. REV. 657, 659 (2009) (“A number of commentators have concluded that, since the Federal Circuit’s creation in 1982, the Circuit has come to embody a number of long-theorized problems with specialized courts . . .”).

23. *See id.* at 677 (“[M]ost commentators appear to agree that the [Federal] Circuit has generally improved the coherence and predictability of judge-made aspects of patent law . . .”).

24. *See id.* at 681 (observing that in context the Federal “Circuit has commonly been criticized and sometimes praised for embracing formal rules that, whatever their faults, appear intended to promote goals of certainty, predictability, and fidelity to recent [Supreme Court] directions” (footnotes omitted)).

25. *See infra* section II(B)(3).

26. *See infra* section II(B)(2).

satisfied through smart doctrinal design—for example, by fitting overlapping doctrines to a model in which one doctrine provides a rule-like overlay (e.g., a safe harbor) for a more fundamental legal standard or, alternatively, by limiting the independent force of one doctrine to relatively extreme situations. In short, this Article analyzes redundancy and anti-redundancy as general legal phenomena, illustrates their interaction through detailed examples from patent law, and suggests how redundancy and anti-redundancy might be reconciled through intelligent legal design.

I. Redundancy and Anti-Redundancy Overview

This Part provides a taxonomy of different forms of redundancy, describes how redundancy and anti-redundancy commonly appear in legal processes and institutions, the drafting and interpretation of legal documents, and the structuring of legal doctrine. In a final section on redundancy and anti-redundancy as design principles, the Part discusses pluses and minuses of redundancy and suggests explanations for anti-redundancy's peculiar hold in legal thought despite redundancy's many advantages.

A. *Forms of Redundancy*

Consistent with a “legal engineering” perspective and the range of situations in which anti-redundancy principles appear, this Article takes a broad, functionalist view of the scope of the term “redundancy.” In essence, the Article defines legal redundancy as occurring when legal devices—terminology hereinafter commonly used to describe legal processes, institutions, language, or doctrines—have overlapping and reinforcing coverage. Such reinforcing coverage means that, within the scope of the overlapping coverage, the two devices work toward a shared outcome that, at least under ideal conditions, either of them might generate by itself.²⁷

The breadth of this outcome-oriented definition for redundancy means that the concept encompasses a variety of different forms of redundancy, including what this section describes as “partial redundancy” as opposed to “complete redundancy.” This section discusses such forms of redundancy as well as the phenomenon of “spurious redundancy” and ways of classifying redundancy by provenance—for example, by whether or not the redundancy was intentionally created.

27. This outcome-oriented definition of “redundancy” seems to be at least potentially broader than the facially more content-specific and motivation-specific definition adopted by Andrew Hessick within the context of judicially generated legal doctrine. See Hessick, *supra* note 1 (manuscript at 6) (“Doctrinal redundancy occurs when two judicially created doctrinal tests seek to protect the same set of interests through the same basic inquiry.”).

1. *Redundancy v. Superfluity.*—Before examining different forms of redundancy, one should make a note of what even this Article’s broad conception of redundancy excludes. As defined here, redundancy is a kind of superfluity, but it is only a subset of superfluity. Redundancy does not encompass superfluity in the absence of work toward a shared outcome that either of the two relevant devices can suffice to generate. Hence, certain legal language can be superfluous because it is simply meaningless or devoid of effect even though that language is not redundant of any other legal language. A legal rule, doctrine, set of terms, institution, or process can be devoid of effect because of a constant and irreconcilable conflict with a superior source of authority. Likewise, a legal device can lack practical significance because circumstance or other legal authority effectively eliminates the body of subject matter on which the language, doctrine, institution, or process was meant to act. None of these situations necessarily involves redundancy. Instead, redundancy results when legal devices provide overlapping coverage of subject matter with respect to which they work, at least to some degree, toward a shared outcome.

2. *Complete Redundancy.*—Having considered what redundancy is and is not as a matter of general principle, let us now consider some of the forms in which redundancy manifests itself. As Figure 1 illustrates below, one form of redundancy is “complete redundancy.” Complete redundancy occurs when there is an essential identity between the coverage and outcomes associated with the two legal devices being compared. Such complete redundancy occurs when a provision in a legal document includes two synonymous terms presented in the alternative, as some might suggest is the case with the terms “arbitrary” and “capricious” in the language providing for “arbitrary or capricious” review of agency decisions under the Administrative Procedure Act.²⁸ More generally, legal writing commonly uses couplets or even triplets of terms that appear to be substantially synonymous—for example, “cease and desist”; “aid and abet”; “will and testament”; or (in a will) “give, devise, and bequeath.”²⁹

28. 5 U.S.C. § 706(2)(A) (2012).

29. *E.g.*, Jonathan K. Van Patten, *On Editing*, 60 S.D. L. REV. 1, 6 (2015) (“There is also a long tradition of rhetorical excess in legal style where synonyms are utilized without necessarily adding meaning: cease and desist; aid and abet; aid and comfort; custom and usage; fraud and deceit; free and clear; null and void; true and correct; last will and testament; give, devise, and bequeath; right, title, and interest; rest, residue, and remainder; ordered, adjudged, and decreed; and . . . necessary and proper.”).

Figure 1: Forms of Redundancy**Complete****Unidirectionally Partial****Bidirectionally Partial**

The color grey indicates areas in which relevant institutions or processes, portions of legal language, or doctrines overlap. Except for black borders included for clarity in illustrating bidirectionally partial redundancy, the colors black and white indicate areas in which either of two institutions or processes, portions of legal language, or doctrines acts in a way that does not overlap with the other.

Complete redundancy in the form of common legal couplets or triplets is often of only relatively trivial significance because the package of synonymous terms has come to be treated as an undifferentiated unit, without any effort wasted on attempting to differentiate the separate parts. Recognition of complete redundancy between the components of a couplet such as “cease and desist” can naturally—and perhaps optimally—lead private and public actors to collapse their understanding and analysis of the separate terms, making their combination, at least in effect, a single term of art. If this occurs, the redundancy probably adds little value but, correspondingly, imposes little legal cost, particularly when drafting and recognition of the redundancy (or single term of art) have become essentially automatic. In short, once complete redundancy in legal language or doctrine is generally recognized, it likely becomes relatively uninteresting from a social-welfare perspective.

On the other hand, when complete redundancy—or at least apparently complete redundancy—is not reduced to triviality, it can lead to significant waste or confusion. The latter undesirable result has arguably occurred with respect to the first two prongs of a test for permanent injunctions embraced by the United States Supreme Court in 2006. Under this test, a movant for an injunction must show “(1) that it has suffered an irreparable injury” and “(2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury.”³⁰ Although, at least in the

30. *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006).

permanent injunction context, these required showings seem fundamentally “one and the same,” courts have commonly appeared hesitant to recognize this explicitly even while, in case after case, they tend overwhelmingly to generate identical outcomes through their analysis of the separate prongs.³¹

In combination with the relative triviality of “collapsed redundancies” such as that of “cease and desist,” courts’ struggles with the test for injunctions might suggest a substantial risk that complete redundancy in legal language and doctrine will be either problematic or largely insignificant. On the other hand, complete redundancy—or something very close to complete redundancy—might have a greater propensity to be useful and meaningful in institutional and procedural contexts. For example, one entity might productively help prevent or correct errors by repeating work separately performed by itself or an equivalent under equivalent circumstances. One often finds checking one’s work useful even if there is little reason to think one is wiser or even in a substantially different frame of mind at one point as opposed to the next.

But beyond the simple possibility of waste if few errors are found, there can be dangers even with procedural and institutional redundancy. One can be careless in checking one’s own—or, for that matter, another’s—work, and the expectation of a check can also breed relative carelessness in an original performance. For the redundancy to serve its error-limiting purpose, government might need to put in place incentives or controls to ensure that the existence of redundancy does not lead to shirking by one or the other entity involved in the repetitive performance. If the redundancy comes through the actions of separate entities who do not know the results achieved by the other, a natural check on shirking might come through concern that the other’s work might prove one’s own results to be wrong or, more positively, through a competitive urge to outperform the other entity.³²

31. Mark P. Gergen, John M. Golden & Henry E. Smith, *The Supreme Court’s Accidental Revolution? The Test for Permanent Injunctions*, 112 COLUM. L. REV. 203, 209 (2012); see also Golden, *supra* note 22, at 695 (“As Douglas Laycock remarks in his remedies casebook, the Court obtained four factors by doubling up, confusingly, on the irreparable harm factor, redundantly restating it as a requirement that legal remedies be inadequate.”); Christopher B. Seaman, *Permanent Injunctions in Patent Litigation After eBay: An Empirical Study*, 101 IOWA L. REV. (forthcoming 2016) (manuscript at 53), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2632834 [<http://perma.cc/ZSH6-SPG4>] (reporting that in 135 of 136 post-*eBay* decisions on motions for permanent injunctions in which a district court made an explicit finding of irreparable injury the court also found legal remedies to be inadequate, and that in 41 of 42 post-*eBay* decisions in which courts made an explicit finding of lack of irreparable injury the court also found legal remedies to be adequate).

32. See EVERETT M. ROGERS & REKHA AGARWALA-ROGERS, COMMUNICATION IN ORGANIZATIONS 93 (1976) (“If an official has reason to doubt the accuracy with which events are reported by those under his authority, he may establish two or more channels (sometimes competitively) to report the same event.”).

3. *Partial Redundancy*.—One potential way of responding to concerns about waste, shirking, or confusion is to arrange for redundancy to be partial, rather than complete. Figure 1 illustrates two of the forms that partial redundancy can take, forms in which reinforcing legal devices have incompletely overlapping coverage.³³ In the first of these forms, redundancy is only unidirectionally partial because one legal device provides a full backstop for the other, encompassing all that the other covers and thereby potentially rendering the other wholly redundant with respect to outcomes produced. But this unidirectionally partial redundancy is not complete redundancy because the “backstop” does not merely replicate the coverage or capacities of the other device: the backstop’s coverage or capacities reach beyond those of the other. Some might argue the doctrine of unconscionability should be understood to play this role with respect to a number of other more specific limitations on contract validity or enforceability, such as doctrines of duress, incapacity, and undue influence, which might be viewed as more specific instances, but not an exclusive set of instances, of situations in which enforcing a contract as written should be considered unconscionable.³⁴ Perhaps less controversially, “safe harbors” in tax and other areas of law can have relationships of unidirectionally partial overlap with more general standards whose outcomes they largely look to replicate more automatically and with greater *ex ante* clarity in a particular subset of situations.³⁵

Figure 1 also includes a graphical representation of bidirectionally partial redundancy. In a situation characterized by bidirectionally partial redundancy, each of the overlapping legal devices has coverage or capacities that are not shared by the other. An example of such bidirectionally partial redundancy comes in common provisions for trial and

33. Some biologists might prefer to use the term “degeneracy” for forms of partial redundancy that result from incompletely overlapping coverage. *E.g.*, Giulio Tononi, Olaf Sporns & Gerald M. Edelman, *Measures of Degeneracy and Redundancy in Biological Networks*, 96 PROC. NAT’L ACAD. SCI. 3257, 3257 (1999) (distinguishing degeneracy, which describes “elements that are structurally different but which, under certain conditions, can perform similar functions” from redundancy, which “refers to duplication or repetition of elements within electronic or mechanical components to provide alternative functional channels”).

34. *Cf.* John Phillips, *Protecting Those in a Disadvantageous Negotiating Position: Unconscionable Bargains as a Unifying Doctrine*, 45 WAKE FOREST L. REV. 837, 861 (2010) (contending that “the doctrine of unconscionable bargains should . . . replace the existing doctrines of duress and undue influence”). *But cf.* Daniel T. Ostas, *Postmodern Economic Analysis of Law: Extending the Pragmatic Visions of Richard A. Posner*, 36 AM. BUS. L.J. 193, 228 (1998) (“As a general rule, a finding of unconscionability requires both a modicum of procedural impropriety, something akin to fraud, duress, or undue influence, and a substantive claim to resulting unfairness.”).

35. *Cf.* Saul Levmore, *Double Blind Lawmaking and Other Comments on Formalism in the Tax Law*, 66 U. CHI. L. REV. 915, 917–18 (1999) (discussing an example of a safe harbor in tax law and noting that “[s]imilar safe harbors exist in many areas of law”).

appellate review. Under such provisions, the trial court has distinctively primary responsibility for factual findings: the appellate court is generally confined to the factual record developed by the trial court and offers only limited review of trial court factual findings.³⁶ At the same time, the appellate court typically has at least one capacity that the trial court lacks—namely, the capacity to revisit (albeit perhaps only through a mechanism like en banc review) its own precedent on legal matters.³⁷ Thus, although the trial and appellate courts have significantly overlapping coverage of pure questions of law and overlapping coverage of at least some issues relating to facts, each has capacities that the other lacks, a fact rendering their redundancy bidirectionally partial.

4. *Probabilistic Redundancy.*—Forms of partial redundancy are not exhausted by those most straightforwardly suggested by Figure 1. Partial redundancy can also result because the extent of overlapping coverage or capacities is in fact only a matter of probabilities, dependent on the uncertain nature of the actual legal audience or other exogenous circumstances.

Such probabilistic redundancy can result when the drafters of a legal document or the generators of alternative legal doctrines do not know with certainty how separate terms, provisions, or doctrines will be later understood or applied. They might suspect that these legal devices will ultimately turn out to be completely redundant as understood and applied, but they might believe there is value in including the potential redundancy to protect against alternative paths of development. As students of language have long appreciated, understood or perceived redundancy is frequently as much a result of the knowledge and understandings of a communication's audience as it is a result of the intentions and actions of the communication's originator.³⁸ Thus, a later, generally recognized

36. JACK H. FRIEDENTHAL, MARY KAY KANE & ARTHUR R. MILLER, *CIVIL PROCEDURE* § 13.4, at 636, 638, 640 (4th ed. 2005) (noting that appellate review is restricted to errors that “appear clearly in the trial-court record,” that “[t]he appellate court cannot . . . receive new evidence concerning the facts,” and that review of factual findings is typically limited by a “clearly-erroneous standard”).

37. See Joseph W. Mead, *Stare Decisis in the Inferior Courts of the United States*, 12 *NEV. L.J.* 787, 798 (2012) (“Sitting en banc, circuit judges are not bound by prior panel decisions, but may give some deference to well-entrenched precedent.”).

38. David V. Gibson & Barbara E. Mendleson, *Redundancy*, *J. BUS. COMM.*, Winter 1984, at 43, 48 (“[T]rue redundancy and meaning are unlikely to be equal for any two people since cognitive structures applied by the sender and the receiver are unlikely to be the same.”); see also *id.* at 49 (“Abbreviations and disciplinary jargon (e.g., legalese and computer languages) are useful means of communication only if they are redundant with the reader’s memorized information.”); cf. *LINGUISTICS* 13 (Anne E. Baker & Kees Hengeveld eds., 2012) (“[U]sers of natural languages often omit things which they can assume their listeners will fill in on the basis of their knowledge of the matter under discussion.”).

redundancy might have been only latent or probabilistic at an earlier time. At least at an earlier time, understandings of relevant legal language or doctrines such as the Free Speech and Free Press Clauses of the U.S. Constitution might have had the chance of following divergent, rather than convergent or otherwise redundancy-generating, evolutionary paths.³⁹ Alternatively, at an earlier time, there might have been at least a chance that the relevant audience for legal language or doctrine would be more heterogeneous along lines that would give functional distinction to legal provisions that might later appear to be completely redundant. A classic example of such a situation is the story often told to explain many of Anglo-American law's traditional legal couplets and triplets—namely, that they date to a post-Norman Conquest practice of using both French and English synonyms as a matter of either courtesy or communicative efficacy in a society whose members might have different linguistic capacities.⁴⁰ As the post-Norman Conquest story suggests, differences in background knowledge can mean that certain members of a legal audience view the same language as entirely redundant whereas others view it as at most only partially redundant. Lacking full knowledge of the nature of a message's recipients, the originator of a message might only be able to make a probabilistic assessment of the message's effective redundancy. Thus, for example, one might speak of “the present Chief Justice of the United States Supreme Court, John Roberts.” If one's audience is entirely confined to U.S. lawyers at a time when the Chief Justice is John Roberts, the term “John Roberts” might be entirely redundant in effect. On the other hand, if the audience is broader, the term “John Roberts” might add distinct value. Many people in the United States, never mind the broader world, would obtain additional information through the use of the appositive—namely, the statement of the fact, previously unknown or forgotten, that the present Chief Justice of the United States Supreme Court is named “John Roberts.”⁴¹ In short, probabilistic redundancy, under which the nature or degree of functional redundancy can differ across times and even within populations, is likely to be a significant form of partial redundancy.

39. Cf. David A. Anderson, *The Origins of the Press Clause*, 30 UCLA L. REV. 455, 533 (1983) (“If the Court has never given the press clause independent significance, neither has it foreclosed the possibility.”).

40. J. F. Macdonald, *The Influence of Latin on English Prose Style*, 5 PHOENIX 31, 34 (1951) (“When a Norman used a French word, he tried to use the English word for it also, and Englishmen returned the courtesy.”).

41. Rene Lynch, *Most Americans Don't Know, or Seem to Care, About Supreme Court*, L.A. TIMES (June 25, 2012), <http://articles.latimes.com/2012/jun/25/nation/la-na-nn-supreme-court-poll-20120625> [<http://perma.cc/E5VJ-C7UB>] (reporting that, in response to a 2010 Pew Research Center Poll, “[o]nly 28% [of those surveyed] correctly identified John Roberts as the chief justice of the Supreme Court” and “[m]ore than half said they didn't know” the name of the chief justice).

5. *Hierarchical and Trans-Dimensional Redundancies.*—Other forms of partial redundancy that merit attention are hierarchical and trans-dimensional redundancies. Hierarchical redundancy, which is a form of partial redundancy between distinctive levels of a legal hierarchy, has already been illustrated by the example of trial and appellate courts. Instinctively, one might want to deny that the relationship between trial and appellate courts features “redundancy” because of obvious distinctions between these bodies. But with respect to a variety of questions, the roles played by trial and appellate courts significantly overlap. From the functionalist perspective of this Article, there is simply categorical error in an effort to deny partial redundancy on grounds, for example, that non-overlapping features dominate overlapping features or involve different dimensions orthogonal to these overlaps. As Robert Cover noted decades ago, federal habeas corpus for state prisoners involves a form of redundancy,⁴² even though this redundancy results from the overlapping jurisdictions of different judicial hierarchies operating within the broader hierarchy of “constitutional federalism.”⁴³ Just as redundancy can be trans-dimensional in the sense that the shadow cast by a three-dimensional, ten-story building can overlap and reinforce the shadow cast by a comparatively two-dimensional sheet of paper, very distinct legal processes, institutions, language, and doctrines can have partial overlaps that operate as redundancies.

In multidimensional or hierarchical situations, an instinct to reject a recognition of partial redundancy might reflect a background calculation or intuition that, in such instances, there is little reason to attach the stigma commonly associated with redundancy. The implicit calculation might be that the cost of redundancy is substantially mitigated or subsumed by the relatively complex nature of one of the overlapping entities or the relation between them. For example, the cost of the appellate court’s performance of some substantive review of district court fact-finding might be mitigated by facts that (1) difficulty drawing strict lines between factual and legal questions could make an effort to strip out all associated redundancy more trouble than it is worth; (2) understanding of at least some aspects of the factual record might be necessary for an appellate court to evaluate whether a trial court has applied the correct legal tests; and (3) understanding of at least some aspects of the factual record might help an appellate court

42. Cover, *supra* note 12, at 648 (characterizing federal habeas corpus as “a large and important instance” of “sequential redundancy”); see also Robert M. Cover & T. Alexander Aleinikoff, *Dialectical Federalism: Habeas Corpus and the Court*, 86 YALE L.J. 1035, 1045 (1977) (“[E]ven without the special awareness and position of federal judges, redundancy fosters greater certainty that constitutional rights will not be erroneously denied.”).

43. Paul M. Bator, *Finality in Criminal Law and Federal Habeas Corpus for State Prisoners*, 76 HARV. L. REV. 441, 445 (1963).

develop better legal doctrine by providing a context for understanding what such doctrine means in practice. But the fact that a certain degree of redundancy might seem naturally acceptable in such a context should not result in a denial of redundancy's existence. Instead, recognition of the common acceptability of overlaps between the functions of appellate and trial judges is better taken as testimony to the fact that at least some forms of redundancy are not necessarily bad. As always, the ultimate functionalist question should be whether redundancy or lack thereof advances interests in social welfare.

6. *Spurious Redundancy*.—In considering forms of redundancy, one should recognize the phenomenon of “spurious redundancy,” which arises when there is an appearance or allegation of redundancy that is either wholly false or at least partly overdone. In many situations, a facial appearance or allegation of complete redundancy corresponds to a reality of no more than partial redundancy. For example, as Carla Bazzanella has pointed out, an apparently blatantly redundant request for “coffee coffee” can be understood not to feature complete redundancy, but instead to involve a specific request “for a real coffee, not a surrogate.”⁴⁴ Likewise, as the linguist Paul Grice pointed out, a classically redundant statement such as “*War is war*” might facially appear “totally noninformative” as a result of an appearance of complete redundancy between the first use of “war” and the second.⁴⁵ Nonetheless, the statement, in particular the second use of “war,” can in fact be “informative at the level of what is implicated”—i.e., because of what the hearer understands to be the reason for making “this particular patent tautology.”⁴⁶ If someone like General Sherman says that “*War is war*” in the context of a military campaign criticized for its brutality, one can readily understand that the speaker means to assert that we cannot reasonably expect brutality to be absent from war.⁴⁷

Spurious redundancy can also involve communication of emphasis or nuance.⁴⁸ The linguist Laurence Horn has observed that two statements can be “informationally redundant” in a technical sense but “argumentatively

44. Carla Bazzanella, *Redundancy, Repetition, and Intensity in Discourse*, 33 LANGUAGE SCI. 243, 250 (2011); see also L. DAVID RITCHIE, INFORMATION 34 (1991) (noting that repetition can “be used to communicate new ideas, as when an exasperated parent repeats a request to emphasize that ‘this is a demand, not merely a request’”).

45. PAUL GRICE, STUDIES IN THE WAY OF WORDS 33 (1989).

46. *Id.*

47. Cf. 2 WILLIAM T. SHERMAN, MEMOIRS OF GENERAL WILLIAM T. SHERMAN 111 (1875) (quoting a letter to General Halleck as stating, “[i]f the people raise a howl against my barbarity and cruelty, I will answer that war is war, and not popularity-seeking”).

48. Cf. A. Daniel Oliver-Lalana, *What I Tell You Three Times Is True: A Pragmatic Approach to Redundancy in Legal Information*, 15 INT’L REV. L. COMPUTERS & TECH. 141, 147 (2001) (“[T]he use of redundancy indicates which issues are important for the communication parties.”).

distinct” in that one argues for one conclusion and the other argues for its opposite.⁴⁹ For example, one might say, “Candidate *X* won by a small margin, but Candidate *X* did win.”⁵⁰ In Horn’s terms, the second clause is informationally redundant with the first, but nonetheless has nontrivial, communicative value that trumps a potential implication of the first statement. Specifically, the first clause noting the small margin of victory can “constitute an argument for . . . the relative lack of popular mandate” for *X*, whereas the second, by focusing on “winning per se argues for the opposite conclusion.”⁵¹

Such examples of spurious redundancy not only highlight distinct forms of redundancy but also show how partial redundancy can allow for shades of meaning and complexity that might be difficult to achieve with more parsimonious and facially efficient speech. Substantial capacity for context-specific nuance tends to be common in natural human languages but can be comparatively absent from formal languages such as those used for computer programming.⁵² A relationship between redundancy and complexity has also been posited for biological systems, where complicated arrays of functionally overlapping subsystems can help ensure both overall system robustness and broad multifunctionality.⁵³

7. *Redundancy Classified by Provenance.*—A further axis for differentiation of forms of redundancy relates to redundancy’s provenance. First, redundancy might be fully intended in that a legal decision maker has deliberately deployed redundancy to reinforce a legal device against misapplication or misunderstanding. An example could be the drafting of separate patent claims that are fundamentally intended to cover the same subject matter but that use different language to try to protect against misinterpretations. A second form of redundancy is only probabilistically intended. In the claim drafting context, a claim drafter might write different claims that the drafter realizes might be later viewed as redundant but the drafter might also hope will be ultimately viewed, at least under favorable

49. Laurence R. Horn, *Given as New: When Redundant Affirmation Isn’t*, 15 J. PRAGMATICS 313, 326 (1991) (emphasis added).

50. See *id.* at 325–26 (discussing the statement “He won by a small margin, but win he did” and later substituting “Candidate *X*” for the pronoun “he”).

51. *Id.* at 326.

52. LINGUISTICS, *supra* note 38, at 14 (“Everything written in a formal language is taken literally, and cannot be interpreted as nuance, colouring, flavouring, innuendo or spin.”).

53. Cf. Joseph Lehár, Andrew Krueger, Grant Zimmermann & Alexis Borisy, *High-Order Combination Effects and Biological Robustness*, 4 MOLECULAR SYSTEMS BIOLOGY 215 (2008) (describing both the robustness and the complexity of biological systems as tied to “the many redundancies and feedbacks . . . that allow [them] to dynamically adapt or compensate for losses or environmental changes”).

circumstances, as having somewhat different scope.⁵⁴ A third form is accidental redundancy, which is not intended at all, but which results instead from a legal device being construed or applied in a way the drafter had not contemplated.⁵⁵ Thus, for example, if a drafter of patent claims developed one claim for a “circular” plate and another for an “octagonal” plate, the drafter might have fully believed that “circular” and “octagonal” would be viewed as describing wholly different sets of shapes, whereas a later interpreter might generate “accidental redundancy” by understanding the term “circular” as broadly encompassing “circle-like” shapes such as octagons.⁵⁶ Such accidental redundancy could emerge from an evolutionary process, in which the scope of the term “circular” gradually stretches over time. Alternatively, it could result more immediately from contemporaneous mistake either in the drafter’s expectations or the interpreter’s understanding.

In sum, there are various forms of complete or partial redundancy that can arise accidentally or deliberately in law. But although a thesaurus might present the terms “redundant” and “superfluous” as synonyms,⁵⁷ redundancy’s requirement of functionally reinforcing overlaps means that there are certain forms of superfluity that are not instances of redundancy.

B. *Redundancy and Anti-Redundancy in Context*

In light of the functionalist approach to defining redundancy described above, this section examines how redundancy and anti-redundancy appear in different legal contexts. Across such legal contexts, redundancy and anti-redundancy commonly feature in (1) processes and institutions, (2) documents and their interpretation, and (3) the structure of legal doctrine. A relatively balanced, engineering perspective on redundancy seems more common with respect to processes and institutions than with

54. RONALD D. SLUSKY, *INVENTION ANALYSIS AND CLAIMING: A PATENT LAWYER’S GUIDE* 246 (2d ed. 2012) (advocating “[v]arying the claim terminology” in the interests of “claim diversity” and providing examples of “claim terminology alternatives” that “might be deemed to mean exactly the same thing” but might also be viewed as having different meanings).

55. *Cf.* Anderson, *supra* note 39, at 533 (“Though scholars today may debate whether the press clause has any significance independent of the speech clause, historically there is no doubt that it did.”).

56. The hypothetical example loosely derives from the fact pattern in *Winans v. Denmead*, 56 U.S. (15 How.) 330 (1854), in which the U.S. Supreme Court held that a jury had to decide whether a patent claim calling for a “body of a car for the transportation of coal . . . in the form of a frustum of a cone,” *id.* at 342, effectively encompassed a car having a cross-section that “was octagonal instead of circular,” *id.* at 340.

57. *See, e.g., Redundant*, THE DOUBLEDAY ROGET’S THESAURUS IN DICTIONARY FORM (1977) (making the term “superfluous” the first-listed synonym for the term “redundant”).

respect to legal interpretation or doctrinal design. Consequently, concern with the latter two legal enterprises will dominate subsequent sections of this Article.

I. Procedural and Institutional Design.—Generally speaking, attention to concerns of redundancy and anti-redundancy seems reasonably balanced with respect to procedural and institutional issues in U.S. law. Indeed, redundancy in relation to procedure or institutions seems often to be appreciated as a positive value—even a positive requirement—in the context of U.S. law.⁵⁸ Of course, as in engineering, inclinations toward redundancy ultimately become subject to practical concerns and limits. But although redundancy in procedural and institutional contexts commonly invites criticism,⁵⁹ there appears relatively general recognition that redundancy in the form of processes or institutions to “check” decisions by one governmental entity or another can generate value even while imposing costs.⁶⁰ A typical corollary to this recognition is acceptance that, even when some redundancy is perceived as desirable, there is likely a need to limit the degree of redundancy—to make trade-offs in light of the expense of redundant coverage, including the opportunity costs that redundancy and

58. See, e.g., Cover, *supra* note 12, at 657 (contending that jurisdictional redundancy can address concerns about the self-interest and ideological commitments of elites as well as with capacity for innovation in “consciously determined policies”); Lance Gable & Benjamin Mason Meier, *Complementarity in Public Health Systems: Using Redundancy as a Tool of Public Health Governance*, 22 ANNALS HEALTH L. 224, 225 (2013) (“[O]verlapping systems serve many beneficial functions in public health law.”); Martin Landau, *Redundancy, Rationality, and the Problem of Duplication and Overlap*, 29 PUB. ADMIN. REV. 346, 356 (1969) (“[R]edundancy serves many vital functions in the conduct of public administration.”).

59. See JONATHAN B. BENDOR, PARALLEL SYSTEMS: REDUNDANCY IN GOVERNMENT 2 (1985) (“Since the days of scientific management, scholars have advised decision-makers to reduce duplication and overlap in the public bureaucracy.”); Zachary D. Clopton, *Redundant Public-Private Enforcement*, 69 VAND. L. REV. (forthcoming 2016) (manuscript at 2), <http://ssrn.com/abstract=2579137> [<http://perma.cc/NQ2G-H2K3>] (“Criticism of redundant enforcement is equal opportunity.”); James C. Cooper, *The Costs of Regulatory Redundancy: Consumer Protection Oversight of Online Travel Agents and the Advantages of Sole FTC Jurisdiction*, 17 N.C. J.L. & TECH. 179, 181 (2015) (manuscript at 2), <http://ssrn.com/abstract=2579738> [<http://perma.cc/382C-YC4H>] (“Every administration in recent history has attempted to reform the inevitable overlaps and redundancies that arise from an ever-growing federal bureaucracy.”).

60. See, e.g., Adam M. Samaha, *Undue Process*, 59 STAN. L. REV. 601, 620–21 (2006) (arguing that although the U.S. Constitution “seems to be bursting with procedural mandates,” it also suggests “concern about decision costs”); cf. *Mathews v. Eldridge*, 424 U.S. 319, 347 (1976) (concluding that “[i]n striking the appropriate due process balance,” the Court needed to consider “the administrative burden and other societal costs” of added process).

redundancy-related transaction costs can impose by diverting government and private energies and by delaying, or possibly even frustrating, government decision making or action.⁶¹

Perhaps most fundamentally, basic pro-redundancy principles in the form of principles of governmental “checks and balances” and federalism are well-accepted parts of U.S. law.⁶² In the *Federalist*, James Madison explicitly argued that maintenance of a proper scheme of limited government, a scheme in which each part of the government would stay within its appropriate sphere and not excessively trample on private liberties, requires that the separate powers of the executive, legislative, and judicial branches at least partially overlap so that each branch remains subject to restraint by the others.⁶³ Madison further contended that, by providing a further layer of checks, “the federal system of America” provided “a double security . . . to the rights of the people.”⁶⁴ Much more recently but along related lines, Laurence Tribe has highlighted that the “separated and divided powers” model of U.S. government⁶⁵ stresses the importance not only of “the independence and integrity of . . . the branches or levels of government,” but also of “the ability of each to fulfill its mission in checking the others so as to preserve the interdependence

61. See Vermeule, *supra* note 13, at 1458 (“The main costs [of second opinions] are the direct costs of obtaining a second opinion, the opportunity costs of delayed decision making, and the risk of indeterminacy if the two opinions differ.” (emphasis omitted)); cf. Henry J. Friendly, “*Some Kind of Hearing*,” 123 U. PA. L. REV. 1267, 1315 (1975) (noting that, across a wide variety of contexts, “the [due process] problem is always the same—to devise procedures that are both fair and feasible”).

62. See *Bowsher v. Synar*, 478 U.S. 714, 722 (1986) (“Even a cursory examination of the Constitution reveals the influence of Montesquieu’s thesis that checks and balances were the foundation of a structure of government that would protect liberty.”); Richard H. Fallon, Jr., *Of Legislative Courts, Administrative Agencies, and Article III*, 101 HARV. L. REV. 915, 937 (1988) (noting that the U.S. Constitution’s framers believed “that the best safeguard against administrative capriciousness and oppression lay in a structure in which the factional or self-aggrandizing impulses of any one branch could be checked by another”); Martin Landau, *Federalism, Redundancy and System Reliability*, in *THE FEDERAL POLITY* 173, 188 (Daniel J. Elazar ed., 1974) (describing U.S. “constitutional designers” as having “built what was, and probably still is, the most redundant government in the world”).

63. THE FEDERALIST NO. 48, at 305–06 (James Madison) (Clinton Rossiter ed., 1961) (contending that protection of “the more feeble against the more powerful members of the government” requires that “the legislative, executive, and judiciary departments . . . be so far connected and blended as to give to each a constitutional control over the others”); cf. TRIBE, *supra* note 12, § 2-2, at 121 (noting that the separated-powers model for U.S. constitutional law has “always remained important”). But cf. 1 BRUCE ACKERMAN, *WE THE PEOPLE* 191 (1991) (emphasizing the status of “the checking role of the separation of powers as ‘auxiliary’” to concern with “the People’s capacity to organize”).

64. THE FEDERALIST NO. 51 (James Madison), *supra* note 63, at 320.

65. TRIBE, *supra* note 12, § 2-1, at 118 (discussing, as “Model I” of U.S. constitutional law, a “separated and divided powers” model in which “the forces and counterforces of government . . . check one another as needed”).

without which independence can become domination.”⁶⁶ At a relatively fundamental level, a commitment to checks and balances has commonly demanded or supported the presence of multiple, partially redundant “veto gates” in legislative processes.⁶⁷ Although this redundancy imposes the added costs of maintaining “checking” institutions or procedures, as well as a potential risk of undue “gridlock,”⁶⁸ there remains a common commitment to the notion that redundancy might on average be expected to generate better governance and thus to operate as “a feature and not a bug.”⁶⁹

As with linguistic and doctrinal redundancies, procedural and institutional redundancies—e.g., review by both houses of Congress, review by the President, and, for some questions, judicial review⁷⁰—are generally not complete redundancies because each of the major institutional reviewers generally has different characteristics or competences⁷¹ and because reviewers often examine somewhat different sets of related issues under different standards of review.⁷² Nonetheless, the level of even partial redundancies in U.S. procedure and institutions is striking when one considers the existence of plausible alternatives such as unicameral legislatures, single-house-dominated legislatures, or more limited judicial

66. *Id.* § 2-2, at 121 (emphasis omitted).

67. THE FEDERALIST NO. 62 (James Madison), *supra* note 63, at 377 (contending that the U.S. “senate, as a second branch of the legislative assembly distinct from and dividing the power with a first, must be in all cases a salutary check on the government”); THE FEDERALIST NO. 73 (Alexander Hamilton), *supra* note 63, at 442 (arguing for an executive veto on the ground that “[t]he oftener [a] measure is brought under examination, the greater the diversity in the situations of those who are to examine it, the less must be the danger of . . . errors [or] . . . missteps”); Jenna Bednar & William N. Eskridge, Jr., *Steadying the Court’s “Unsteady Path”: A Theory of Judicial Enforcement of Federalism*, 68 S. CAL. L. REV. 1447, 1476 (1995) (observing that the many “veto gates” imposed on “national political decisionmaking diminish the problem of congressional cheating on the federal arrangement”). *But cf.* Matthew C. Stephenson, *Does Separation of Powers Promote Stability and Moderation?*, 42 J. LEGAL STUD. 331, 335 (2013) (contending that, although bicameralism can promote compromise, it also “attenuates the threat of repeal” and, under some circumstances, can thereby encourage “extreme policies”).

68. Josh Chafetz, *The Phenomenology of Gridlock*, 88 NOTRE DAME L. REV. 2065, 2075 (2013) (“The United States federal government has a relatively more cumbersome process for enacting laws than most . . . democracies.”); *see also* SANFORD LEVINSON, *FRAMED: AMERICA’S FIFTY-ONE CONSTITUTIONS AND THE CRISIS OF GOVERNANCE* 133–34 (2012) (discussing the “threat of deadlock” that bicameralism poses).

69. LEVINSON, *supra* note 68, at 163.

70. *See id.* (noting that the U.S. Constitution might be viewed as effectively giving each of the House of Representatives, Senate, President, and judiciary the capacity to have “the last word” on an attempted statute).

71. *See* Todd D. Rakoff, *The Shape of the Law in the American Administrative State*, 11 TEL AVIV U. STUD. L. 9, 22 (1992) (describing the U.S. Constitution as establishing “branches of government that are ‘omnicompetent’ as regards subject-matter but ‘unipowered’ as regards the tools at their disposal”).

72. *Cf.* Vermeule, *supra* note 13, at 1445 (commenting on “[w]hole versus partial [second] opinions” (emphasis omitted)).

review.⁷³ On this last point, the U.S. commitment to judicial review of administrative decisions, which is commonly presumed to be available even when not explicitly made so by statute,⁷⁴ attests to a strong embrace of at least partially redundant checks and balances.⁷⁵

Likewise, commitment to substantial redundancy in legal institutions and processes appears through common recognition of rights to appeal the decisions of trial courts.⁷⁶ The redundancy here can be viewed as more complete than between initial administrative review and subsequent judicial review because of the likely greater commonality between the outlooks and competences of trial and appellate judges, a likely greater commonality that might help explain the longtime failure to recognize a federal constitutional right to appellate review of trial court judgments.⁷⁷ Nevertheless, as discussed in subpart I(A), this redundancy is generally only partial because of significant differences between trial courts and appellate courts and the determinations made by them. For example, adjudication in the trial courts often involves only one judge, might involve a jury in addition to the judge, and generally involves presentation of evidence in addition to legal argument. In contrast, appellate adjudication commonly involves a panel of

73. See Chafetz, *supra* note 68, at 2076 (observing that, under the British form of government, “achieving unified government requires convincing a plurality of voters in a majority of constituencies to cast a single vote for an MP of your party”); John C. Reitz, *Political Economy and Separation of Powers*, 15 *TRANSNAT’L L. & CONTEMP. PROBS.* 579, 593 (2006) (discussing the broad influence of the British model); *id.* at 611–12 (observing that the U.S. version of “judicial review of legislation” has been “so robust that many other countries long rejected the idea”).

74. *Abbott Labs. v. Gardner*, 387 U.S. 136, 140 (1967) (stating that the U.S. Administrative Procedure Act “embodies [a] basic presumption of judicial review” of agency action); RICHARD J. PIERCE, JR., SIDNEY A. SHAPIRO & PAUL R. VERKUIL, *ADMINISTRATIVE LAW AND PROCESS* § 5.2, at 120 (6th ed. 2014) (“When legislative intent is not clear, courts presume that Congress intended to provide a right to judicial review of an agency action.”); BERNARD SCHWARTZ, ROBERTO L. CORRADA & J. ROBERT BROWN, JR., *ADMINISTRATIVE LAW* 655 (7th ed. 2010) (“[R]eview by a three-judge district court was the method of review provided for a number of federal agencies. The Judicial Review Act [then] . . . substituted the more common FTC-type review by courts of appeals for those agencies.”).

75. See *THE FEDERALIST* NO. 78 (Alexander Hamilton), *supra* note 63, at 468 (describing the “independence of . . . judges” as “requisite to guard the Constitution and the rights of individuals”).

76. Marc M. Arkin, *Rethinking the Constitutional Right to a Criminal Appeal*, 39 *UCLA L. REV.* 503, 513 (1992) (noting that commentators had commonly “point[ed] out that forty-seven of the fifty states in the union provide the criminal defendant with the right to appeal at least once without obtaining prior court approval”); Cassandra Burke Robertson, *The Right to Appeal*, 91 *N.C. L. REV.* 1219, 1222 (2013) (“[T]he federal court system and forty-seven states provide—as a matter of state law—either a constitutional or statutory requirement for appeals as of right in both civil and criminal cases.”).

77. Robertson, *supra* note 76, at 1221 (“[T]he Supreme Court has repeatedly declined to recognize a due process right to appeal in either civil or criminal cases.”).

multiple judges,⁷⁸ generally does not involve a jury,⁷⁹ and generally does not involve presentation of new evidence beyond a very limited set of materials, such as legislative history or dictionary definitions, of which a court may take judicial notice.⁸⁰ Further, appellate review can serve interests such as a desire to facilitate uniformity in controlling principles of case law⁸¹ that are not as characteristic of error checking or redundancy per se as of the typically hierarchical, telescoping nature of court organization as one moves up paths of appeal.

Finally, it seems worth noting that, at a more micro level, the legal process over which courts preside is, from the filing of a complaint onward, awash in redundancy. Although legal stylists commonly condemn aspects of this redundancy as a bug, much of it might be, like checks and balances, an important engineering feature. As Cover observed, “redundancy features in procedure” such as the use of “[m]ultiple witnesses” help not only to confirm what appears to be true but also, where the presumptively redundant features in fact conflict, to identify “the areas of uncertainty.”⁸² With respect to questions of law as opposed to pure questions of fact, Martin Shapiro remarked that, in part because of “rules of *stare decisis*[.] . . . the rules of legal discourse seem to require each attorney to suppress as much information and transmit as much redundancy as possible.”⁸³ Legal communications marked by the “string citation[.] . . . highly redundant synonym use,” and a reader’s capacity to predict citations from text and vice versa give routine evidence of high levels of

78. Evan H. Caminker, *Precedent and Prediction: The Forward-Looking Aspects of Inferior Court Decisionmaking*, 73 TEXAS L. REV. 1, 42 (1994) (“District court judges almost always decide cases alone, judges sitting on circuit courts of appeals generally decide cases in panels of three . . .”).

79. Cf. Eric Schnapper, *Judges Against Juries—Appellate Review of Federal Civil Jury Verdicts*, 1989 WIS. L. REV. 237, 354 (invoking “a substantial body of evidence demonstrating that appellate judges are in important ways less competent factfinders than ordinary jurors”).

80. See *Salve Regina Coll. v. Russell*, 499 U.S. 225, 232 (1991) (“With the record having been constructed below and settled for purposes of the appeal, appellate judges are able to devote their primary attention to legal issues.”); Caitlin E. Borgmann, *Appellate Review of Social Facts in Constitutional Rights Cases*, 101 CALIF. L. REV. 1185, 1202 (2013) (discussing how, relative to appellate courts, trial courts possess “superior factfinding competence”); cf. Caminker, *supra* note 78, at 41 (“The structure of and tasks assigned to trial courts encourage their relative proficiency at factfinding, and appellate courts are designed and situated to encourage a relative proficiency at legal reasoning.”).

81. Irene M. Ten Cate, *International Arbitration and the Ends of Appellate Review*, 44 N.Y.U. J. INT’L L. & POL. 1109, 1192 (2012) (“Centralized appellate review . . . promotes fairness by ensuring that like cases are treated alike, increases predictability for stakeholders, and strengthens the external credibility of the decision-making institution.”).

82. Cover, *supra* note 12, at 653–54.

83. Shapiro, *supra* note 6, at 127.

redundancy⁸⁴—indeed, levels of redundancy that help make lawyers, legal academics, and their work product notorious.⁸⁵ Shapiro diagnosed the high level of redundancy in legal discourse as “the standard solution predicted by communications theory for any acute noise problem”—for instance, in situations in which “state supreme courts, the U.S. Supreme Court, and the British courts” rule on matters of tort law,⁸⁶ “the noise problem of a non-hierarchical organization” that engages in incremental decision making.⁸⁷

Shapiro’s thesis is consistent with the notion that U.S. society and the U.S. legal system have come to accept or even embrace substantial forms of redundancy as a matter of process and institutional design, and have commonly done so for reasons quite similar to those for accepting or embracing redundancy in engineering or communication. As in engineering or communication, this acceptance or embrace must also have limits because redundancy imposes costs. The stylists who condemn redundancy in legal writing might thus be best understood as condemning excess redundancy—redundancy that in some instances might rise to the level of obsessive–compulsive disorder as opposed to practically useful insurance of effective communication.

Of course, the tolerance of procedural and institutional redundancy in U.S. law is far from absolute. U.S. legal systems exhibit many tendencies to promote closure in legal proceedings and judgments. Principles of claim and issue preclusion and of stare decisis all facilitate final—or relatively final—resolution of legal disputes, issues, or arguments.⁸⁸ Limitations on collateral review of legal judgments, including limitations on habeas review despite its constitutional status, similarly reflect a desire to cut off argument at some point and prevent a potentially endless, resource-consuming loop of litigation and relitigation.⁸⁹ Likewise, concerns about parallel litigation in

84. *Id.* at 127–28; cf. Richard A. Posner, *Statutory Interpretation—in the Classroom and in the Courtroom*, 50 U. CHI. L. REV. 800, 812 (1983) (“No one would suggest that judicial opinions or academic articles contain no surplusage; are these documents less carefully prepared than statutes?”).

85. Cf. *Moskal v. United States*, 498 U.S. 103, 120 (1990) (Scalia, J., dissenting) (noting “the obvious instances of iteration to which lawyers, alas, are particularly addicted—such as ‘give, grant, bargain, sell, and convey’”).

86. Shapiro, *supra* note 6, at 130.

87. *Id.* at 134.

88. *James B. Beam Distilling Co. v. Georgia*, 501 U.S. 529, 542 (1991) (“Public policy dictates that there be an end of litigation” (internal quotation marks omitted)).

89. *Travelers Indem. Co. v. Bailey*, 557 U.S. 137, 154 (2009) (“It is just as important that there should be a place to end as that there should be a place to begin litigation, and the need for finality forbids a court called upon to enforce a final order to tunnel back . . . for the purpose of reassessing prior jurisdiction de novo.” (omission in original) (citations omitted) (quoting *Stoll v. Gottlieb*, 305 U.S. 165, 172 (1938)) (internal quotation marks omitted)); *Shea v. Louisiana*, 470 U.S. 51, 59–60 (1985) (distinguishing between direct appeal and collateral review based on

state and federal courts have supported at least a limited allowance for federal court abstention “out of deference to pending state court proceedings.”⁹⁰ Even aside from concerns of duplicative or piecemeal litigation, a substantial degree of streamlining of legal process is often tolerated: the courts have shown great tolerance for limitations on review of results from arbitration.⁹¹

Nonetheless, in institutional and procedural contexts, limitations to redundancy seem commonly to reflect not as much a knee-jerk hostility to redundancy as a sense that, although redundancy can generate advantages such as error reduction, a functional society needs to impose some end to institutional review and process in order to move forward productively. In short, in institutional and procedural contexts, there seems more of a general acceptance of a relatively balanced, engineering perspective on redundancy, a perspective that recognizes redundancy’s value but also recognizes that, at some point, redundancy’s costs can exceed its benefits.

2. *Documents and Interpretation.*—Anti-redundancy in law is perhaps most visible in terms of anti-redundancy canons of interpretation. Rules against interpreting a legal document in a way that renders language within the document redundant or otherwise superfluous are commonly cited as canons of construction for legal documents ranging from constitutions and statutes to patents and contracts.⁹² Indeed, electronic searches in Westlaw’s database of all federal court opinions suggest that, in recent years, federal courts have cited anti-redundancy or antisurplusage concerns at least about half as often as the principle of *Chevron*⁹³ deference to administrative-agency determinations,⁹⁴ a principle that is perhaps the dominant

“considerations of finality in the judicial process” and the sense that “[s]omewhere, the closing must come”).

90. ERWIN CHEMERINSKY, FEDERAL JURISDICTION § 14.2, at 903 (6th ed. 2012).

91. See Stephen J. Ware, *Paying the Price of Process: Judicial Regulation of Consumer Arbitration Agreements*, 2001 J. DISP. RESOL. 89, 90 (observing that “arbitration’s finality (near absence of appellate review) saves businesses the costs of appeals”).

92. See, e.g., Anita S. Krishnakumar, *Statutory Interpretation in the Roberts Court’s First Era: An Empirical and Doctrinal Analysis*, 62 HASTINGS L.J. 221, 243 & n.100 (2010) (reporting that “[o]ne frequently referenced subpart [of the ‘whole act rule’ for statutory interpretation] is the rule against superfluities”).

93. *Chevron U.S.A. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837 (1984).

94. A search of Westlaw’s database of all federal court opinions yielded the following numbers of hits for opinions issued from January 1, 2000, to September 29, 2015: (1) 7,637 hits for opinions that gave facial evidence of citing *Chevron* in association with statutory interpretation; and (2) 4,291 hits for opinions that gave facial evidence of invoking anti-redundancy or antisurplusage concerns in association with statutory interpretation. The specific Westlaw search codes that yielded these results for searches run on September 29, 2015, were as follows: (1) (statute! /s (interpret! or constr!)) & (chevron /p (interpret! or constr! or canon)) and DA(after 1999); and (2) (statute! /s (interpret! or constr!)) & ((redundant or redundancy or redundancies or surplusage or superflu!) /s (interpret! or constr! or canon)) and DA(after 1999).

interpretive principle of federal statutory law⁹⁵ and that has been the subject of mountains of law-review articles.⁹⁶ At least in terms of invocations by their Latin names, express references to other principles of statutory interpretation, such as those of *ejusdem generis* or *noscitur a sociis*, lag far behind.⁹⁷

In constitutional law, the canon against superfluity received one of its most prominent articulations in *Marbury v. Madison*.⁹⁸ In this case, Chief Justice Marshall's opinion for the Court contended that failure to reject the proposition that Congress could add to the Court's original jurisdiction would render the U.S. Constitution's provisions on cases within the Court's original and appellate jurisdictions "mere surplusage . . . entirely without meaning."⁹⁹ He then enunciated the general rule against interpretations that render part of the Constitution superfluous: "It cannot be presumed that any clause in the constitution is intended to be without effect; and therefore such a construction is inadmissible, unless the words require it."¹⁰⁰

As Akhil Amar has noted, multiple commentators have pointed out that Marshall's use of the antisurplusage rule in *Marbury* is flawed.¹⁰¹ Even if the Constitution's provision for the Court's original jurisdiction did not specify a ceiling for that jurisdiction, it could still have meaningful effect by specifying a floor, giving the Court original jurisdiction that Congress could

More detailed study by a research assistant of a random sample of 100 of the results from the latter search indicated that over 90% in fact involved relevant invocation of anti-redundancy or antisurplusage concerns, with 85 of the 100 involving anti-redundancy specifically.

95. Thomas W. Merrill, *The Story of Chevron: The Making of an Accidental Landmark*, in ADMINISTRATIVE LAW STORIES 399, 399 (Peter L. Strauss ed., 2006) (noting that *Chevron* is "the most frequently cited case in administrative law").

96. *Id.* at 400 (observing that *Chevron* has been "a magnet for commentators," "debated, analyzed, and measured in countless articles").

97. A search of Westlaw's database of all federal court opinions yielded the following numbers of hits for opinions issued from January 1, 2000, to September 29, 2015: (1) 991 hits for opinions that gave facial evidence of specific invocation of the *expressio unius* canon in association with statutory interpretation; (2) 458 hits for opinions that gave facial evidence of specific invocation of the *ejusdem generis* canon in association with statutory interpretation; and (3) 296 hits for opinions that gave facial evidence of specific invocation of the *noscitur a sociis* canon in association with statutory interpretation. The specific Westlaw search codes that yielded these results for searches run on September 29, 2015, were as follows: (1) (statute! /s (interpret! or constru!)) & ("expressio unius" or "inclusio unius") /p (interpret! or constru! or canon) and DA(after 1999); (2) (statute! /s (interpret! or constru!)) & ("ejusdem generis" /s (interpret! or constru! or canon) and DA(after 1999); and (3) (statute! /s (interpret! or constru!)) & ("noscitur a sociis" /s (interpret! or constru! or canon) and DA(after 1999).

98. 5 U.S. (1 Cranch) 137 (1803).

99. *Id.* at 174.

100. *Id.*

101. Akhil Reed Amar, *Constitutional Redundancies and Clarifying Clauses*, 33 VAL. U. L. REV. 1, 5 (1998) ("[M]odern scholars have ridiculed Marshall's logic here, labeling his argument 'clearly overstated' and 'surely wrong.'").

not take away.¹⁰² Nonetheless, the canon against superfluity is a generally acknowledged part of U.S. constitutional law, and judges have commonly cited *Marbury* as support for its use.¹⁰³

Judges similarly cite antisurplusage canons in opinions interpreting statutes, patent claims, and contracts. The Supreme Court has stated that “[i]t is a cardinal principle of statutory construction that a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void, or insignificant.”¹⁰⁴ Likewise, courts, including the U.S. Court of Appeals for the Federal Circuit, have asserted that “[i]t is the usual (though not invariable) rule that, in patent claims as elsewhere, the construction of a clause as a whole requires construction of the parts, with meaning to be given to each part so as to avoid rendering any part superfluous.”¹⁰⁵ In accordance with this principle, patent law’s much-invoked doctrine of claim differentiation acts “as an anti-redundancy canon”¹⁰⁶ by implementing “a rebuttable presumption that each claim in a patent has a different scope.”¹⁰⁷ Likewise, in interpreting contracts, courts regularly invoke an anti-redundancy canon, stating, for example, that “[a] basic [tenet] of contract law is that each word in the agreement should be interpreted to have a meaning, rather than to be redundant and superfluous.”¹⁰⁸ In short, courts seem to have generally

102. *Id.* (“As a matter of logic, perhaps the clause could be read as setting forth a constitutional minimum rather than maximum quantum of original jurisdiction.”).

103. *See, e.g.*, *Griswold v. Connecticut*, 381 U.S. 479, 490–91 (1965) (Goldberg, J., concurring) (“While this Court has had little occasion to interpret the Ninth Amendment, ‘[i]t cannot be presumed that any clause in the constitution is intended to be without effect.’” (alteration in original) (quoting *Marbury*, 5 U.S. (1 Cranch) at 174)); *Canning v. NLRB*, 705 F.3d 490, 507 (D.C. Cir. 2013) (concluding that a proposed interpretation of the Recess Appointments Clause would “depriv[e a specified] phrase of any force” and therefore “run[] afoul of the principle that every phrase of the Constitution must be given effect”).

104. *TRW Inc. v. Andrews*, 534 U.S. 19, 31 (2001) (internal quotation marks omitted).

105. *Frans Nooren Afdichtingssystemen B.V. v. Stopaq Amcorr Inc.*, 744 F.3d 715, 722 (Fed. Cir. 2014); *cf.* Peter S. Menell, Matthew D. Powers & Steven C. Carlson, *Patent Claim Construction: A Modern Synthesis and Structured Framework*, 25 *BERKELEY TECH. L.J.* 711, 753 (2010) (“The doctrine of ‘claim differentiation’ provides that ‘each claim in a patent is presumptively different in scope.’” (quoting *RF Del., Inc. v. Pac. Keystone Techs., Inc.*, 326 F.3d 1255, 1263 (Fed. Cir. 2003))).

106. ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 777 (6th ed. 2013).

107. *Dow Chem. Co. v. United States*, 226 F.3d 1334, 1341 (Fed. Cir. 2000); *see also* Lemley, *supra* note 7, at 1392 (observing that “[c]ourts rely heavily on the doctrine of claim differentiation”).

108. *Wintermute v. Kan. Bankers Sur. Co.*, 630 F.3d 1063, 1068 (8th Cir. 2011) (second alteration in original) (quoting *Jones v. Sun Carriers, Inc.*, 856 F.2d 1091, 1095 (8th Cir. 1988)); *see also* Foskett v. Great Wolf Resorts, Inc., 518 F.3d 518, 522 (7th Cir. 2008) (“A contract must be construed so as to give a reasonable meaning to each provision of the contract and so as to avoid render[ing] portions of a contract meaningless, inexplicable or mere surplusage.” (alteration in original) (internal quotation marks omitted)); E. ALLAN FARNSWORTH, *CONTRACTS* § 7.11, at

adopted a presumption that, no matter the form of document, a “written instrument [is] to be interpreted so as not to render some language mere surplusage.”¹⁰⁹

3. *Doctrinal Structure*.—Another form of anti-redundancy presumes that different legal doctrines are intended to occupy distinct spaces of application or analysis that are not to overlap in very substantial ways. This presumption can be used to limit the potential scope of general provisions, such as the constitutional requirement of “due process,”¹¹⁰ when such general provisions might otherwise overlap or blend with the scope of a more specific provision, such as the Fourth Amendment’s prohibition of “unreasonable searches and seizures.”¹¹¹ In such situations, the general rule laid down by the U.S. Supreme Court is that the more specific provision governs, and the limitations of this more specific provision are not to be overridden by reliance on the more general provision, which is to be viewed as essentially displaced and inapplicable.¹¹² Likewise, the economic-loss doctrine forbidding bringing certain sorts of claims in tort, rather than contract, is championed for “protect[ing] contract doctrines” from being overridden by tort doctrines and “prevent[ing] the piling on of duplicative remedies.”¹¹³ In like vein, in patent law, the Supreme Court once famously emphasized that examination of the subject-matter eligibility of a patent claim—i.e., whether the claim covers only types of things, such as machines, that are eligible for patenting—should be considered to be entirely distinct from questions about “[t]he ‘novelty’ of any element or

458 (4th ed. 2004) (“[A]n interpretation that gives effect to every part of the agreement is favored over one that makes some part of it mere surplusage.”).

109. MERGES & DUFFY, *supra* note 106, at 777.

110. U.S. CONST. amend. V; *id.* amend. XIV, § 1.

111. *Id.* amend. IV.

112. *Cty. of Sacramento v. Lewis*, 523 U.S. 833, 842 (1998) (“Because we have ‘always been reluctant to expand the concept of substantive due process,’ we held in *Graham v. Connor*, 490 U.S. 386 (1989), that ‘[w]here a particular Amendment provides an explicit textual source of constitutional protection against a particular sort of government behavior, that Amendment, not the more generalized notion of substantive due process, must be the guide for analyzing these claims.’” (alteration in original) (citations omitted) (first quoting *Collins v. City of Harker Heights*, 503 U.S. 115, 125 (1992); then quoting *Albright v. Oliver*, 510 U.S. 266, 273 (1994) (plurality opinion of Rehnquist, C.J.)); see also John F. Manning, *The Eleventh Amendment and the Reading of Precise Constitutional Texts*, 113 YALE L.J. 1663, 1734 (2004) (describing a “specificity canon” that can prevent a more general statute from rendering redundant a more specific statute by “presuppos[ing] that when a statute prescribes either a carefully drawn method of exercising a given power or a well-delineated set of restrictions on such power, an interpreter may read that specification to displace more general sources of potential authority”).

113. *All-Tech Telecom, Inc. v. Amway Corp.*, 174 F.3d 862, 869 (7th Cir. 1999); see also *Digicorp, Inc. v. Ameritech Corp.*, 662 N.W.2d 652, 659 (Wis. 2003) (“[T]he economic loss doctrine requires transacting parties in Wisconsin to pursue only their contractual remedies when asserting an economic loss claim, in order to preserve the distinction between contract and tort law.”).

steps in a process, or even of the process itself,” novelty being a separate requirement for patentability.¹¹⁴ The Federal Circuit’s predecessor appellate court for patent law, the Court of Customs and Patent Appeals (CCPA), quickly picked up on the Supreme Court’s apparent rejection of “‘point of novelty’ analysis” for subject-matter eligibility,¹¹⁵ and the Federal Circuit, which adopted CCPA precedent as its own,¹¹⁶ appears to have turned this separation between analyses under § 101 and § 102 of the U.S. Patent Act into a model for strongly compartmentalized analysis under various other statutory provisions.¹¹⁷

With respect to the structure of legal doctrine, anti-redundancy can serve significant functional interests. In addition to focusing a decision maker’s attention on a single legal inquiry, anti-redundancy as a principle for structuring legal doctrine can help cut off analytically repetitive legal argument. Courts can experience frustration when a ruling against a party on a hard-fought legal question seemingly only serves as a prelude to the assertion of fundamentally similar arguments under a different doctrinal heading. In patent law, such frustration can arise when a patentee first loses on a question of patent claim construction—a question about the literal scope of patent claims—and follows this defeat with argument that, despite not falling within the literal scope of the patent claim as construed, an accused product or process infringes under the doctrine of equivalents because it contains one or another element that is at least equivalent to each element of the claim.¹¹⁸ Arguments for infringement by equivalence can often closely track arguments about patent claims’ literal scope,¹¹⁹ and the result can be judicial complaint that equivalence arguments effectively amount to an effort to relitigate claim construction, a complaint likely to

114. *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (“The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.”).

115. *In re Taner*, 681 F.2d 787, 791 (1982).

116. *S. Corp. v. United States*, 690 F.2d 1368, 1370 (Fed. Cir. 1982) (en banc) (adopting as precedent for the newly formed Federal Circuit “[t]hat body of law represented by the holdings of the Court of Claims and the Court of Customs and Patent Appeals”).

117. *Cf. In re Nuijten*, 500 F.3d 1346, 1354 n.3 (Fed. Cir. 2007) (“Of course, a claim that is so unclear as to be ambiguous about whether it covers a process or a machine might be invalid for failure to ‘particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention,’ 35 U.S.C. § 112 ¶ 2, but claim definiteness is a requirement separate from patentability under § 101.” (alterations in original)).

118. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1016 (2006) (“Under the doctrine of equivalents, ‘a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is “equivalence” between the elements of the accused product or process and the claimed elements of the patented invention.’” (quoting *Warner–Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997))).

119. *See* John R. Allison & Mark A. Lemley, *The (Unnoticed) Demise of the Doctrine of Equivalents*, 59 STAN. L. REV. 955, 977 (2007) (“[T]he patentee will use the doctrine of equivalents as a second bite at the apple.”).

presage rejection of the equivalence argument and a grant of summary judgment of no infringement.¹²⁰ The result can be an effective collapse of the “two bites at the apple,” that the doctrines of literal infringement and of infringement by equivalence seem fundamentally intended to provide.

C. *Redundancy and Anti-Redundancy as Design Principles*

Whatever the faults of anti-redundancy, the law has apparently long survived them. Why might anti-redundancy nonetheless be a matter of concern? First, anti-redundancy commonly runs contrary to actual norms of human communication and legal design.¹²¹ Consequently, unless one believes that anti-redundancy principles carry no real weight with courts and are at most only convenient means for post hoc rationalization,¹²² they might lead courts astray in interpreting and applying relevant law. Further, even if anti-redundancy principles typically only establish easily hurdled defaults, the cumulative cost of overcoming these defaults in case after case might entail substantial waste if redundancy is pervasive. Second, to the extent anti-redundancy leads to less redundancy either in original legal design or in legal doctrines as understood and applied, anti-redundancy might prevent law from realizing benefits of redundancy such as the relative clarity and reliability in cases of core concern that redundancy can help ensure.¹²³

In engineered systems, redundancy is commonly used to ensure safety or otherwise to protect against system failure.¹²⁴ Dual-braking systems in vehicles provide an example of useful partial redundancy, one that exists between a commonly pedal-operated “fluid braking subsystem” and a hand-operated, emergency “mechanical braking subsystem.”¹²⁵ These braking systems are redundant in the sense that they both provide a means of

120. *See id.* at 958 (“[A] court that has just rejected a literal infringement argument . . . is unlikely to undo the work of claim construction by sending the issue of infringement by equivalents to the jury.”).

121. *See supra* text accompanying notes 2–9; *see also* Bazzanella, *supra* note 44, at 251 (describing redundancy as a “pervasive” and “essential feature[] of language” as well as common in biological and complex systems).

122. *See* FARNSWORTH, *supra* note 108, § 7.11, at 456 (describing the use of maxims of interpretation in judicial opinions as “often more ceremonial . . . than persuasive”).

123. *Cf.* Amar, *supra* note 101, at 10 (identifying “a certain kind of good redundancy represented by various clauses that are clarity-enhancing and doubt-removing”).

124. *See, e.g.*, ISRAEL KOREN & C. MANI KRISHNA, FAULT-TOLERANT SYSTEMS 3 (2007) (“All of fault tolerance is an exercise in exploiting and managing *redundancy*.”); Landau, *supra* note 58, at 349 (noting that “the phenomenon of ‘duplication’” is not “overlooked in the design of automobiles, computers, and aircraft . . . , as with the dual braking system”); Victor P. Nelson, *Fault-Tolerant Computing: Fundamental Concepts*, COMPUTER, July 1990, at 19, 21 (“Fault tolerance in a digital system is achieved through redundancy in hardware, software, information, and/or computations.”).

125. EBELING, *supra* note 10, at 91.

stopping a moving vehicle. Their combination protects against total brake failure by requiring that “[b]oth . . . fail in order for the [overall braking] system to fail.”¹²⁶ But generally speaking, the braking systems are only partially redundant—indeed, feature only bidirectionally partial redundancy—because the fluid braking system allows for much finer control of the vehicle whereas the emergency braking system has its own distinctive capacity to act as a parking brake.¹²⁷

Mechanical redundancies can exhibit another aspect of redundancy commonly found in legal institutions and processes—namely, hierarchical or multipolar relationships. A “safety valve” can override and shut down the operation of other mechanical subsystems. Further, mechanical redundancies can be intertwined with relationships among people. My office has an automatically locking door that creates a constant risk of my locking myself out. But there is value in having an automatically locking door, and the risk generated by the automatic lock is mitigated by the fact that, in the event of a lock out, I might call on someone else—my faculty assistant, an administrator, or even the university police—to unlock the door.

Similarly, in biological systems, redundancy, often partial and sometimes hierarchical or multipolar, frequently helps ensure robustness—i.e., the capacity of “a system to maintain its functions despite external and internal perturbations.”¹²⁸ Biological redundancy can also serve a secondary purpose of fostering evolutionary capacity by providing organisms with a greater tolerance for mutations.¹²⁹ As maintaining key

126. *Id.*

127. Most car owners are presumably familiar with an even more mundane example of redundancy in the form of a spare tire kept in the car’s trunk to back up the tires currently in use. Apart from the need to remove a flat tire and install the spare, a spare tire and a tire originally installed on a car might be essentially completely redundant. But such a situation now tends to be the exception, rather than the norm: most cars today come with “a ‘temporary-use’ spare tire and wheel” that tends to be “physically shorter and narrower than the vehicle’s standard tires and wheels” and that should only be used over relatively short distances and at relatively low speeds. *Tire Tech: Spare Tire Use*, TIRERACK.COM, <http://www.tirerack.com/tires/tiretech/techpage.jsp?techid=141> [<http://perma.cc/D3AD-ZC7J>].

128. Hiroaki Kitano, *Biological Robustness*, 5 NATURE REVIEWS: GENETICS 826, 826 (2004); see also NASSIM NICHOLAS TALEB, *ANTIFRAGILE: THINGS THAT GAIN FROM DISORDER* 44 (2012) (“Layers of redundancy are the central risk management property of natural systems.”); David C. Krakauer & Joshua B. Plotkin, *Redundancy, Antiredundancy, and the Robustness of Genomes*, 99 PROC. NAT’L ACAD. SCI. 1405, 1405 (2002) (noting that biological redundancy among genes is thought to “promote[] robustness by ‘backing-up’ important functions”).

129. Lisa Schramm, Yaochu Jin & Bernhard Sendhoff, *Quantitative Analysis of Redundancy in Evolution of Developmental Systems*, in 2012 IEEE SYMPOSIUM ON COMPUTATIONAL INTELLIGENCE IN BIOINFORMATICS AND COMPUTATIONAL BIOLOGY 61, 61 (2012) (“In evolutionary biology, it has been argued that genetic redundancy is one of the main mechanisms that contribute substantially to mutational robustness, which in turn is a pre-requisite for evolutionary innovation.” (footnote omitted)); see also *Plant Evolution: Double or Quits*,

bodily functions is crucial for living, it is perhaps no surprise that many organisms contain “apparently redundant genes” that “perform[] the same function,” with the result “that inactivation of one of these genes has little or no effect” on the organism’s ability to survive.¹³⁰ Biological systems can also exhibit redundancy in more complex ways: in humans, for example, the possibility of communicating through sign language can operate as a backup or alternative to the possibility of communicating through speech.¹³¹ Engineered systems with audiovisual capabilities can likewise employ “between-channel redundancy” by presenting overlapping information through distinct audio and visual modes of communication¹³²—for example, a beeping sound and a flashing red light used together to provide a warning.¹³³

Language itself can be viewed as an engineered system in which redundancy helps ensure against communication failure by protecting against discrete errors or limitations in the transmission, reception, and comprehension of messages.¹³⁴ Stripping out redundancy can lead to greater possibilities of communicative failure. In ordinary writing, effective communication can often occur despite a missing letter or even a missing ___ of letters. But such errors might be substantially more likely to cause problems in the already-compressed expression of a short text message in which there is less context to supply meaning. Through reinforcing or clarifying effect, overlapping legal doctrines or linguistic redundancy in legal drafting can similarly help ensure that critical communicative or

ECONOMIST (June 28, 2014), <http://www.economist.com/news/science-and-technology/21605869-vegetable-kingdom-more-sets-chromosomes-are-often-better-double-or> [perma.cc/Y4L8-YAH9] (observing that genetic redundancy “allows the spares to mutate and evolve to do new jobs while the existing jobs are covered by the unchanged ‘heir’ genes”); *cf.* TALEB, *supra* note 128, at 3 (describing the concept of “antifragility” as one that exceeds “resilience or robustness” in the sense that, whereas “[t]he resilient resists shocks and stays the same[,] the antifragile gets better”).

130. Martin A. Nowak, Maarten C. Boerlijst, Jonathan Cooke & John Maynard Smith, *Evolution of Genetic Redundancy*, 388 NATURE 167, 167 (1997).

131. Martin Randles, David Lamb, E. Odat & A. Taleb-Bendiab, *Distributed Redundancy and Robustness in Complex Systems*, 77 J. COMPUTER & SYS. SCI. 293, 294 (2011) (“[I]n a biological system if communication through speech (say) becomes impossible[,] then other system attributes may be utilised, to accomplish the same outcome, such as sign language . . .”).

132. Gibson & Mendleson, *supra* note 38, at 50 (“Between-channel redundancy . . . occurs in dual- or multi-channel communication when information is shared or repeated among auditory, olfactory, tactile, gustatory, or visual channels.”).

133. *Cf. id.* at 54 (“Communicating by telegram, telephone, or many forms of teleconferencing presents more opportunities for error and equivocation and fewer checks on misinformation than does communicating face-to-face, when many channels are used and communication is commonly redundant.”).

134. *Id.* at 52 (“Redundancy can facilitate all forms of communication associated with humans since it counteracts noise—the ultimate limiter of effective communication.”); Landau, *supra* note 58, at 346 (“[I]t is precisely the liberal use of redundancy that provides linguistic expression with an extraordinary measure of ‘reliability.’”).

decisional errors are avoided.¹³⁵ In this sense, John Manning and Matthew Stephenson have noted that technically redundant language can serve a meaningful purpose: a text's inclusion of apparently unnecessary words can help clarify or reinforce the intended meaning of other language in the text.¹³⁶ The drafter of a legal document might consider such clarification or reinforcement to be particularly important if there is a substantial risk that a hostile party or court will naturally seek to twist the understanding of legal language to its liking.¹³⁷

More generally, as Henry Smith has highlighted, the need for law and legal documents to speak authoritatively to heterogeneous audiences across time and across "complex and loose organizations, like a court system," can place a premium not only on employment of conventional formalities but also on the use of redundancy as a way of overcoming noise.¹³⁸ Of course, substantial consignment of the direct reading and interpretation of legal texts to lawyers could reduce the effective heterogeneity of the relevant audience. But the members of the legal profession themselves tend to be intellectually diverse, encompassing a variety of different forms of legal specialists as well as people who, even if sharing a specialty, have distinct modes of thought informed by their different nonlegal backgrounds. In any event, a common commitment to government in which generalist judges and policy makers have the ultimate say naturally places limits on the degree to which the law can be viewed as speaking only to a very specialized and largely homogeneous audience.¹³⁹

135. Cf. Randy E. Barnett, *The Virtues of Redundancy in Legal Thought*, 38 CLEV. ST. L. REV. 153, 154 (1990) (contending "that the degree of confidence we have in any of our beliefs largely depends upon the degree to which the different methods we use to critically assess our beliefs converge on the same conclusion").

136. MANNING & STEPHENSON, *supra* note 5, at 248 (noting that, although rendered technically redundant by the U.S. Supreme Court's construction of "communication," statutory words such as "'notice,' 'circular,' 'advertisement,' or 'letter'" were "not at all superfluous"); cf. Shapiro, *supra* note 6, at 132 (recalling "the argument that redundancies at the syntactic level are not redundant at the semantic level, because they transmit the knowledge that the sender is repeating or patterning his message").

137. Lawrence M. Friedman, *Law and Its Language*, 33 GEO. WASH. L. REV. 563, 574 (1964) (hypothesizing that the common use of strings of synonyms in "Anglo-American statutes" reflects a history in which statutes "have sometimes been treated by courts with something akin to contempt").

138. Henry E. Smith, *The Language of Property: Form, Context, and Audience*, 55 STAN. L. REV. 1105, 1157–61 (2003) (discussing benefits of "[r]edundancy in legal communication"); see also ROGERS & AGARWALA-ROGERS, *supra* note 32, at 14 (observing that "[h]eterophilous communication"—i.e., communication between a source and receiver who are different along relevant dimensions—"often leads to message distortion, delayed transmission (because of longer reaction time), restricted channels, and cognitive dissonance" and that redundancy "reduces the disturbing influence of [such] noise on communication effectiveness").

139. See Smith, *supra* note 138, at 1159 (expressing skepticism about the general ability of "potential information intermediaries" such as "lawyers and journalists" to compensate fully for

As discussed earlier, redundancy in language can serve additional, more independently affirmative communicative purposes than error correction or prevention, such as facilitating communication of nuance.¹⁴⁰ In this respect, Lawrence Friedman cited the example of the phrase “the truth, the whole truth, and nothing but the truth” in an oath commonly taken by witnesses.¹⁴¹ Friedman viewed the phrase as an example of “[r]itual phraseology . . . designed to convey, not information, but emotion”—“the magic and majesty of the oath.”¹⁴² One might also suspect that the redundancy here is designed for greater clarity and emphasis, with the additional variants on “truth” securing assurance not only that, despite the vagaries of auditory communication, the recipient of the message will absorb its basic import¹⁴³ but also that the recipient will appreciate finer points—namely, that sworn testimony is to feature neither partial truths nor whole truths obscured by extraneous matter.¹⁴⁴

Law’s robustness can also be improved through the deployment of legal doctrines or bodies of legal doctrine that have overlapping concern or effect. In certain situations, doctrinal overlaps can reduce uncertainty about legal outcomes by helping ensure that a variety of closely related factual situations will lead to a similar outcome. Thus, for example, if a claimed invention differs at best by only a “hairsbreadth” from a previously publicly available device,¹⁴⁵ there might be cause for debate over whether, under one

the inaccessibility of primary legal materials “such as statutes, cases, and regulations” to the general public).

140. See *supra* text accompanying notes 44–53.

141. Friedman, *supra* note 137, at 571 (internal quotation marks omitted).

142. *Id.*

143. Cf. LINGUISTICS, *supra* note 38, at 38 (“The spoken utterances come in one long sound stream, and the individual words, and even individual sounds, are often hard to distinguish.”); TERRENCE W. DEACON, THE SYMBOLIC SPECIES: THE CO-EVOLUTION OF LANGUAGE AND THE BRAIN 363 (1997) (noting that “the best way to compensate for noise or error-proneness in communication is redundancy” and that “[w]e tend to repeat things, spell out important words, say the same thing in different ways, or add gestures and exaggerated tonality and volume in order to overcome the vicissitudes imposed by noisy rooms, distractions, inept listeners, or otherwise difficult-to-convey messages”); Oliver-Lalana, *supra* note 48, at 146 (“[A] tautological addition makes sense whenever the information sender is afraid that the meaning of his message cannot be properly understood by the recipient, which may be caused by deficient comprehension abilities, contextual information, lack of attention or motivation, or by any other form of pragmatic or semantic noise.”).

144. Here I implicitly contest to some degree Friedman’s assertion that there is no known “substantive reason for distinguishing between a truth and a whole truth.” Friedman, *supra* note 137, at 571; cf. George C. Christie, *Vagueness and Legal Language*, 48 MINN. L. REV. 885, 891 (1964) (contending “that through the skillful combination of vague terms a draftsman can often achieve better results than he can by stringing together—or, if one prefers, fitting together—precise technical terms”).

145. *Sibia Neurosciences, Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1349, 1359 (Fed. Cir. 2000) (holding a claim obvious after determining that “the undisputed teaching of the Stumpo paper leads one to within a hairsbreadth of anticipation”—i.e., lack of novelty).

claim construction or another, the claimed invention survives patent law's novelty requirement because all one needs for novelty is a hairsbreadth of distinction.¹⁴⁶ But there might be no real debate over whether the claimed invention is in fact patentable: although the hairsbreadth suffices to establish novelty, it might be entirely clear that it does not suffice to satisfy patent law's partially redundant "super-novelty" requirement of non-obviousness,¹⁴⁷ the requirement that a claimed invention not only be at least somewhat distinct from what is disclosed or embodied in a single piece of prior art, but also be beyond what, in view of all the prior art, a person of ordinary skill in the relevant technological art would have found to be obvious.¹⁴⁸ An example of reinforcing doctrinal overlaps can also be derived from a famous fact pattern in contract law—namely, the famous *Peerless*¹⁴⁹ case and close variants, under which doctrines of misunderstanding and mistake have been offered as alternate grounds for finding an apparent agreement to have been tellingly defective.¹⁵⁰ More generally,

146. See *Oakley, Inc. v. Sunglass Hut Int'l*, 316 F.3d 1331, 1339 (Fed. Cir. 2003) ("A determination that a claim is invalid as being anticipated or lacking novelty under 35 U.S.C. § 102 requires a finding that each and every limitation is found either expressly or inherently in a single prior art reference." (internal quotation marks omitted)); JANICE M. MUELLER, *PATENT LAW* 273 (4th ed. 2013) ("[T]he test for anticipation under 35 U.S.C. § 102 is one of 'strict identity' . . .").

147. MUELLER, *supra* note 146, at 273 (describing the nonobviousness requirement as a "requirement for something more than novelty"). *But cf.* *Cohesive Techs., Inc. v. Waters Corp.*, 543 F.3d 1351, 1364 (Fed. Cir. 2008) ("While it is commonly understood that prior art references that anticipate a claim will usually render that claim obvious, it is not necessarily true that a verdict of nonobviousness forecloses anticipation.").

148. See 35 U.S.C. § 103 (2012) (stating the nonobviousness requirement for patentability); *Cohesive Techs.*, 543 F.3d at 1364 ("Obviousness can be proven by combining existing prior art references, while anticipation requires all elements of a claim to be disclosed within a single reference."); *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986) ("The person of ordinary skill is a hypothetical person who is presumed to be aware of all the pertinent prior art.").

149. *Raffles v. Wichelhaus* (*Peerless*), (1864) 159 Eng. Rep. 375; 2 Hurl. & C. 906.

150. See, e.g., RESTATEMENT (SECOND) OF CONTRACTS § 20 cmt. d, illus. 1–4 (AM. LAW INST. 1981) (presenting variants of the *Peerless* case fact pattern under a discussion of mutual misunderstanding but describing at least some variants as also governed by the rules on mistake); Friedrich Kessler & Edith Fine, *Culpa in Contrahendo, Bargaining in Good Faith, and Freedom of Contract: A Comparative Study*, 77 HARV. L. REV. 401, 427–28 (1964) (describing the *Peerless* case as "involving latent ambiguity, frequently called 'mutual misunderstanding' or 'mutual mistake'" (footnote omitted)); A. W. Brian Simpson, *Contracts for Cotton to Arrive: The Case of the Two Ships Peerless*, 11 CARDOZO L. REV. 287, 323 (1989) (pointing in passing to arguable aspects of misunderstanding and mistake in speaking of an assumed "genuine misunderstanding, neither side initially realizing that there were two vessels of the same name loading cotton in Bombay"). *But cf.* Benjamin Alarie, *Mutual Misunderstanding in Contract*, 46 AM. BUS. L.J. 531, 533 (2009) (contrasting "mutual misunderstanding cases," in which "the parties understand the terms of the contract differently," with "mistake cases," in which "the terms are clearly understood but the underlying factual beliefs about the world of one or both of the parties are . . . mistaken"); Scott D. Gerber, *Corbin and Fuller's Cases on Contracts (1942?): The Casebook That Never Was*, 72 FORDHAM L. REV. 595, 621 (2003) (quoting a letter from Lon Fuller to Arthur

whenever there are overlapping legal doctrines that can provide support for an identical legal result, they can act together to provide greater assurance that this result will be achieved. Litigants and even judges can use this aspect of overlapping legal provisions or principles to their advantage, providing alternate grounds for their arguments or judgments to protect against the failure of one or another.¹⁵¹

The relationship between patent law's novelty and nonobviousness requirements points to a further, subtler, but perhaps more profound way in which overlapping legal doctrines can have clarifying effect. Redundancy can have clarifying effect by enabling one "front-end" doctrine to do substantial work while remaining relatively simple, with a more complicated or more hazily defined doctrine providing either the basic background standard or acting as a backstop to secure the overall legal system against anomalies, loopholes, or abuse. In patent law, the test for lack of novelty of a patent claim can enjoy a quite simple formulation—a single prior art reference must disclose all aspects of the claimed invention¹⁵²—because the novelty requirement is reinforced by the further, more complicated requirement of nonobviousness to a person of ordinary skill in the relevant art, a requirement whose application can require considering combinations of the disclosures of different prior art references,¹⁵³ determination of whether such references should be considered to be "analogous art,"¹⁵⁴ and assessment of the capacities of the ordinary artisan.¹⁵⁵ As Smith has suggested, a similar relationship between simpler, front-end rules and more complex or hazier standards appears in relationships between law and equity, with equitable safety valves giving

Corbin mentioning "three cases on mutual mistake of fact (as contrasted with 'misunderstanding' as in the Peerless case)").

151. Cf. Stewart A. Baker, *A Practical Guide to Certiorari*, 33 CATH. U. L. REV. 611, 628–29 (1984) (noting "widespread speculation that some circuit court decisions have been deliberately made 'certproof'—insulated from Supreme Court review by combining a humdrum alternative ground with a controversial new judicial rule"). But see Kathryn M. Stanchi, *The Science of Persuasion: An Initial Exploration*, 2006 MICH. ST. L. REV. 411, 431 ("While some commentators see argument in the alternative as a valid persuasive strategy, others caution that the strategy can make both arguments appear weak.").

152. See *supra* note 146 and accompanying text.

153. See *supra* note 148 and accompanying text.

154. *Innovention Toys, LLC v. MGA Entm't, Inc.*, 637 F.3d 1314, 1321 (Fed. Cir. 2011) ("A reference qualifies as prior art for a determination under § 103 when it is analogous to the claimed invention.").

155. See *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007) (instructing that, in addressing the question of nonobviousness, "a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ").

backstopping support to more straightforward legal rules that can provide substantial clarity in at least a subset of real-world situations.¹⁵⁶

Another advantage of overlapping legal doctrines is that, like two-dimensional maps that cover different but overlapping regions of the globe,¹⁵⁷ they can help prevent undesired gaps in legal coverage while also avoiding a need for the excessive warping of one or another doctrine to prevent this or that particular case from falling through doctrinal cracks. The use of a combination of overlapping legal doctrines can thus enable a brokered peace between conflicting demands for simplicity and complexity,¹⁵⁸ allowing the deployment of a set of rules that are locally relatively simple but that together form a relatively complex and adaptive whole.¹⁵⁹ The somewhat different perspective that a distinct but at least partially overlapping doctrine embodies might improve the law's self-correcting and adaptive potential as well as its facial breadth of coverage. The Uniform Commercial Code suggests that contract law's unconscionability doctrine plays such a role in relation to overlapping doctrines of public policy or contract interpretation.¹⁶⁰ Aspects of patent law's restrictions on subject-matter eligibility, including doctrines regulating when a claimed invention should be viewed as representing an attempt to patent an "abstract idea," "natural phenomenon," or "law of nature,"¹⁶¹

156. Henry E. Smith, *On the Economy of Concepts in Property*, 160 U. PA. L. REV. 2097, 2124–25 (2012) (“[I]t is easier to describe—and to navigate—a system of simple rules backed up by a no-misuse principle than it would be to specify the methods of misuse (or even its outer contours) and then treat non-misuse as an exception.”); *id.* at 2127 (“Law can afford to be simple as long as it is backed up by equitable anti-opportunism principles.”). *But see* Douglas Laycock, *The Triumph of Equity*, LAW & CONTEMP. PROBS., Summer 1993, at 53, 53 (“We should stop thinking of equity as separate and marginal, as consisting of extraordinary remedies, supplemental doctrines, and occasional exceptions . . .”).

157. *Cf.* STEPHEN HAWKING & LEONARD MLODINOW, *A BRIEFER HISTORY OF TIME* 14–18 (2005) (describing the possibility of a unified theory of physics that uses multiple formulas having distinct but overlapping coverage).

158. *See* Peter H. Schuck, *Legal Complexity: Some Causes, Consequences, and Cures*, 42 DUKE L.J. 1, 8 (1992) (noting that “complexity is both a weakness and a strength”); *cf.* RICHARD A. EPSTEIN, *SIMPLE RULES FOR A COMPLEX WORLD* 33 (1995) (observing that “simplicity is not the sole goal of any sensible legal system” because “it seeks to minimize . . . administrative [costs] without regard to the impact . . . [on] incentives to human action”).

159. *Cf.* Caryn Devins, Roger Koppl, Stuart Kauffman & Teppo Felin, *Against Design*, 47 ARIZ. ST. L.J. 609, 673 (2015) (“The complexity theory literature demonstrates that attributes such as redundancy, degeneracy, adaptivity, diversity, and resilience often predict performance in unforeseen situations.”).

160. U.C.C. § 2-302 cmt. 1 (AM. LAW INST. & NAT’L CONFERENCE OF COMM’RS ON UNIF. STATE LAWS 1987) (stating that policing against “unconscionable” contractual language had previously “been accomplished by adverse construction of language, by manipulation of the rules of offer and acceptance or by determinations that the clause is contrary to public policy or to the dominant purpose of the contract”).

161. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012) (“[L]aws of nature, natural phenomena, and abstract ideas’ are not patentable.” (alteration in original) (citations omitted)).

currently appear to play a similar role in relation to doctrines requiring that a claimed invention meet patentability requirements of utility, novelty, and nonobviousness.¹⁶² A somewhat flexible subject-matter analysis that overlaps with other patentability analyses can help prevent avoidance of the intended force of the separate patentability requirements through artful claim drafting.¹⁶³

More generally, overlapping coverage between more settled or crisply defined doctrines and more plastic doctrines might make it easier for courts and society to tolerate or even encourage the evolutionary potential of the latter. Evolution of a relatively plastic doctrine might be easier to stomach if more crisply defined doctrines ensure that key interests are secure. Such a combination of relatively rule-like cores plus less settled peripheries might be viewed as characteristic of common law developed through case-by-case precedent and might constitute one of the traditional common law's evolutionary advantages.

In light of the above advantages of redundancy, why has anti-redundancy remained so strong? Courts continue to invoke anti-redundancy principles regularly across legal contexts, and even Karl Llewellyn, a great skeptic of canons,¹⁶⁴ offered only a relatively weak countercanon to the anti-redundancy canon for statutory construction—namely, the countercanon that, “[i]f inadvertently inserted or if repugnant to the rest of the statute, [words in a statute] may be rejected as surplusage.”¹⁶⁵ Randy Barnett has suggested that “[a]t least three reasons explain why [in legal contexts] the virtues of redundancy are so commonly overlooked”:

162. *See id.* at 1304 (rejecting the Government's invitation to disregard “the novelty of a component law of nature . . . when evaluating the novelty of the whole [of a claimed invention]”).

163. *See* John M. Golden, *Flook Says One Thing, Diehr Says Another: A Need for Housecleaning in the Law of Patentable Subject Matter*, 82 GEO. WASH. L. REV. 1765, 1793 (2014) (noting the U.S. Supreme Court's concern with “abusively artful claim drafting” as a way of avoiding the force of “subject-matter exclusions”); *cf. Mayo*, 132 S. Ct. at 1297 (“If a law of nature is not patentable, then neither is a process reciting a law of nature, unless that process has additional features that provide practical assurance that the process is more than a drafting effort designed to monopolize the law of nature itself.”).

164. 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, 401 (1950) (contending that “there are two opposing canons on almost every point” and that “to make any canon take hold in a particular instance, the construction contended for must be sold, essentially, by [other] means”).

165. *Id.* at 404 (providing this prosurplusage canon as a counter to an antisurplusage canon); *cf. EINER ELHAUGE*, STATUTORY DEFAULT RULES: HOW TO INTERPRET UNCLEAR LEGISLATION 188 (2008) (observing that the conflict between canons and “counter-canon[s] . . . was overstated, because many of Llewellyn's counter-canons merely” limited associated canons); ANTONIN SCALIA, A MATTER OF INTERPRETATION: FEDERAL COURTS AND THE LAW 27 (1997) (contending that, “[m]ostly, . . . Llewellyn's ‘Parries’ do not contradict the corresponding canon but rather merely show that it is not absolute”).

(1) “[M]oral philosophers and legal intellectuals do not spend much time worrying about easy cases where differing modes of analysis converge.”¹⁶⁶

(2) “[M]odern intellectuals are trained to accept the principle of parsimony—or ‘Ockham’s razor’—leading them to seek the minimally sufficient account of any conclusion.”¹⁶⁷

(3) “Intellectuals in many disciplines, from law to philosophy to economics, are often oblivious to the serious practical problems of knowledge and interest that pervade actual decisionmaking.”¹⁶⁸

David Gibson and Barbara Mendleson suggest another possibility.¹⁶⁹ Recorded forms of communication, such as writing or audio recordings, frequently enable effective communication with less redundancy than would commonly be required to ensure accurate and reliable communication through verbal speech.¹⁷⁰ Repetition or near repetition is less necessary in recorded communication because an audience member can, for example, read or reread the relevant text to avoid missing a point or to substitute for committing content to memory. Further, reception of the recorded communication might be more readily arranged to occur in a relatively controlled and noise-free environment such as a library reading room.¹⁷¹ Finally, the potentially greater likelihood of repeated and widespread use of the original form of a recorded message can place a greater premium on limiting redundancy than would be typical for unrecorded verbal remarks. With each repeated use, the cumulative cost that needless redundancy imposes increases, thereby increasing the potential savings from a single edit to remove redundancy. In short, means for recording messages can render redundancy that was generally helpful for unrecorded verbal communication essentially wasteful in new communicative contexts. In adapting verbal speech patterns to recorded

166. Barnett, *supra* note 135, at 157.

167. *Id.* at 158; cf. Tun-Jen Chiang, *The Rules and Standards of Patentable Subject Matter*, 2010 WIS. L. REV. 1353, 1396–97 (“[I]f the abstract-idea doctrine [for subject-matter eligibility] is understood as being functionally redundant with [patent law’s] enablement [requirement], the logical argument would be to fold the doctrine into enablement so as to simplify patent law.”).

168. Barnett, *supra* note 135, at 158.

169. See Gibson & Mendleson, *supra* note 38, at 53 (discussing a potential explanation for the fact that, “[i]n business communication, the message sender often has the predisposition—if not the mandate—to be as succinct as possible”).

170. See *id.* (noting that emphasis on eliminating redundancy “often prevails with . . . recorded forms of communication”).

171. *Id.* (“Error and equivocation are more likely to occur within noise-congested channels (e.g., the telephone . . .) than when using other more ‘efficient’ channels (e.g., the computer . . .).”).

media, people might become used to seeking to strip out redundancy, and the resulting mindset might morph into an overly simplified general effort to eliminate redundancy across the board.

This posited psychoanalysis of anti-redundancy is not meant to deny anti-redundancy's functional bases for appeal. As the explanation itself suggests, anti-redundancy has a fundamental association with relative efficiency or elegance,¹⁷² an association that substantially tracks engineers' concern with the cost of introducing and maintaining redundant systems. In many situations, anti-redundancy might also be argued to advance four additional ends: (1) tracking the intent of relevant actors such as document drafters; (2) improving the behavior of such drafters or other potential generators of redundancy;¹⁷³ (3) increasing the predictability and functional quality of official interpretations and applications of law; and (4) supplying courts with transubstantive decision rules that can make their work more manageable across a variety of contexts. In a variant of Llewellyn's account of canons and countercanons, however, each of these justifications has problems.

First, there is a substantial argument that the fourth itemized justification is really no justification at all. Anti-redundancy might make judges' "jobs easier" by permitting them to decide or at least to appear "to decide cases that involve increasingly technical legal issues on the basis of familiar, if content-free, generic legal rules that can be transported from case to case and from legal problem to legal problem like a set of handy,

172. Cf. Amar, *supra* note 101, at 6 ("[T]he anti-redundancy maxim, sensibly understood, is merely one aspect of a general preference in favor of grace over awkwardness . . ."). Costs associated with redundancy can include the additional information costs of producing and processing longer legal documents, H. J. Hsia, *Redundancy: Is It the Lost Key to Better Communication?*, 25 AV COMM. REV. 63, 79 (1977) (observing that redundancy "usually exists at the expense of information" and "invariably brings about . . . an increase in the cost of information processing"); see also JACK P. HAILMAN, CODING AND REDUNDANCY: MAN-MADE AND ANIMAL-EVOLVED SIGNALS 176 (2008) ("[R]edundancy always reduces the efficiency or parsimony of a code."), the suspicion that such longer documents might inspire, cf. Smith, *supra* note 138, at 1149 ("In the absence of common knowledge, longer locutions can be used, but then the nonwriting party has to search through them for possible traps."), and possible increases in problematic ambiguity if additional words are not chosen carefully or the effort to provide clarity through reinforcement on one front leads to confusion on another, perhaps because each reinforcement brings with it some additional fuzzy periphery, see THOMAS HOBBS, LEVIATHAN 240 (Richard Tuck ed., 1991) ("[A]ll words, are subject to ambiguity; and therefore multiplication of words in the body of the Law, is multiplication of ambiguity . . ."); Oliver-Lalana, *supra* note 48, at 148 (observing that redundancy might "increas[e] legal uncertainty and therefore opaqueness" by "increas[ing] the complexity that the information user has to deal with" and by "conceal[ing] the authentic legal norm by communicating something that does not correspond exactly to it").

173. ADRIAN VERMEULE, JUDGING UNDER UNCERTAINTY: AN INSTITUTIONAL THEORY OF LEGAL INTERPRETATION 198 (2006) ("As default rules, the canons are conventionally justified either (1) as rules that track legislators' preferences . . . or else (2) as democracy-forcing rules that courts might use to provoke desirable legislative responses.").

all-purpose tools.”¹⁷⁴ But making judges’ jobs easier hardly seems a primary purpose for law, without which judges presumably would have no work at all. In any event, even if the “anti-redundancy makes judges’ jobs easier” argument were normatively sound as a matter of principle, it would seem a weak reed on which to rely. There are dozens of other canons and interpretive tools that judges can deploy to ease their labor.¹⁷⁵ In this context, removing an anti-redundancy presumption from judges’ arsenal seems unlikely to substantially impair judges’ ability to generate a decision with a plausibly legal-sounding justification even when judges’ competence to decide the merits might be doubted.

The remaining three beyond-efficiency justifications for anti-redundancy seem stronger but also substantially mitigated by significant counterpossibilities that the relevant anti-redundancy principle will lead to negative effects along the same axis of concern that the candidate justification invokes. Take, for example, the classic justification for anti-redundancy canons of interpretation as well as canons of interpretation more generally—namely, that such canons increase the odds that judicial interpretations will track the intent of relevant actors such as legislators, contracting parties, or patent applicants.¹⁷⁶ A canon might do this directly because the relevant actors’ intent tends to track the canon’s assumptions¹⁷⁷ or because, as suggested by James Landis, contemplation or recitation of such canons helps generate a proper judicial state of mind.¹⁷⁸ Landis’s suggestion seems likely to fail as a justification if the first argument fails: if documents are commonly drafted to contain redundancy, it is hard to believe that adopting a presumption of anti-redundancy is the best way to prepare for a faithful reading of legal text. Thus, the fundamental argument for anti-redundancy as means to foster faithful interpretations appears to be

174. Macey & Miller, *supra* note 18, at 671; *cf.* FRANK B. CROSS, *THE THEORY AND PRACTICE OF STATUTORY INTERPRETATION* 91 (2009) (“Some have argued that the canons are useful precisely because they are nonideological and provide a neutral tool in cases where the judiciary is relatively indifferent to outcome.”).

175. William N. Eskridge, Jr., *The New Textualism and Normative Canons*, 113 *COLUM. L. REV.* 531, 536 (2013) (reviewing ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS* (2012)) (“Updated through 2012, my casebook coauthors and I found 187 different canons of statutory construction in the opinions of the Supreme Court under Chief Justices Rehnquist and Roberts.”).

176. *See, e.g.*, Gluck & Bressman, *supra* note 7, at 935 (describing as a “primary justification” of the antisurplusage canon the proposition that “the rule helps faithful-agent judges effectuate congressional intent”).

177. *See* HENRY J. FRIENDLY, *Mr. Justice Frankfurter and the Reading of Statutes*, in *BENCHMARKS* 196, 208 (1967) (“Frankfurter rarely relied on canons of construction which, he followed Holmes in emphasizing, ‘are not in any true sense rules of law’ and have worth only to the extent that they are ‘generalizations of experience.’”).

178. James M. Landis, *A Note on “Statutory Interpretation,”* 43 *HARV. L. REV.* 886, 892 (1930) (suggesting that canons of interpretation can help foster a state “of mind more likely to . . . give effect accurately to the real legislative purpose”).

that they in fact track legal drafting practice. This argument has common-sense appeal. Why would drafters of legal documents engage in the apparently wasteful, often affirmatively costly¹⁷⁹ activity of repeating the substance of what a legal document already says?¹⁸⁰ Further, given frequent condemnation of redundancy as a matter of style, shouldn't we, if only as a form of "interpretive charity," champion anti-redundancy in interpretation as part of a presumption that legal drafters were not "truly terrible writers"?¹⁸¹

Despite such commonsense appeal, the increased-fidelity justification for anti-redundancy in interpretation has received wide and well-justified criticism. As noted above, redundancy is rife in ordinary human communication,¹⁸² and there are ample reasons—often even especially intense reasons—to expect the use of redundancy in the drafting of legal documents. Generally speaking, any drafter of a legal document faces uncertainty with respect to where, when, by whom, and under what potentially changed circumstances a legal document will be interpreted. The separation between the drafter and the relevant audience can predictably complicate the achievement of accurate and effective communication, in effect requiring the sacrifice of parsimony in pursuit of that end.

In situations where a drafter of a legal document has reason for concern that an unknown audience might misunderstand or misapply the message, the drafter might predictably use both linguistic redundancy (redundant language) and substantive redundancy (overlapping substantive provisions) to try to ensure that the document will ultimately be interpreted and applied as desired, at least with respect to the most critical interests of concern.¹⁸³ In accordance with this postulate, drafters of patent claims are trained to write multiple claims to cover the same invention.¹⁸⁴ Likewise, judges have observed that contracts often include not only "truly redundant

179. See Menell, Powers & Carlson, *supra* note 105, at 753 (contending that the patent law doctrine of claim differentiation "reflects the economic reality that patent fees depend on the number of claims in the patent").

180. See SCALIA, *supra* note 165, at 25–26 (observing that "canons of construction . . . have been widely criticized, indeed even mocked, by modern legal commentators" but that at least a number of them are "commonsensical"); Menell, Powers & Carlson, *supra* note 105, at 753 (describing the doctrine of claim differentiation as having roots in common sense).

181. Amar, *supra* note 101, at 6 (describing "the anti-redundancy maxim" with respect to the U.S. Constitution as reflecting "interpretive charity").

182. See *supra* notes 134–36 and accompanying text.

183. *Spectrum Health—Kent Cmty. Campus v. NLRB*, 647 F.3d 341, 346 (D.C. Cir. 2011) ("As is true of drafters of legislation, drafters of contracts do sometimes take a belt-and-suspenders approach in order 'to make assurance doubly sure.'").

184. See *infra* notes 213–19 and accompanying text.

phrases”¹⁸⁵ but also belt-and-suspenders provisions that provide overlapping coverage of key points.¹⁸⁶ Moreover, a recent survey of congressional staffers by Abbe Gluck and Lisa Bressman provides evidence that legislators “intentionally err on the side of redundancy” both to ensure coverage of “the intended terrain” when the law is applied and to satisfy the more immediate demands of an audience of political actors whose individual players often want to see their own favored language in the statute.¹⁸⁷ In short, anti-redundancy principles appear to be frequently discarded in the writing of texts addressed to audiences of heterogeneous or uncertain content.

Further, the fact that anti-redundancy principles are commonly violated in practice suggests that they commonly fail to fulfill the goal set forth by yet another candidate justification—namely, that they can productively encourage the drafters of legal documents to conform to their presumptions. A fundamental problem is that this goal of encouraging lack of redundancy in legal writing tends to reflect an implicit presumption that redundancy is unproductive and wasteful, whereas, as we have seen, redundancy can often add value. Positive aspects of redundancy help explain why anti-redundancy often seems to fail to have much visible effect on the drafting practices it targets. Gluck and Bressman’s survey indicates that, although legislative drafters know of the antisurplusage canon of construction, they deliberately disregard it.¹⁸⁸

Among the candidate justifications for anti-redundancy, there remains the notion that anti-redundancy can increase the predictability and quality of the law’s understanding and application. With respect to the interpretation of legal documents per se, this justification seems questionable, in large part because the antisurplusage canon cuts against so much actual drafting

185. *Ardente v. Standard Fire Ins. Co.*, 744 F.3d 815, 819 (1st Cir. 2014) (noting the commonness of “redundancy in insurance policies”); *TMW Enters., Inc. v. Fed. Ins. Co.*, 619 F.3d 574, 577 (6th Cir. 2010) (observing that “redundancies abound” in “insurance contracts”).

186. *See Certain Interested Underwriters at Lloyd’s, London v. Stolberg*, 680 F.3d 61, 68 (1st Cir. 2012) (rejecting an invitation to narrow an insurance-coverage exclusion to avoid overlap with other exclusions in part because “insurance policies are notorious for their simultaneous use of both belts and suspenders”); *TMW*, 619 F.3d at 577 (noting the potential utility of “contract drafting that involves belts (certain damages are excluded) and suspenders (all damages not excluded are covered)”; *In re SRC Holding Corp.*, 545 F.3d 661, 670 (8th Cir. 2008) (stating that “[n]othing prevents the parties from using a ‘belt and suspenders’ approach in drafting the exclusions [from coverage], in order to be ‘doubly sure’”).

187. Gluck & Bressman, *supra* note 7, at 934 (reporting that surveyed congressional staffers said that legislative drafters “intentionally err on the side of redundancy” to ensure intended coverage to satisfy diverse players’ interests in favored language); *cf.* Posner, *supra* note 84, at 812 (noting that a statute “may contain redundant language as a by-product of the strains of the negotiating process”).

188. Gluck & Bressman, *supra* note 7, at 954 (concluding that canons such as the antisurplusage canon “cannot be justified as draft-teaching tools because our respondents already know that courts apply the rules but still disregard them” (emphasis omitted)).

practice. Indeed, disjunction between the canon and reality might support a vicious cycle: courts find frequent cause to rebut the antisurplusage canon, and such rebuttals further erode drafters' confidence (or worry) that an antisurplusage rule will in fact be applied, with the result being continued or even enhanced departures from the canon in actual drafting practice.¹⁸⁹ In any event, given the disjunction between anti-redundancy canons' presumption, general realities of human communication, and more specific traits of common drafting practice—never mind the existence of alternative canons pointing in different directions¹⁹⁰—the notion that the antisurplusage canon generally increases the predictability of legal interpretations seems somewhat Panglossian.¹⁹¹

On the other hand, anti-redundancy as an approach to doctrinal design—a principle favoring separation in doctrinal coverage or in forms of analysis—might enjoy more widespread practical justification. The capacity for anti-redundancy in doctrinal design to foster greater predictability and perhaps even accuracy in legal judgments could provide justification for the Supreme Court's instruction that, "[w]here a particular [constitutional] Amendment provides an explicit textual source of constitutional protection against a particular sort of government behavior, that Amendment, not the more generalized notion of substantive due process, must be the guide for analyzing [those] claims."¹⁹² Consistent channeling of legal claims into a relatively thick body of jurisprudence under one specific amendment might provide a better basis for predicting the outcome of judicial deliberation than would exist if there were a substantial chance of claims being diverted to decision making under hazier notions of broader fundamental rights, notions that might not have been so frequently deployed in relation to the particular type of fact patterns at issue.¹⁹³

189. *Id.* at 954–55 (“An overwhelming number of our respondents told us that more predictable judicial application of the canons would change the way that drafters treat them.”).

190. CROSS, *supra* note 174, at 101 (“The canons are too often indeterminate in direction, making them vulnerable to easy manipulation”); Eskridge, *supra* note 175, at 545 (“In most cases involving any interpretive difficulty, . . . the problem will be that there are a dozen or more canons that are applicable to the issue and they will push the interpreter in cross-cutting ways.”).

191. *Cf.* RICHARD A. POSNER, THE PROBLEMS OF JURISPRUDENCE 280 (1990) (“[T]he canons are the collective folk wisdom of statutory interpretation and they no more enable difficult questions of interpretation to be answered than the maxims of everyday life enable the difficult problems of everyday living to be solved.”).

192. *Cty. of Sacramento v. Lewis*, 523 U.S. 833, 842 (1998) (first alteration in original) (internal quotation marks omitted) (quoting *Albright v. Oliver*, 510 U.S. 266, 273 (1994) (plurality opinion of Rehnquist, C.J.)).

193. *Cf. id.* at 850 (“Rules of due process are not . . . subject to mechanical application in unfamiliar territory.”).

To the extent one believes that, in areas substantially governed by precedent, the process and results of judicial decision making tend to “work themselves pure,”¹⁹⁴ one might conjecture that the more specific provision, by attracting a thicker body of case law, is more likely to generate better social results. This might be particularly true when the more specific provision already includes relatively nonspecific hedge words invoking broad standards of “reasonableness,” “fairness,” or “substantiality” that can help ensure that the provision allows consideration of most major social concerns. Thus, for example, one might hope that the notion of protection “against unreasonable searches and seizures” under the Fourth Amendment¹⁹⁵ would largely cover the ground encompassed by concerns of “due process” under the Fifth or Fourteenth Amendments.¹⁹⁶

In short, there might be something to the notion that concerns of predictability, administrability, and substantive effectiveness are in fact advanced when anti-redundancy encourages courts to distinguish and analytically separate different legal doctrines, perhaps even displacing coverage by one in favor of coverage by another. But it is worth noting that this potential justification does not support anti-redundancy canons of interpretation. By comparison, these seem particularly ripe for removal or truncation because of their apparent conflict with ordinary communicative practices, courts’ existing willingness to find exceptions, and explicit indications by drafters or their associates that they do not act in accordance with anti-redundancy canons’ presumptions.

II. Redundancy and Anti-Redundancy in Patent Law

To better understand the operation of redundancy and anti-redundancy in law, it might be helpful to focus on a specific area of law, its doctrinal structure, and some of its recent challenges. Patent law is a good candidate for such an area because it has provided particularly fertile ground for the operation and conflict of redundancy and anti-redundancy in at least four ways:

- (1) the centrality of issues of interpretation, in particular the interpretation of patent claims;¹⁹⁷
- (2) a long-term, historical trend toward increased subdivision and separation of legal questions, such as those regulating patentability;

194. Cf. Michael S. Moore, *The Dead Hand of Constitutional Tradition*, 19 HARV. J.L. & PUB. POL’Y 263, 269 (1996) (noting but criticizing “John Mansfield’s famous statement about the common law ‘working itself pure’”).

195. U.S. CONST. amend. IV.

196. *Id.* amends. V, XIV.

197. See Golden, *supra* note 19, at 322 (“Determination of the scope of a patented invention is one of the most contentious and difficult tasks of modern patent law.”); Lemley, *supra* note 7, at 1389 (“The process of claim construction is the most important part of patent litigation.”).

- (3) centralization of appeals in the Federal Circuit, which has contributed to the long-term, historical trend; and
- (4) relentless pressure for institutional and procedural developments to reduce system costs, delays, and errors.

The first factor means that patent law constantly features interpretive situations in which anti-redundancy concerns can arise. The second and third have combined to generate a situation in which a great variety of patent law doctrines have been discretely defined either by statute or through a deep and centralized body of appellate case law. The relatively well-defined nature of many doctrines has brought potential overlaps into sharper relief, and the multiplicity of such doctrines increases the possibilities for arguably unseemly redundancy. Finally, continuing institutional developments have predictably manifested tension between the upfront advantages of streamlined procedure and the value of at least partially redundant institutions and processes.

A. *Claim Construction and Differentiation*

As discussed in Part I, a commonly stated principle for the interpretation of a legal document is that it should, to the extent reasonable, be interpreted in a way that prevents language therein from being redundant or otherwise superfluous. Some form of this principle is commonly cited when courts interpret patent claims. Indeed, electronic searches in Westlaw's federal opinions database suggest that express invocation of concerns with redundancy or surplusage occurs nearly as frequently in claim construction as express invocation of the basic standard for claim construction¹⁹⁸—namely, that claims are to be interpreted according to the understanding of a person having ordinary skill in the relevant technological art.¹⁹⁹ Deployments of anti-redundancy in the context of

198. Search of Westlaw's databases of district court and Federal Circuit opinions yielded the following numbers of hits for opinions issued from January 1, 2000, to September 29, 2015: (1) 1,958 hits for opinions that gave facial evidence of invoking the ordinary artisan standard in the context of patent claim construction; (2) 1,534 hits for opinions that gave facial evidence of invoking anti-redundancy or antisurplusage concerns in the context of patent claim construction; and (3) 1,030 hits for opinions that gave facial evidence of invoking the specific anti-redundancy canon of claim differentiation in the context of patent claim construction. The specific Westlaw search codes that yielded these results for searches run on September 29, 2015, were as follows: (1) ((patent!) /s (interpret! or constru!)) & "35 U.S.C." & ((canon or interpret! or constru!) /s ("ordinary skill" or "ordinary artisan" or PHOSITA or POSITA)) and DA(after 1999); (2) ((patent!) /s (interpret! or constru!)) & "35 U.S.C." & (((canon or interpret! or constru!) /s (redundant or redundancy or redundancies or surplusage or superflu!)) or "claim differentiation") and DA(after 1999); and (3) ((patent!) /s (interpret! or constru!)) & "35 U.S.C." & "claim differentiation" and DA(after 1999).

199. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc) ("We have made clear . . . that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention . . .").

claim construction partake of many of the defects and weaknesses, as well as the advantages, of anti-redundancy principles for interpretation generally. But in at least a subset of situations involving claim construction, anti-redundancy might have an additional advantage or justification tracing to the process by which patent claims are drafted. In this subset of situations, courts invoke anti-redundancy as a basis for rejecting arguments by patentees that a portion of a claim's language is superfluous or redundant and thus does not serve to limit claim's scope.²⁰⁰

This use of anti-redundancy to reject a patentee's favored claim interpretation and to favor a narrower interpretation corresponds to another common principle for construing legal documents—namely, the principle of construing the document against the drafter.²⁰¹ Aside from a limited amount of relatively technical matter, patents and the claim language within them are generally drafted and amended by the patent applicant and any patent attorney or agent the applicant employs.²⁰² Outside certain post-grant proceedings, the process of examination by the U.S. Patent and Trademark Office (USPTO) is generally conducted *ex parte*, with a patentee or patent applicant able to respond to examiner office actions through argument and amendment but with other members of the public not directly involved.²⁰³ Thus, whereas a later accused infringer typically has played no direct role in the drafting of a patent document, a patentee or the patentee's

200. *See, e.g.,* *Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 781 (Fed. Cir. 2010) (rejecting a patentee's argument that certain language was merely preambular and nonlimiting); *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 951 (Fed. Cir. 2006) (rejecting a patentee's proposed construction where "the effect of adopting [that] claim construction would be to read limitations [a], [b], [e], and [h] out of the claim").

201. *See, e.g., Contra Proferentem*, BLACK'S LAW DICTIONARY (10th ed. 2004) ("The doctrine that, in the interpretation of documents, ambiguities are to be construed unfavorably to the drafter."); FARNSWORTH, *supra* note 108, § 7.11, at 459 (discussing "the rule that if language supplied by one party is reasonably susceptible to two interpretations, . . . the one that is less favorable to the party that supplied the language is preferred").

202. MERGES & DUFFY, *supra* note 106, at 13 ("While the Patent and Trademark Office (PTO) is responsible for adding a few technical portions to the final patent . . . , the predominant function of the PTO during the application process is to determine whether the draft patent . . . would constitute a valid patent.").

203. *See* Bryan Blumenkopf, *Exposing Latent Patent Infringement*, 19 RICH. J.L. & TECH., no. 2, 2013, at 1, 53 ("Unlike the patent examiner who examines patent claims *a priori, ex parte*, in bulk, and on a compressed schedule, the district courts generally have the luxuries of hindsight . . . and the adversarial process . . ."). *See generally* Robert A. Armitage, *Understanding the America Invents Act and Its Implications for Patenting*, 40 AIPLA Q.J. 1, 4-5 (2012) (commenting on the tradition of patentability being determined through "a secret, non-public dialogue between the patent applicant and the patent examiner"). Although third parties are generally unable to participate directly in the interchanges between a patent applicant and patent examiner, they may, during a statutorily delimited time window, submit "for consideration and inclusion in the record of a patent application, any patent, published patent application, or other printed publication of potential relevance to the examination of the application." 35 U.S.C. § 122(e)(1) (2012).

predecessor in interest has had an opportunity to draft claim language that has the scope that the patentee later asserts. In particular, if a patentee is now asserting that certain claim language is superfluous, the patentee or patentee's predecessor in interest has had the opportunity to avoid any limitation from that language through a more straightforward approach—namely, omitting that language from the claim. Given the notice purpose of patent claims²⁰⁴ and the corresponding statutory injunction that claims “particularly poin[t] out and distinctly clai[m] the subject matter which the inventor or a joint inventor regards as the invention,”²⁰⁵ reading a claim comparatively narrowly by reasonably rejecting a patentee's argument that certain claim language is nonlimiting and therefore superfluous can be particularly well justified.²⁰⁶

In claim construction, however, the most prominent anti-redundancy principle is the doctrine of claim differentiation.²⁰⁷ This doctrine imposes a presumption that different patent claims are to be construed to have different scope.²⁰⁸ In other words, the doctrine of claim differentiation embodies an anti-redundancy principle that presumes against complete redundancy but allows for partial redundancy: claims are presumptively to be construed so that the coverage provided by one claim is not precisely the same as—entirely overlapping and coextensive with—that of another.

The doctrine of claim differentiation seems highly questionable both from the standpoint of likely drafter's intent and the standpoint of functional doctrinal design. The USPTO is authorized by statute to require the narrowing of an application that originally claims “two or more independent and distinct inventions” so that the application covers only “one of the inventions.”²⁰⁹ Further, the USPTO has strong incentive to use this power of “restriction” because it protects the revenue expected from the agency's per-application fee structure and “ensures the integrity of the

204. See *Haemonetics*, 607 F.3d at 781 (stating that patent claims' “notice function would be undermined . . . if courts construed claims so as to render physical structures and characteristics specifically described in those claims superfluous”); *Bicon*, 441 F.3d at 950–51 (providing a notice-serving rationale for the principle of interpreting claims “with an eye toward giving effect to all terms in the claim”).

205. 35 U.S.C. § 112(b) (2012).

206. As indicated by the use of the terms “reasonably rejecting” in the text, courts have generally recognized that anti-redundancy principles in claim construction are not absolute and can be overridden by other considerations. See *Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1410 (Fed. Cir. 2004) (“[W]here neither the plain meaning nor the patent itself commands a difference in scope between two terms, they may be construed identically.”).

207. See Lemley, *supra* note 7, at 1391 (“The doctrine of claim differentiation is the canon [of patent claim construction] that has arguably had the most significant impact on claim construction.”).

208. See *supra* text accompanying notes 106–07.

209. 35 U.S.C. § 121 (2012).

[USPTO's] classification system.”²¹⁰ Moreover, robust imposition of restriction requirements can “defend against an applicant overwhelming an examiner by dividing the examiner’s time for search and examination among inventions with separate features even when both inventions are obvious over the prior art.”²¹¹ In fact, the USPTO does appear to have used its restriction powers quite vigorously, to the apparent chagrin of U.S. practitioners who can point abroad to foreign countries’ apparently looser standards for joining multiple inventions within a single application.²¹²

In a context in which patent applicants expect themselves to be relatively strictly limited to one invention per patent, significant redundancy of claim coverage within a single patent becomes especially natural.²¹³ In this context, inclusion of multiple patent claims within a single patent—i.e., the practice of claiming an alleged invention through multiple linguistic formulations—tends to serve the purpose of helping to ensure desired coverage of the invention by protecting against the possibility that certain claims will later be understood to be narrower than hoped²¹⁴ or that certain claims, most likely among the broader claims, will later be found invalid.²¹⁵ In accordance with this insurance purpose for multiple claims, some claims are deliberately drafted to be narrower than other claims (i.e., to generate no more than partial redundancy), but some distinct claims use different language not as much to distinguish them but instead to try to increase the chances that at least one claim, whether redundant with other claims or not, will have a desired level of coverage.²¹⁶ In short, claim drafters are

210. *Applied Materials, Inc. v. Advanced Semiconductor Materials Am., Inc.*, 98 F.3d 1563, 1576 (Fed. Cir. 1996).

211. Jon W. Henry, *Ten Misconceptions of Division of Inventions for Examination Purposes*, 86 J. PAT. & TRADEMARK OFF. SOC’Y 581, 582 (2004).

212. See, e.g., MERGES & DUFFY, *supra* note 106, at 1170 (“In general, European standards on which inventions may be claimed together are quite liberal, and the same is true of Japan.”); Etienne de Villers, *The Patent Prosecution Highway: Canada as Office of First Filing*, LANDSLIDE, Jan.–Feb. 2010, at 30, 32 (“Generally, USPTO examiners seem to issue restriction requirements more often than Canadian examiners, and, when a restriction is issued, require a narrower election of claim sets.”); Edwin S. Flores Troy, *The Development of Modern Frameworks for Patent Protection: Mexico, A Model for Reform*, 6 TEX. INTELL. PROP. L.J. 133, 159–60 (1998) (describing as “a recurrent problem in United States practice . . . the PTO’s use of restriction requirements to limit inventors to one invention per patent”).

213. Cf. Dennis Crouch & Robert P. Merges, *Operating Efficiently Post-Bilski by Ordering Patent Doctrine Decision-Making*, 25 BERKELEY TECH. L.J. 1673, 1688 (2010) (“[P]atent applicants typically protect an invention with multiple, overlapping claims . . .”).

214. See Lemley, *supra* note 7, at 1394 (“[P]atent applicants draft multiple claims because . . . taking multiple bites at the apple gives patentees a greater chance of successfully capturing their single invention in words.”).

215. See MERGES & DUFFY, *supra* note 106, at 31 (describing “narrower claims” in a patent as “a form of insurance” against the possibility that a broader claim will later be found invalid).

216. See DAVID PRESSMAN, *PATENT IT YOURSELF* 245 (Richard Stim ed., 13th ed. 2008) (suggesting to patent claim drafters that after writing a first set of claims they should “consider

commonly engaged in an engineering exercise that deliberately introduces redundancy in order to try to protect against any of a number of “stresses” or “failures”—invalidity challenges, relatively narrow claim constructions, etc.—that can later afflict the language that they use.²¹⁷ The imposition of additional patent fees for the inclusion of claims exceeding numerical thresholds of three independent claims and twenty claims overall has a limiting influence on this practice. But even within the numerical thresholds, there is significant room for redundant drafting. Moreover, in light of patent attorney billing rates of hundreds of dollars per hour, the standard fees of \$80 for each claim beyond twenty and \$420 for each independent claim beyond three seem unlikely to be generally preclusive.²¹⁸ In this context, the doctrine of claim differentiation, which instructs courts to presume that differently worded claims have different scope, can push courts toward interpretations that artificially twist the interpretation of claims in ways contrary to common drafting practices.²¹⁹

The doctrine of claim differentiation seems particularly problematic when operating “horizontally”—i.e., between claims that are independent claims or that derive from different independent claims—as opposed to “vertically”—i.e., between a first claim and a second claim that incorporates the requirements of the first claim. At least one claim in a patent document is an “independent claim,” a claim that stands on its own and does not incorporate the limitations of another claim by reference.²²⁰ Other claims can be “dependent claims,” which are claims that refer to another claim, incorporate its limitations by reference, and then add some additional claim language.²²¹ The relationship between a dependent claim and the parent claim from which it depends supports an expectation that the

writing another set of claims” because, even though such claims “will not always give your invention broader coverage,” they “will provide alternative weapons”).

217. See SLUSKY, *supra* note 54, at 243 (advocating protection against uncertainty through a “diverse claim suite [that] presents the invention in different ways, for example, by organizing the limitations differently, using different terminology, or employing different combinations of functional and structural recitations”).

218. See 37 C.F.R. § 1.492(d)–(e) (2015) (listing claim fees).

219. See Lemley, *supra* note 7, at 1394 (“If the patentee is using different words to mean the same thing, a rule that requires each set of words to have its own unique meaning creates artificial distinctions not intended by the patentee . . .”).

220. MUELLER, *supra* note 146, at 98 (“[A]n independent claim stands alone without referring to any other claim.”).

221. *Id.* (“A dependent claim includes (i.e., incorporates by reference) all limitations of the claim from which it depends, and also adds some further limitation(s).”) For example, a hypothetical independent claim could read as follows: “1. A stool comprising a top seat portion and a first leg connected to the seat portion and extending substantially downward from the seat portion.” A dependent claim could then read: “2. The stool of claim 1 further comprising a second leg connected to the seat portion and extending substantially downward from the seat portion.”

dependent claim will generally be narrower than the parent.²²² This expectation is commonly further fortified by language in the dependent claim that indicates that it “further compris[es]” the matter separately specified in the dependent claim.²²³ Thus, with respect to vertically related claims, the presumption generated by the doctrine of claim differentiation—that claims have different scope and, in this particular context, that the dependent claim has narrower scope²²⁴—seems likely to accord with both common drafting intent and likely reader expectations.

In contrast, with respect to claims that are only horizontally related, there seems no general reason to expect that the breadth of the claims will have any specific relation. Given the purposes of claim drafters to try to ensure coverage of at least a core subset of subject matter despite the vagaries of claim construction and validity analysis, they might reasonably intend for independent claims to have essentially or identically the same scope.²²⁵ On the other hand, in part because of validity concerns, one can envision a claim drafting strategy under which even independent claims have a portfolio of intended scopes, with one independent claim being intended to be broader than another or to have a scope that has no simply described relation to the other—perhaps because the claim is intended to be narrower along one dimension but broader along another. For an example of a situation in which a claim seems broader along a first axis but narrower along a second axis, consider a hypothetical patent with one independent claim specifying that a particular process will run at a pH of 5.0 or above, and another independent claim specifying that the otherwise identical process will run at a pH of between 4.0 and 7.0. The first claim is narrower than the second in that the first claim’s literal scope does not reach below a pH of 5.0. But the first claim is broader than the second in that the first claim’s literal scope encompasses processes running at pH levels above 7.0.

222. Cf. MERGES & DUFFY, *supra* note 106, at 31 (“Often the claims in a patent begin with the broadest claim which is then ‘qualified’ in a series of dependent claims.”).

223. See, e.g., U.S. Patent No. 7,173,416 col. 10 ll. 27–29 (filed Mar. 4, 2002) (“8. Magnetic measurement probe according to claim 1, further comprising a sample support made of non-magnetic material of low electric conductivity.” (emphasis omitted)); U.S. Patent No. 6,521,030 col. 15 ll. 38–42 (filed June 20, 2000) (“15. The set of inkjet inks according to claim 11, further comprising: a magenta ink comprising a magenta dye; and a yellow ink comprising a yellow dye.” (emphasis omitted)).

224. AK Steel Corp. v. Sollac, 344 F.3d 1234, 1242 (Fed. Cir. 2003) (“Under the doctrine of claim differentiation, dependent claims are presumed to be of narrower scope than the independent claims from which they depend.”).

225. See Lemley, *supra* note 7, at 1394 (“The doctrine [of claim differentiation] leads to a fruitless search for gradations in meaning that simply may not exist.”).

Appropriately, the Federal Circuit has characterized the doctrine of claim differentiation as only establishing a rebuttable presumption,²²⁶ and the Federal Circuit has indicated that this presumption is somewhat weaker between horizontally related claims.²²⁷ But at least between horizontally related claims, it is not clear that it makes sense to have any presumption at all.

Moreover, a common effect of the presumption, even when operating vertically, is the relative inflation of patent claims' overall scope.²²⁸ This effect of the rebuttable presumption under the doctrine of claim differentiation is especially perverse for two reasons. First, the inflationary effect can undermine patent claims' notice function by rewarding patentees who are responsible for the inclusion of ambiguous claim language that courts later use the presumption to inflate. Second, the prospect of an inflationary effect can provide extra reason for patent applicants to pepper their applications with a multiplicity of claims with potentially inflationary language.²²⁹ Indeed, the leading treatise on claim drafting explicitly instructs that:

In order to enhance the scope of a broader scope claim, it may be useful to also provide a narrower scope claim that is dependent on the broader scope claim, so that by claim differentiation, the broader scope claim may encompass more than the narrow claim or the embodiment illustrated in the specification.²³⁰

A further manual on claim drafting testifies:

The doctrine of claim differentiation is usually invoked in litigation when the patent owner needs a claim term to be interpreted expansively to make it read on the accused product or process.

226. *E.g.*, *Regents of the Univ. of Cal. v. Dakocytomation Cal., Inc.*, 517 F.3d 1364, 1375 (Fed. Cir. 2008) (observing that “[p]resumptions are rebuttable” and that “the prosecution history overcame the presumption” generated by the doctrine of claim differentiation in the instant case).

227. *Cf. Interdigital Commc'ns, LLC v. ITC*, 690 F.3d 1318, 1324 (Fed. Cir. 2012) (“The doctrine of claim differentiation is at its strongest in this type of case, where the limitation that is sought to be ‘read into’ an independent claim already appears in a dependent claim.” (some internal quotation marks omitted)); *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003) (noting that the presumption generated by the doctrine of claim differentiation “is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim”).

228. *See* SLUSKY, *supra* note 54, at 124 (describing the doctrine of claim differentiation, somewhat loosely, as “provid[ing] that when an independent claim is limited by recitations in a dependent claim, the first claim must be regarded as being broader”).

229. *Cf. Lemley, supra* note 7, at 1395 (“Patent prosecutors often differentiate claims not because they have a different scope in mind . . . but because they know that the courts will apply the claim differentiation doctrine . . .”).

230. ROBERT C. FABER, *FABER ON MECHANICS OF PATENT CLAIM DRAFTING* § 8.2, at 8–4 (7th ed. 2015).

Anticipating the day when their claims may be litigated, attorneys sometimes include claim differentiation claims in their applications as a way of bolstering the case for a broad interpretation of the claims from which they depend. Such a claim might not otherwise be included in the claim suite²³¹

In sum, an anti-redundancy principle, rooted in an assumption about the undesirability of redundant or otherwise inefficient use of language, can in fact encourage greater redundancy in the form of claim multiplication and increased use of arguably ambiguous language.

To understand better why a common effect of the doctrine of claim differentiation might be the relative inflation of patent claims' overall scope, consider a hypothetical situation, designed for simplicity, in which two claims differ only in that the first claim recites a requirement for a "nail" and the second claim recites a requirement for a "metal nail." In the absence of the second claim, the term "nail" in the first claim might be understood, in accordance with a dictionary definition, to mean "a small metal spike."²³² In the presence of the second claim and the doctrine of claim differentiation, however, the addition of the term "metal" in the second claim generates a presumption that the "nail" of the first claim is not necessarily metal because otherwise the two claims will have identical scope. As a result of this presumption, one might more likely conclude that the nail of the first claim might be made of wood, ceramic, or a semiconductor as an alternative to metal. In short, the presence of the second claim and the doctrine of claim differentiation together make it more likely that the first claim will be read more broadly.²³³

The fact that this hypothetical example is not a passing fancy is illustrated by what is now the leading decision on how to perform claim construction, the en banc decision of the Federal Circuit in *Phillips v. AWH Corp.*²³⁴ In this case, the key dispute was over the meaning of the term "baffles" in claim 1 of the patent.²³⁵ After reciting an apparently dictionary-derived definition of "baffles" as "objects that check, impede, or obstruct

231. SLUSKY, *supra* note 54, at 125.

232. *Nail*, PAPERBACK OXFORD ENGLISH DICTIONARY (7th ed. 2012) (first listed definition of "nail").

233. *Cf.* *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004) ("As this court has frequently stated, the presence of a dependent claim that adds a particular limitation raises a presumption that the limitation in question is not found in the independent claim."); *Dow Chem. Co. v. United States*, 226 F.3d 1334, 1341 (Fed. Cir. 2000) ("The doctrine of claim differentiation can support a broader construction of step (c) of claim 1 because the doctrine creates a rebuttable presumption that each claim in a patent has a different scope.").

234. 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

235. *Id.* at 1309–11 (concluding that the circuit had to "determine the correct construction of the structural term 'baffles'").

the flow of something,²³⁶ the Circuit addressed the critical question of whether the baffles in question had to be oriented nonperpendicularly to walls with which they were associated. The Circuit's first step after providing the dictionary-derived definition for "baffles" involved the doctrine of claim differentiation. The Circuit observed:

[D]ependent claim 2 states that the baffles may be "oriented with the panel sections disposed at angles for deflecting projectiles such as bullets" The inclusion of such a specific limitation on the term "baffles" in claim 2 makes it likely that the patentee did not contemplate that the term "baffles" already contained that limitation.²³⁷

The Circuit followed this anti-redundancy salvo with two additional claim-based shots along anti-redundancy lines.²³⁸ Only after this did the Circuit turn to consideration of what was said by the remainder of the patent document, the specification that the Circuit had described, about ten pages earlier, as the "[u]sually . . . dispositive[,] . . . single best guide to the meaning of a disputed term."²³⁹ Here, the Circuit acknowledged that the specification made "clear the invention envisions baffles that serve [the] function" of "deflect[ing] projectiles" such as bullets and, to serve this function, must presumably be nonperpendicular.²⁴⁰ But the Circuit countered this evidence from the specification by arguing that, because the patent contemplated other objectives the baffles could serve, baffles appearing in the claims could serve objectives other than deflecting projectiles and thus might be perpendicular.²⁴¹

Although the Circuit's opinion ultimately relied on more than claim differentiation and other anti-redundancy principles to support its conclusion,²⁴² the prime place accorded to concerns of claim differentiation and redundancy seems telling. Even if not entirely decisive, claim

236. *Id.* at 1324.

237. *Id.*

238. The Circuit contended that language in another claim, independent claim 17, would be redundant with that claim's own use of the term "baffles" if such baffles were independently required not to be perpendicular to associated walls. *Id.* at 1324–25. The Circuit closed its round of anti-redundancy salvos by asserting that, "[i]f the baffles recited in claim 1 were inherently placed at specific angles, or interlocked to form an intermediate barrier, claim 6 would be redundant." *Id.* at 1325.

239. *Id.* at 1315 (internal quotation marks omitted).

240. *Id.* at 1325.

241. *Id.* at 1327 ("Although deflecting projectiles is one of the advantages of the baffles of the '798 patent, the patent does not require that the inward extending structures always be capable of performing that function.").

242. *Id.* at 1326–27 ("The fact that the written description of the '798 patent sets forth multiple objectives to be served by the baffles recited in the claims confirms that the term 'baffles' should not be read restrictively to require that the baffles in each case serve all of the recited functions.").

differentiation operated to favor the claim inflation described earlier. In *Phillips*, the Circuit deploys the doctrine to support a conclusion that an independent claim should be construed broadly so that it has distinct scope from presumptively narrower dependent claims.

The inflationary effect of claim differentiation and the perverse incentives that it provides for claim multiplication and imprecision might not be a great concern if the process of assessing claim scope were costless and there were no other worries about how the patent system operates. But claim construction is far from costless and is in fact notoriously difficult.²⁴³ Moreover, the inflationary effect of the doctrine of claim differentiation exacerbates separately existing concerns about the patent system. There has been great concern about the extent to which the public is properly on notice of patent scope.²⁴⁴ Further, the sometimes subtle way in which claim differentiation can inflate claim scope can reduce already low confidence that time-strained patent examiners will avoid having the wool drawn over their eyes. In the hypothetical example involving the term “nail,” a time-strained examiner, who sensibly tends to pay less heed to dependent claims in assessing questions of patentability,²⁴⁵ might easily overlook the fact that, because of claim differentiation’s interaction with a dependent claim specifying that the nail is made of metal, the word “nail” will likely not be construed by courts to have its common meaning of “small metal spike.” The examiner might examine the independent claim for validity based on an incorrect assumption that the word “nail” is to be construed more narrowly than the doctrine of claim differentiation makes likely.²⁴⁶

In sum, the doctrine of claim differentiation can have an inflationary effect on claim scope and can lay traps for unwary examiners and thereby the public. Despite constituting an anti-redundancy principle, the doctrine of claim differentiation can even have the perverse effect of encouraging the drafting of additional and at least partially redundant claims. Because of these pathological aspects of the doctrine’s operation, there are strong arguments for its abolition or more substantial limitation.

243. See Golden, *supra* note 19, at 324 (“[C]laim construction jurisprudence continues to bear hallmarks of unpredictability.”).

244. See JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 8–9 (2008) (discussing how patents can fail to provide notice of their boundaries).

245. MERGES & DUFFY, *supra* note 106, at 31 (noting that the use of dependent claims “simplifies examination” because “a dependent claim must be novel if the claim on which it depends is novel”).

246. Cf. Lemley, *supra* note 7, at 1395 (“If patent lawyers are . . . using the claim differentiation doctrine to game the claim construction process, rote application of the canon simply plays into their hands.”).

B. Doctrinal Compartmentalization

Concerns of redundancy and anti-redundancy appear not only with respect to questions of patent claim construction but also with respect to questions of the structure of patent law doctrine. Amidst the shifting sands of patent law, there is continual debate over whether one or another argument properly fits under one doctrinal rubric or another. For example, recent stirrings in the law of subject-matter eligibility have led to questions about whether certain arguments should be viewed either exclusively or primarily as arguments about novelty, nonobviousness, enablement, or indefiniteness, rather than as arguments about subject-matter eligibility. Underlying such questions often seems to be either an assumption or a conclusion that policy makers would ideally identify a single doctrinal rubric through which the arguments at issue are to be channeled. A long-term trend toward increased doctrinal compartmentalization has facilitated these questions in at least two ways: (1) by providing more distinctly defined doctrinal rubrics whose domains might plausibly be argued to be exclusive and (2) by providing momentum for efforts to further distinguish and separate these rubrics' domains.

1. Long-Term Trend Toward Compartmentalization.—Since 1790, there has been significant change and refinement of the structure and institutions of patent law. The requirement of a specification providing a written description of an alleged invention became a generally recognized requirement in England in the late eighteenth century.²⁴⁷ The United States introduced “a formal system of examination, with professional examiners” in 1836.²⁴⁸ Likewise, patent claims, specific portions of the patent document meant to delineate the scope of an alleged invention and associated patent rights, first began to play a prominent role in patent law in the nineteenth century.²⁴⁹ The nonobviousness requirement for patentability arose relatively slowly and was not codified in the U.S. Patent Act until 1952.²⁵⁰

Moreover, from the late eighteenth century to the late twentieth century, U.S. patent law not only developed new legal doctrine but also generated a greater sense of the distinctions between its growing variety of legal doctrines. A prominent example of such a development was a noticeable shift in the 1970s toward stronger judicial distinctions between

247. MERGES & DUFFY, *supra* note 106, at 6 (describing as “[a]n important change . . . the increasingly stringent requirement that the applicant for a patent describe his or her invention clearly and completely”).

248. *Id.* at 8.

249. *See id.* at 750 (discussing the history of patent claims).

250. *See id.* at 610 (discussing the nonobviousness “doctrine’s relative youth”).

questions of patent-claim validity and questions of patent scope, with the courts tending to marginalize a previously central canon that patent claims should be construed so as to preserve their validity.²⁵¹

More recent refinements have reflected pressure to distinguish issues in ways that facilitate allocation of responsibilities between judge and jury, a more strongly felt need after a norm of bench trials gave way to a norm of jury trials in the last decades of the twentieth century.²⁵² Probably the most prominent of such developments is the Supreme Court-sanctioned holding that claim construction is a process to be carried out by judges²⁵³ and therefore, implicitly, necessarily to be distinguished from the determination of a patent claim's infringing equivalents, a separate issue of patent scope that, at least so far, has been generally left (at least in principle)²⁵⁴ to juries, rather than judges.²⁵⁵ In contrast, at least into the third quarter of the twentieth century, judicial decisions, which previously had come predominantly in cases involving bench trials,²⁵⁶ could mix questions of claim construction and equivalents much more freely, thereby almost necessarily leaving questions of literal claim scope and of the scope of equivalents on a relatively even level.²⁵⁷

The refinements and distinctions that have emerged in patent law have in many respects been improvements, helping to bring greater clarity, reproducibility, and comprehensibility to legal analysis and argument. But in part because patent law's individual doctrines tend to be no more than

251. Golden, *supra* note 19, at 360–61 (“The 1970s may mark a true breakpoint, with courts finally developing strong tendencies to distinguish questions of equivalence, assessment of an invention’s merit, and claim construction in both patentee-favorable and patentee-unfavorable opinions.” (footnotes omitted)).

252. See Mark A. Lemley, *Why Do Juries Decide if Patents Are Valid?*, 99 VA. L. REV. 1673, 1705 fig.1 (2013) (showing a shift toward the majority of patent trials being jury trials in the last quarter of the twentieth century).

253. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996) (holding “that the construction of a patent, including terms of art within its claim, is exclusively within the province of [a] court” and is not subject to the Seventh Amendment right to a jury trial).

254. The “at least in principle” qualification reflects in part an increased tendency for judges to grant summary judgments of noninfringement that prevent the issue of equivalence from being resolved by a jury. See Lee Petherbridge, *On the Decline of the Doctrine of Equivalents*, 31 CARDOZO L. REV. 1371, 1396 (2010) (predicting “that the future of the doctrine of equivalents will be trial court summary judgments adverse to the patentee”).

255. See *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1522 (Fed. Cir. 1995) (en banc) (“[I]nfringement under the doctrine of equivalents is an issue of fact to be submitted to the jury in a jury trial with proper instructions, and to be decided by the judge in a bench trial.”), *rev'd on other grounds*, 520 U.S. 17, 38 (1997).

256. See *supra* text accompanying note 252.

257. Golden, *supra* note 19, at 360 (“[U]ntil the last few decades of the twentieth century, courts and commentators portrayed the primary test for infringement as one of whether the accused product or process was at least equivalent to what was literally claimed.” (emphasis omitted)).

rough proxies for desirable social goals,²⁵⁸ the compartmentalization of legal doctrines has also raised the risk of losing perspective on what the law is meant to accomplish as a whole.²⁵⁹ In this way, the refinement and distinction of patent law doctrines might have contributed to a current widespread sense that, from a policy perspective, the current patent regime is broken or, alternatively stated, not close to functioning as it should.²⁶⁰ An associated backlash has featured a shift toward more “holistic” analysis²⁶¹ of questions relating to patent rights’ validity and effective power—perhaps most prominently in the evaluation of subject-matter eligibility and judicial assessments of remedies for patent infringement.

A quick way to gain some appreciation for the historical trend toward refinement and compartmentalization is to compare the 1790 Patent Act²⁶² with the Patent Act of the present day.²⁶³ The 1790 Act occupied about two pages of single-column text and contained seven sections, each only one-paragraph long and lacking separately identified subsections.²⁶⁴ Section 1 of the 1790 Act laid out both the basic procedures for obtaining a patent and the basic patentability requirements—namely, that the alleged invention be either a “useful art, manufacture, engine, machine, or device” that the applicant had “invented or discovered” or “any improvement therein not before known or used.”²⁶⁵ Section 1 also indicated that the grant of a patent

258. See John M. Golden, *Patentable Subject Matter and Institutional Choice*, 89 TEXAS L. REV. 1041, 1065 (2011) (contending that, generally speaking, patentability requirements “are no more than crude proxies for the question of whether any individualized patent grant will further overall social goals”); cf. John M. Golden, *Principles for Patent Remedies*, 88 TEXAS L. REV. 505, 551 (2010) (“[C]onflicting goals, an ill-defined sense of what patent owners should receive, economic and technological contingency, and a relative scarcity of good empirical data combine to create deep uncertainty about how the patent system is performing and even what it should seek to accomplish.”).

259. Cf. Devins, Koppl, Kauffman & Felin, *supra* note 159, at 665 (“In many respects, the judicial process emphasizes the segmentation of legal issues without considering that their aggregate impact may transcend the sum of the parts.”).

260. See John M. Golden, *Proliferating Patents and Patent Law’s “Cost Disease,”* 51 HOUS. L. REV. 455, 456 (2013) (“Since at least 1999, the exact words ‘The patent system is in crisis’ have appeared so often in academic literature that they might be considered a meme.”).

261. Use of the term “holistic” here resonates with its usage by Polk Wagner and Lee Petherbridge to describe an approach to claim construction that is relatively “free-form[.] . . . seeking the correct meaning according to the particular circumstances presented.” R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105, 1133–34 (2004).

262. Patent Act of 1790, ch. 7, §§ 1–7, 1 Stat. 109, 109–12 (repealed 1793).

263. 35 U.S.C. §§ 1–390 (2012) (embodying the present U.S. Patent Act); see also Herbert H. Jarvis, *Seduced by the Sequence: An Analysis of the U.S. Supreme Court’s Opinion in Association of Molecular Pathology v. Myriad Genetics, Inc.*, 16 FLA. COASTAL L. REV. 65, 112 (2014) (noting “the simplicity of the early statutes (the Patent Act of 1790 was roughly four pages with seven sections, whereas today’s statute is about 141 pages with approximately 390 sections)”).

264. Patent Act of 1790 §§ 1–7, 1 Stat. at 109–12.

265. *Id.* § 1, 1 Stat. at 109–10.

contained an additional discretionary aspect that has dropped out of U.S. patent statutes—namely, whether the “Secretary of State, the Secretary for the department of war, and the Attorney General, or any two of them, . . . deem the invention or discovery sufficiently useful and important, to cause letters patent to be made out.”²⁶⁶ Section 2 of the 1790 Act then recited the basic disclosure requirements, specifically the need for an applicant to:

deliver to the Secretary of State a specification in writing, containing a description, accompanied with drafts or models, and explanations and models (if the nature of the invention or discovery will admit of a model) of the thing or things . . . invented or discovered . . . which specification shall be so particular, and said models so exact, as not only to distinguish the invention or discovery from other things before known and used, but also to enable a workman or other person skilled in the art or manufacture . . . to make, construct, or use the same . . .²⁶⁷

Sections 3 through 7 added provisions on the public availability of specifications and models,²⁶⁸ on remedies for patent infringement,²⁶⁹ on challenges to patent rights,²⁷⁰ and on fees for patent issuance.²⁷¹

In contrast, the modern Patent Act spans dozens of pages and has dozens of sections.²⁷² These sections are, in turn, often broken down into itemized subsections.²⁷³ The present-day Patent Act’s table of contents alone spans over four pages of double-column text in the *Manual of Patent Examining Procedure*.²⁷⁴

More significantly, the current Patent Act reflects a significant amount of separation, refinement, and supplementation of the basic provisions appearing in the 1790 Act. For example, unlike the 1790 Act, the modern Patent Act generally presents the main patentability requirements separately from provisions on administrative procedure such as the processes of patent application and grant. Further, analogs to the patentability requirements appearing in § 1 of the 1790 Act are spread among three separate sections

266. *Id.* § 1, 1 Stat. at 110.

267. *Id.* § 2, 1 Stat. at 110.

268. *Id.* § 3, 1 Stat. at 111 (imposing on the Secretary of State a “duty” to make available copies of specifications and opportunities to copy models on request).

269. *Id.* § 4, 1 Stat. at 111 (providing for damages and for forfeiture of infringing articles).

270. *Id.* §§ 5–6, 1 Stat. at 111–12 (enabling challenges to patent rights).

271. *Id.* § 7, 1 Stat. at 112 (specifying fees to be paid “to the several officers employed in making out and perfecting” a patent).

272. *See generally* 35 U.S.C. §§ 1–390 (2012).

273. *See generally id.*

274. U.S. PATENT & TRADEMARK OFFICE, MPEP app. L, at L-1 to L-5 (9th ed. Mar. 2014). Even if one excludes listings of repealed sections or repetition due to the continuing force of provisions under pre-America Invents Act (AIA) law, the table of contents would span about three pages of double-column text. *See id.*

of the modern Patent Act: § 101 requiring “invent[ion] or discov[ery] of a] new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof”,²⁷⁵ § 102 specifying, through multiple itemized subsections, a variety of details relating to the determination of novelty and, more generally, the classification of material as prior art for purposes of assessing novelty or nonobviousness;²⁷⁶ and § 103 setting forth the nonobviousness requirement for patentability.²⁷⁷

Courts and commentators have frequently ascribed legal significance to the spinning off of § 102 and § 103 from § 101. Despite the current § 101’s retention of “invent[ion] or discov[ery]” language and its use of the adjective “new,” questions about whether an alleged invention is sufficiently new or inventive to be patentable are now commonly viewed as the virtually exclusive domains of § 102 and § 103 on novelty and nonobviousness, respectively. Indeed, one of the primary authors of the 1952 Patent Act described § 103’s initial codification of the nonobviousness requirement²⁷⁸ as having been intended “to substitute . . . for the requirement of ‘invention’ and for all prior case law” on that requirement.²⁷⁹ In 1981, the U.S. Supreme Court came to a parallel conclusion when examining the legislative history behind the development of § 102 as a freestanding novelty section.²⁸⁰ The Court stated in strong language that, in accordance with the history, questions of subject-matter eligibility under § 101 and questions of novelty under § 102 and nonobviousness under § 103 are fundamentally separate:²⁸¹ in the Court’s words, “[a] rejection on either [novelty or nonobviousness] grounds does not affect the determination that respondents’ claims recited subject matter which was eligible for patent protection under § 101.”²⁸² By explaining at length the distinction of § 101 questions from § 102 questions and § 103

275. 35 U.S.C. § 101.

276. *Id.* § 102 (including multiple sections in both its pre-AIA and post-AIA forms). The pre-AIA version of § 102 includes provisions relating to so-called “statutory bars” to patentability that are often distinguished from true questions of novelty. See MERGES & DUFFY, *supra* note 106, at 493 (distinguishing between novelty and statutory bars under pre-AIA law).

277. 35 U.S.C. § 103.

278. MERGES & DUFFY, *supra* note 106, at 624 (“Section 103 of the 1952 Act was the first legislative attempt to structure judicial thinking about obviousness.”).

279. Giles S. Rich, *Laying the Ghost of the “Invention” Requirement*, 1 APLA Q.J. 26, 36 (1972). See generally John F. Duffy, *Inventing Invention: A Case Study of Legal Innovation*, 86 TEXAS L. REV. 1, 43 (2007) (“In the midst of general unhappiness with the Court’s invention standard . . . Congress stepped in . . .”).

280. *Diamond v. Diehr*, 450 U.S. 175, 190–91 (1981) (discussing “[t]he legislative history of the 1952 Patent Act”).

281. *Cf. id.* at 190 (“The question therefore of whether a particular invention is novel is wholly apart from whether the invention falls into a category of statutory subject matter.” (internal quotation marks omitted)).

282. *Id.* at 191.

questions, the Supreme Court's 1981 opinion thus exemplifies—and perhaps also helped promote—the tendency of members of the patent community to “bin” certain issues by statutory section or subsection.

Just as provisions on the nature of advances that may be patented are now spread across multiple statutory sections, modern analogs of the adequate disclosure provisions of section 2 of the 1790 Act now appear in three separately numbered sections of the current Patent Act: § 112, which has multiple subsections that separately require both “one or more claims particularly pointing out and distinctly claiming the subject matter . . . regard[ed] as the invention” and also “a written description of the invention” that enables its reproduction and use by one of skill in the art and that “set[s] forth the best mode contemplated” for implementing the invention;²⁸³ § 113 requiring the provision of “a drawing where necessary for the understanding of the subject matter sought to be patented”;²⁸⁴ and § 114 authorizing the USPTO to “require the applicant to furnish a model of convenient size” or “specimens or ingredients” for an “invention relat[ing] to a composition of matter.”²⁸⁵ Moreover, the first subsection of § 112 itself imposes three distinct requirements: (1) a requirement of a “written description” sufficient to “reasonably convey[] to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date” of the relevant patent application;²⁸⁶ (2) a further requirement that the written description enable one of skill in the art “to make and use” the invention;²⁸⁷ and (3) the now significantly less enforceable requirement²⁸⁸ that the written description disclose the “best mode.”²⁸⁹

One could go on describing ways in which the U.S. Patent Act's substantive provisions have been expanded, multiplied, and more strictly distinguished over time. For example, the Patent Act now has an entire section, 35 U.S.C. § 271, that defines, through separately itemized subsections, different ways that patent claims may be infringed. As a result,

283. 35 U.S.C. § 112 (2012). In the post-AIA version of § 112, its subsections are fully itemized as subsections (a) through (f). In the pre-AIA version, corresponding subsections appeared as separate paragraphs that the patent community came to refer to as paragraphs one through six.

284. *Id.* § 113.

285. *Id.* § 114.

286. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

287. *See id.* at 1344 (holding that the written description and enablement requirements are “two separate description requirements”).

288. *See* 35 U.S.C. § 282(b)(3)(A) (excluding “failure to disclose the best mode” from bases for patent claim invalidity that provide potential defenses to a charge of patent infringement).

289. MUELLER, *supra* note 146, at 117–18 (observing that the first subsection of § 112 is understood to impose “three separate [disclosure] requirements . . . : (1) enablement, (2) best mode, and (3) written description of the invention” (emphasis omitted)); *see also Ariad*, 598 F.3d at 1344 (agreeing that the first subsection of § 112 imposes “three separate requirements”).

a recent decision of the Supreme Court could and did confine itself to reviewing whether, under certain assumptions, there was infringement under subsection (b) of § 271, even though the petitioner sought to have the Court address whether there was infringement under § 271(a).²⁹⁰ Another example of a portion of the Patent Act where there has been a multiplication and distinction of provisions comes in the form of the current Act's provisions for patent-infringement remedies, which now span five different statutory sections.²⁹¹ In another example of textual separation likely contributing to doctrinal compartmentalization, the different wording of the Act's separate sections on injunctive relief "to *prevent* the violation of any right secured by [the] patent"²⁹² and on damages "adequate to *compensate* for the infringement"²⁹³ has led the Federal Circuit to determine that the Act only authorizes forward-looking injunctions, rather than injunctions that help mitigate or correct for past harm.²⁹⁴ Indeed, as suggested earlier, the Federal Circuit's relatively thick jurisprudence and efforts to clarify the state of patent law have arguably accelerated the historical trend toward increased compartmentalization.²⁹⁵

Without multiplying examples further, the point seems reasonably well established. U.S. patent law has experienced a long-term trend of doctrinal growth and refinement that has supported greater compartmentalization of legal issues, greater tendencies to argue that certain questions are exclusively or at least overwhelmingly the province of one legal doctrine instead of a combination of doctrines, and greater opportunities for the proliferation of arguments for such compartmentalization and associated anti-redundancy principles.

2. *No Vitiating Doctrine and the Doctrine of Equivalents.*—The splitting of the determination of patent scope into claim construction by a judge and assessment of alleged infringement by equivalents, commonly by a jury,²⁹⁶ has generated one of the more interesting fronts between redundancy and anti-redundancy in patent law. The doctrine of equivalents

290. *Limelight Networks, Inc. v. Akamai Techs., Inc.*, 134 S. Ct. 2111, 2120 (2014) (noting that "the question presented is clearly focused on § 271(b), not § 271(a)").

291. 35 U.S.C. §§ 283–87 (providing for injunctions, damages, shifting of attorney fees, time and notice limitations on damages, and certain exemptions from remedies).

292. *Id.* § 283 (emphasis added).

293. *Id.* § 284 (emphasis added).

294. See John M. Golden, *Injunctions as More (or Less) than "Off Switches": Patent-Infringement Injunctions' Scope*, 90 TEXAS L. REV. 1399, 1424 (2012) ("The Federal Circuit has held that district courts lack authority to issue purely reparative injunctions that appear to be directly concerned only with correcting for harm caused by past infringement." (footnote omitted)).

295. See *supra* text accompanying notes 20–24.

296. See *supra* text accompanying notes 252–54.

enables courts to find infringement of patent claims even when an accused product or process does not fall within the literal scope of the claims.²⁹⁷ As the U.S. Supreme Court has explained, “[u]nder this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is ‘equivalence’ between the elements of the accused product or process and the claimed elements of the patented invention.”²⁹⁸ Consequently, the doctrine acts as a sort of fail-safe mechanism in patent law, protecting the patentee’s side of the disclosure-for-exclusive-rights bargain by helping to close loopholes in patent scope that can result from practical limitations of patent drafting or from deliberate efforts to design around patent claims in a way that gains all the substantive benefits of the patentee’s invention while avoiding the patent’s literal scope.²⁹⁹

But the doctrine of equivalents has invited criticism because of its fuzziness—a predictable result of the doctrine’s resting on notions of insubstantial difference or substantial similarity³⁰⁰ as well as a recent Supreme Court pronouncement that the doctrine should not be reduced to a more precise formula.³⁰¹ The doctrine’s fuzziness raises notice concerns for a public that would like to plan ahead based on an accurate understanding of what patent law does and does not allow.³⁰²

Moreover, as discussed in section I(B)(3), the doctrine of equivalents can draw judicial fire for yet another reason more pertinent here. The doctrine invites arguments that are in many respects repetitious of arguments already made—and presumably already lost—in a patentee’s efforts to win a broader claim construction, an understanding of the literal scope of the claims that would have encompassed an accused product or process without resort to the doctrine of equivalents. The patentee’s

297. MUELLER, *supra* note 146, at 468 (“United States patent law also recognizes the possibility of ‘nonliteral’ or ‘nontextual’ infringement under the doctrine of equivalents.”).

298. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997).

299. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002) (“If patents were always interpreted by their literal terms, . . . [u]nimportant and insubstantial substitutes for certain [patent claim] elements could defeat the patent, and its value to inventors could be destroyed by simple acts of copying.”); *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950) (contending that limiting patent scope to claims’ literal terms “would leave room for—indeed encourage—the unscrupulous copyist to make unimportant and insubstantial changes and substitutions”).

300. *See* MUELLER, *supra* note 146, at 475 (describing tests for infringement by equivalence).

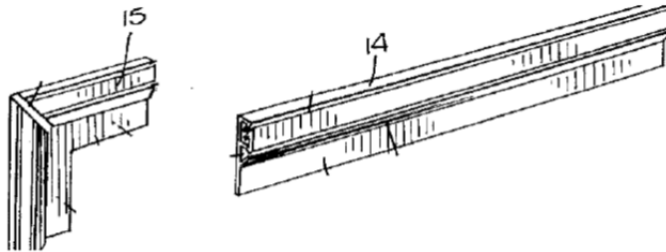
301. *See Warner-Jenkinson*, 520 U.S. at 39–40 (indicating that “[d]ifferent linguistic frameworks [for infringement by equivalence] may be more suitable to different cases”).

302. *See* Michael J. Meurer & Craig Allen Nard, *Invention, Refinement and Patent Claim Scope: A New Perspective on the Doctrine of Equivalents*, 93 GEO. L.J. 1947, 1978 (2005) (“One of the most common objections to the [doctrine of equivalents] is the doctrine’s negative effect on the notice function of patent claims.”); Petherbridge, *supra* note 254, at 1374 (describing the doctrine of equivalents as “foster[ing] uncertainty”).

somewhat repetitious equivalence arguments can trigger an adverse reaction from judges, who might perceive these arguments as an attempt effectively to relitigate claim construction and who might therefore incline toward a relatively curt rejection of the equivalence arguments—without their being allowed to go to a jury—on grounds that they seek to “vitiate” claim language that the court has just construed.³⁰³

The case of *Unique Concepts, Inc. v. Brown*³⁰⁴ offers an example of how the doctrine of equivalents can invite arguments for infringement that largely reiterate prior claim construction arguments. As a bonus, the case provides a further example of the invocation of anti-redundancy concerns within claim construction itself.

Figure 2



This excerpt from Figure 2 of U.S. Patent No. 4,018,260 (filed Apr. 27, 1976) shows a “right-angle border piec[e]” labeled as item 15 and a “linear border piec[e]” labeled as item 14.³⁰⁵

Unique Concepts involved a patent directed “to an ‘assembly of border pieces’ used to attach a fabric wall covering to a wall.”³⁰⁶ The patentee argued that the claim term “right angle corner border pieces” should be construed to encompass not only single-unit right-angle structures like that in Figure 2 above but also multiple-unit right-angle structures formed by arranging two separate linear structures at a right angle.³⁰⁷ A divided Federal Circuit rejected the patentee’s argument, partly because the panel majority felt that construing “right angle corner border pieces” to encompass structures made of separate linear elements would insufficiently

303. See *Packless Metal Hose, Inc. v. Extek Energy Equip. (Zhejiang) Co.*, No. 2:09-CV-265-JRG, 2013 WL 682845, at *7 (E.D. Tex. Feb. 22, 2013) (concluding, where a party’s equivalence arguments, “in essence, repeat[ed] its arguments with respect to literal infringement,” that application of the doctrine of equivalents “would vitiate [relevant] claim elements”).

304. 939 F.2d 1558 (Fed. Cir. 1991).

305. U.S. Patent No. 4,018,260 fig.2, col. 4, ll. 59–61 (filed Apr. 27, 1976).

306. *Unique Concepts*, 939 F.2d at 1559.

307. *Id.* at 1561 (internal quotation marks omitted).

distinguish “linear border pieces” that the claims separately required.³⁰⁸ The Federal Circuit explicitly invoked anti-redundancy concerns in support of its conclusion, saying:

If, as Unique argues, linear border pieces of framing material, whose ends are mitered, are the same as linear border pieces and a right angle corner piece, the recitation of both types of pieces is redundant.³⁰⁹

Even aside from general doubts about the advisability of anti-redundancy canons of interpretation, the reasoning here seems questionable—at least if the concern was redundancy—because one can readily conceive of “linear border pieces” that are far from any corner and thus could not plausibly be considered part of even a multi-part “right angle corner piece.” Thus, as with *Marbury v. Madison*,³¹⁰ this case might give support to the notion that an additional reason to oppose anti-redundancy canons is their liability to arguable misapplication that short-circuits careful consideration.

More to the present point, however, the patentee in *Unique Concepts* followed its failed claim construction argument with a contention that, even if a multi-part “right angle corner border piece[]” was not within the literal scope of the claim language, such a multi-part piece was nonetheless equivalent to a single-part “right angle corner border piece” that the claim language had been held to literally require.³¹¹ A key inquiry for assessing equivalence was whether a multi-part “right angle corner border piece” performed substantially the same function in substantially the same way with substantially the same result as a single-part “right angle corner border piece.”³¹² Determination of whether such objects were “substantially the same” in relevant respects involved assessment of arguments and materials that were the same or substantially the same as much of those already considered in construing the claims. In both contexts, the court’s opinion pointed to what it viewed as key language in the patent’s specification, language that distinguished between multi-part “improvise[d] corner

308. *See id.* at 1562 (“The fact that mitered linear border pieces meet to form a right angle corner does not make them right angle corner pieces, when the claim separately recites both linear border pieces and right angle corner border pieces.”).

309. *Id.*

310. *See supra* text accompanying notes 98–103.

311. *Unique Concepts*, 939 F.2d at 1563–64 (discussing equivalence arguments and their resolution by the district court).

312. *Id.* at 1564 (discussing the function-way-result test for infringement by equivalence).

pieces” and single-part “preformed corner piece[s]” by indicating that “a preformed corner piece is somewhat easier for a do-it-yourselfer to work with.”³¹³

In short, *Unique Concepts* shows how arguments in relation to the doctrine of equivalents can substantially involve a rehash of arguments already made in relation to claim construction—i.e., to determination of claims’ literal scope. Although the Federal Circuit’s *Unique Concepts* opinion avoided invoking the doctrine against the vitiation of claim limitations through the doctrine of equivalents, the case suggests how courts might easily be driven by the substantially redundant nature of claim construction and equivalence arguments to assert that arguments of equivalence seek to vitiate claim language. It is perhaps no wonder therefore that the Federal Circuit needs to periodically admonish lower courts that the “no vitiation” doctrine should not be invoked lightly³¹⁴ lest it improperly vitiate the doctrine of equivalents itself.³¹⁵

3. *Recent Pushback on Subject Matter and Remedies.*—As discussed above, U.S. patent law has experienced a long-term trend of doctrinal refinement and compartmentalization that has both fed off and fed the deployment of anti-redundancy. But there has been significant pushback against this trend in the last decade, at least in part because of a perception that doctrinal compartmentalization has enabled patent law to slip loose from its social-welfare-promoting purpose. There have been at least two major fronts in this pushback: (1) revitalization of subject-matter eligibility doctrine, accompanied by recognition that subject-matter eligibility analysis can overlap with other patentability or claim validity analyses,³¹⁶ and (2) revisitation of remedies doctrines, with renewed emphasis on a variety of issues that implicate wide-ranging policy concerns as well as more focused concern with assessing an invention’s actual value.³¹⁷

313. *Id.* at 1562 (first alteration in original) (emphasis omitted) (internal quotation marks omitted); *see also id.* at 1564 (discussing and affirming district court’s resolution of arguments on infringement by equivalence).

314. *E.g.*, *Charles Mach. Works, Inc. v. Vermeer Mfg. Co.*, 723 F.3d 1376, 1381 (Fed. Cir. 2013) (holding that “a reasonable jury could have found equivalence, and the [district] court erred by making a contrary legal determination”); *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1356 (Fed. Cir. 2012) (stating that “[c]ourts should be cautious not to shortcut this inquiry by identifying a ‘binary’ choice in which an element is either present or ‘not present’”); *see also Ring & Pinion Serv. Inc. v. ARB Corp.*, 743 F.3d 831, 836 (Fed. Cir. 2014) (quoting *Deere* and reversing a failure to grant summary judgment of infringement by equivalence).

315. *Deere*, 703 F.3d at 1356 (“Of course, in every case applying the doctrine of equivalents, at least one claimed element is not literally present in the accused product.”).

316. *See infra* text accompanying notes 318–23.

317. *See* John M. Golden, *Patent Privateers: Private Enforcement’s Historical Survivors*, 26 HARV. J.L. & TECH. 545, 605 & n.406 (2013) (noting that, in recent years, “[t]he Supreme Court and Federal Circuit have together limited the availability or value of patent-infringement

The Supreme Court has issued four decisions on subject-matter eligibility since 2010.³¹⁸ In each one, the Court has found at least some of the patent claims at issue to be invalid or unpatentable because they encompassed ineligible subject matter.³¹⁹ In so doing, the Court's opinions have overruled the apparently sharp distinction between questions of subject-matter eligibility and questions of novelty or nonobviousness that language from a 1981 Court opinion had embraced.³²⁰ Instead, questions of the conventionality or unconventionality of various aspects of a claimed invention have been found to be relevant to subject-matter eligibility analysis.³²¹ Apparently, a key motivation for the Court has been the concern that more compartmentalized, less overlapping analysis might make it too easy for a clever drafter of patent claims to skirt the exclusions from subject-matter eligibility of "[l]aws of nature, natural phenomena, and abstract ideas"³²² while also satisfying other, more refined tests for patentability such as novelty and nonobviousness.³²³

The Court's concerns can be illustrated by the case of *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*³²⁴ In that case, the Court confronted a patent claim for a "method of optimizing" treatment of certain gastrointestinal diseases.³²⁵ This claim involved three basic parts.

remedies"). Compartmentalization concerns have been raised in relation to other intellectual property regimes as well. See Mark A. Lemley & Mark P. McKenna, *The Scope of IP Rights* 1 (Stanford Public Law Working Paper No. 2660951), <http://ssrn.com/abstract=2660951> [<https://perma.cc/A7FC-3782>] (critiquing the tendency of copyright, patent, and trademark laws "to enforce a more or less strict separation" between questions about the validity of legal rights, about their infringement or non-infringement, and about various defenses to infringement).

318. See Golden, *supra* note 163, at 1768–69.

319. *Id.*

320. See *supra* text accompanying notes 280–82282.

321. See, e.g., *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2359 (2014) (noting, in analyzing subject-matter eligibility, that "all of [a number of listed] computer functions are 'well-understood, routine, conventional activi[ies]'" (second alteration in original) (quoting *Mayo Collaborative Servs. v. Prometheus Labs.*, 132 S. Ct. 1289, 1294 (2012))); *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (describing the Court as "determin[ing] whether Myriad's patents claim any 'new and useful . . . composition of matter'"); *Mayo*, 132 S. Ct. at 1294 (stating, in analyzing subject-matter eligibility, that "the steps in the claimed processes (apart from the natural laws themselves) involve well-understood, routine, conventional activity previously engaged in by researchers"); *Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (explaining the lack of subject-matter eligibility of claims for methods of hedging risk partly because "[h]edging is a fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class" (internal quotation marks omitted)).

322. *Alice*, 134 S. Ct. at 2354.

323. See *id.* at 2360 ("This Court has long 'warn[ed] . . . against' interpreting § 101 'in ways that make patent eligibility depend simply on the draftsman's art.'" (alterations in original) (quoting *Mayo*, 132 S. Ct. at 1294) (some internal quotation marks omitted)).

324. 132 S. Ct. 1289 (2012).

325. *Id.* at 1295 (internal quotation marks omitted). A representative claim on the method recited in full:

The first two were “well-understood, routine, conventional” steps that had previously been performed by physicians or others—namely, (1) the administration of a known drug to a patient and (2) subsequent determination of the level of a particular metabolite of that drug in the patient.³²⁶ The third part reflected the actual advance made by the inventors: their discovery of a particular relevant ceiling and a particular relevant floor for metabolite levels, with a measured metabolite level above the ceiling indicating that the existing drug dosage was likely to be toxic for the patient and therefore should be reduced, and with a measured metabolite level below the floor indicating that the existing drug dosage was likely to be ineffective for treating the patient and therefore should be increased.³²⁷

The discovery of the relevant ceiling and floor values for the associated metabolite was an apparently novel and socially valuable discovery³²⁸—the sort of discovery that one might imagine a patent system should be happy to reward. But the Supreme Court quite defensibly viewed this discovery as a discovery of laws of nature that by themselves are not patent eligible.³²⁹ Further, although conceding that one may patent an “application” of laws of nature,³³⁰ the Court rejected the notion that the patent claim escaped the bar against patenting laws of nature by attaching to the recitation of the natural laws the drug-administration and metabolite-measurement steps.³³¹ The Court explained that “simply appending conventional steps, specified at a high level of generality,”³³² is not

A method of optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder, comprising:

(a) administering a drug providing 6-thioguanine to a subject having said immune-mediated gastrointestinal disorder; and

(b) determining the level of 6-thioguanine in said subject having said immune-mediated gastrointestinal disorder,

wherein the level of 6-thioguanine less than about 230 pmol per 8×10^8 red blood cells indicates a need to increase the amount of said drug subsequently administered to said subject and

wherein the level of 6-thioguanine greater than about 400 pmol per 8×10^8 red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject.

U.S. Patent No. 6,355,623 col. 20 ll. 9–25 (filed Apr. 8, 1999).

326. *Mayo*, 132 S. Ct. at 1294.

327. *Id.* at 1297–98; *id.* at 1295.

328. *See id.* at 1295 (observing that it had “been difficult for doctors to determine whether for a particular patient a given dose is too high, risking harmful side effects, or too low, and so likely ineffective”).

329. *Id.* at 1296 (“Prometheus’ patents set forth laws of nature—namely, relationships between concentrations of certain metabolites in the blood and the likelihood that a dosage of a thiopurine drug will prove ineffective or cause harm.”).

330. *Id.* at 1294 (“We must determine whether the claimed processes have transformed these unpatentable natural laws into patent-eligible applications of those laws.”).

331. *Id.* at 1297–98.

332. *Id.* at 1300.

“enough”³³³ to supply an inventive concept necessary to distinguish the claimed invention from an effort to patent laws of nature.³³⁴ The Court’s use of the conventionality of these steps as a factor in subject-matter eligibility analysis necessarily intertwined that analysis with some of the concerns of patent law’s novelty and nonobviousness requirements. The Court effectively acknowledged this and the associated doctrinal redundancy by “recogniz[ing] that, in evaluating the significance of additional steps, the § 101 patent-eligibility inquiry and, say, the § 102 novelty inquiry might sometimes overlap.”³³⁵

The “new” remedies analysis can also be viewed as chafing at the compartmentalization of patent law doctrine. Over the past decade, courts have moved toward assessing patent-infringement remedies through cross-cutting analysis that can require detailed attention to the precise nature of an invention as bounded by prior art. After the Supreme Court’s decision in *eBay Inc. v. MercExchange, L.L.C.*,³³⁶ patentees who have succeeded in showing a continuing course of patent infringement can no longer generally assume that they will obtain injunctions against further violations.³³⁷ Instead, there are real hurdles to obtaining such relief that enable courts to focus attention on concerns such as the “public interest” and “balance of hardships” that are quite practical but also can require revitalized focus on the precise nature of the claimed invention and its delineation through the patent document.³³⁸ Likewise, stricter demands for proof of damages can lead courts to consider questions of real-world value, the viability of alternative design options, and the prospects for real-world harm—questions that interact with patent law’s doctrinal rubrics for patentability and infringement while also reaching beyond them.³³⁹ In sum, cross-cutting and at least partially redundant analysis of legal and practical concerns has

333. *Id.* at 1297 (emphasis omitted).

334. *See also* *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014) (describing the required “inventive concept” as “an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept]” (alteration in original) (internal quotation marks omitted)).

335. *Mayo*, 132 S. Ct. at 1304.

336. 547 U.S. 388 (2006).

337. *See id.* at 391 (setting forth “a four-factor test” that a patentee must satisfy before obtaining a permanent injunction).

338. *Id.* (listing factors involving consideration of “the balance of hardships” and “the public interest”).

339. *Cf.* Roy J. Epstein & Paul Malherbe, *Reasonable Royalty Patent Infringement Damages After Uniloc*, 39 AIPLA Q.J. 3, 4 (2011) (noting that recent Federal Circuit decisions “point to a higher standard of economic analysis in patent damages cases”); *id.* at 8 (detailing factors in assessing damages).

emerged on multiple fronts in contrast to a longer-term historical trend toward compartmentalization of patent law doctrines in ways frequently operating to limit redundancy.

C. *Alternative Institutions and Procedures*

A further area in which redundancy has grown has been in the realm of institutions and procedure. Here, the U.S. Supreme Court's resumption of a serious role in reviewing questions of substantive patent law, after a decade or so of substantial absence,³⁴⁰ can be viewed as an example of revitalization of a preexisting redundancy—the U.S. legal system's allowance for second-level appellate review even after review by a circuit court having centralized jurisdiction over patent appeals. Additional institutional and procedural innovations that have increased redundancy have mostly involved the USPTO. The USPTO has implemented some forms of error-checking redundancy on its own, perhaps most prominently through the institution of “second pair of eyes” review of applications for patents on business methods.³⁴¹ Other reforms enacted by Congress have generated new post-grant proceedings at the USPTO that offer opportunities to revisit an initial decision to issue a patent. In the 1980s, Congress adopted provisions for the USPTO to engage in *ex parte* reexamination of issued patents.³⁴² Nearly two decades later, Congress added an option of *inter partes* reexamination.³⁴³ Finally, in the America Invents Act of 2011, Congress replaced *inter partes* reexamination with so-called *inter partes* review and introduced two additional forms of post-grant proceedings.³⁴⁴ These various proceedings not only permit checks on the USPTO's earlier work but also can act as alternatives to expensive litigation in district courts or before the International Trade Commission, thus highlighting how some forms of redundancy might actually promote speed of action and the lowering of direct costs by offering cheaper alternatives to other institutions or processes. The comparatively uncontroversial nature of the growth in patent law's institutional procedural redundancies would seem to provide

340. Golden, *supra* note 22, at 670 (noting that a rise in Supreme Court review of patent cases after the early 1990s “is almost wholly attributable to the advent of its involvement in core questions of substantive patent law”).

341. Michael J. Meurer, *Patent Examination Priorities*, 51 WM. & MARY L. REV. 675, 696 (2009) (discussing the USPTO's “Second Pair of Eyes Review (SPER) program” that “required a second review of business method patents” and reflected concerns about patent quality).

342. MERGES & DUFFY, *supra* note 106, at 1039 (discussing the enactment of provisions for *ex parte* reexamination in 1980).

343. *Id.* (discussing the enactment of provisions for *inter partes* reexamination in 1999).

344. *Id.* at 1046 (noting that the America Invents Act of 2011 “accelerate[d] the trend toward administrative review of patent validity decisions”).

another example of how redundancy seems to achieve facial acceptance more easily in procedural or institutional contexts than with respect to matters of interpretation or doctrinal design.

III. Reconciling Redundancy and Anti-Redundancy

Part II has shown how, with respect to redundancy and anti-redundancy, modern patent law embodies a number of traits of U.S. law more generally. In particular, modern patent law exhibits relatively uncontroversial use of redundancy in institutional and process design, but much more contested or even hostile views of redundancy in the interpretation of legal language, as well as in often substantially atextual reasoning about the scope and interaction of different substantive legal doctrines. As Part II observes, U.S. patent law has exhibited a long-term trend toward increased distinction and compartmentalization of doctrines regulating patentability. Likewise, with the emergence of separate patent claims within the patent document, patent law has come to recognize two distinct forms of infringement, literal infringement and infringement by equivalence, and courts have chafed at relitigation of issues due to continuing overlaps between the arguments and evidence evoked by attempts to prove each of these forms of infringement.³⁴⁵ On the other hand, to the frustration of some commentators and many members of the patent law community, recent developments have swung against compartmentalization and the anti-redundancy tendencies it commonly embodies. As in much of U.S. law, the field seems open for a new synthesis that respects the legitimate concerns that inform anti-redundancy while facilitating intelligent use of redundancy as a principle of legal design. This Part looks to develop a framework for such a synthesis.

One could argue that there is no need to seek a new synthesis because anti-redundancy tends to involve no more than rebuttable presumptions and is therefore substantially self-correcting to the extent it diverges from facts on the ground.³⁴⁶ Part II has anticipated this argument by showing how, in U.S. patent law, anti-redundancy appears to have proven costly. The doctrine of claim differentiation has arguably run amuck, not only by seeming dramatically contrary to the actual practices and fundamental motivations of claim drafters, but also by perversely providing positive encouragement for redundant claim drafting in hopes of thereby obtaining subtly expanded patent scope.³⁴⁷ Somewhat similarly, the compart-

345. See *supra* text accompanying note 303.

346. See, e.g., CROSS, *supra* note 174, at 100–01 (concluding that, although “linguistic canons” of statutory interpretation likely make unrealistic presumptions and “may yield erroneous results[,] . . . [t]hey may provide a useful aid to interpretation, so long as they may be rebutted”).

347. See *supra* notes 227–46 and accompanying text.

mentalization of various patent law doctrines had, at least until recently, left them vulnerable to manipulation, circumvention, or extreme outcomes that could seem excessively disconnected from the significance of the underlying invention.³⁴⁸ At least in the context of patent law, these experiences with anti-redundancy provide grounds for suggesting that anti-redundancy concerns of claim differentiation and doctrinal distinctiveness might be better demoted to mere factors for consideration, rather than principles having presumptive force. But particularly with respect to questions of doctrinal design, there remain questions of when anti-redundancy concerns are likely to weigh most heavily, and how and whether those concerns might be effectively answered.

Here, an important point is that anti-redundancy might help optimize legal performance along relevant lines of accuracy and predictability when legal doctrine looks to strike an appropriate balance between competing concerns. A need to balance such opposing concerns can make unavailable a straightforward engineering approach to using redundancy to increase the security of expectations. Use of partially overlapping legal doctrines to better secure the interests of one side of the competing-concerns divide—for example, recognizing the availability of due process as a protection against search and seizure despite the Fourth Amendment’s separate protection—can cause individuals to feel better secured in their liberty and privacy interests. But this same legal step can leave law enforcement officers not only more confined but also less certain about what they can properly do in performing their jobs. In short, the designers of substantive legal doctrine often cannot engage in relatively straightforward engineering trade-offs between the cost of adding redundancy and the benefits of increased security or error avoidance that redundancy can provide. Instead, legal designers commonly face a more complicated, three-sided problem that involves interests in providing assurance to those on opposite sides of doctrinal boundaries, as well as costs of articulating and administering legal doctrines that can mediate the divide. In the context of such three-sided problems, compartmentalization of certain legal analysis in accordance with anti-redundancy might make substantial sense.

Take, for example, the relationship between the legal requirements of subject-matter eligibility and of novelty and nonobviousness in patent law. Here, the revival of a more robust approach to policing subject-matter eligibility that overlaps with novelty and nonobviousness might predictably be celebrated by those primarily concerned with the possibility of infringing others’ patent rights. The newly revived subject-matter eligibility doctrine promises to tighten restrictions on what can be validly patented, thereby opening up greater “freedom to operate” without a patent license.

348. See *supra* notes 318–39 and accompanying text.

Moreover, to the extent novelty-and-nonobviousness-infused subject-matter eligibility doctrine introduces new uncertainty that extends beyond the already-uncertain peripheries of existing novelty and nonobviousness doctrine, possible infringers are, at least at a first cut,³⁴⁹ no worse off than before. As the reinforcement to patentability requirements provided by a revived subject-matter eligibility doctrine cuts in their favor, they can simply choose to remain within earlier bounds, rather than take their chances with the new opportunities that revitalized subject-matter eligibility doctrine provides. On the other hand, existing and would-be patentees and their financial backers cannot so simply hide from the broad-reaching uncertainty that a revitalized subject-matter eligibility doctrine introduces. Even at a first cut, they cannot be content with simply continuing as before: if a key point of novelty for their claimed or hoped-for inventions lies in some form of excluded matter—a law of nature, physical phenomenon, or abstract idea—they must reassess whether the odds of validity and availability of patent rights have fallen so sharply that they can no longer rationally proceed in accordance with previous plans. For them, the uncertainty introduced by the vague boundaries of novelty-and-nonobviousness-infused subject-matter eligibility can have a chilling effect that extends beyond the revitalized eligibility exclusions' actual scope.

Such concerns of uncertainty and the potential chilling of legitimate and even socially desirable behavior seem reasonably likely whenever a new standard with less-than-crisp boundaries backs up the work of another, often more clearly articulated legal doctrine. Further, these concerns seem likely to be particularly acute in a category of situations in which the subject-matter eligibility example falls. In this category of situations, an existing, relatively vague standard like patent law's nonobviousness requirement, which Learned Hand characterized as summoning “as fugitive, impalpable, wayward, and vague a phantom as exists in the whole paraphernalia of legal concepts,”³⁵⁰ is backed up by a second relatively vague standard like patent law's revived subject-matter eligibility requirement, which I have elsewhere described as having fostered a “maelstrom of uncertainty.”³⁵¹ Although I generally agree with the Supreme Court's move to revive subject-matter eligibility doctrine and to

349. For certain possible infringers, this might only be true at a first cut because other possible infringers might gain a competitive advantage from increased legal uncertainty—for example, because these possible infringers are better at assessing questions of patentability under the new conditions of uncertainty or are better equipped to deal with the risks that this increased uncertainty entails.

350. *Harries v. Air King Prods. Co.*, 183 F.2d 158, 162 (2d Cir. 1950); *see also* *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 415, 418 (2007) (emphasizing that courts must assess that day's analog of nonobviousness through “an expansive and flexible approach”).

351. *Golden*, *supra* note 163, at 1770.

do so in a way that involves doctrinal overlaps, the Court's move has predictably generated short-term uncertainty and has also threatened to become a platform for relatively unguided—and thus potentially sloppy and degraded—analysis of issues relating to novelty and nonobviousness. Moreover, by potentially diverting analytical effort from freestanding novelty or nonobviousness analyses, new subject-matter eligibility doctrine could lead to a degradation of the quality of case law on the freestanding novelty and nonobviousness requirements themselves.³⁵² In such a context, one predictably finds expressions of concern about the mixing of subject-matter eligibility analysis and novelty or nonobviousness analysis,³⁵³ and one can anticipate calls for return to a more strictly compartmentalized doctrinal structure.³⁵⁴

One can generalize from the above. Across legal contexts, demands for simplification and compartmentalization might tend to be strongest when overlapping standards are involved, particularly if one of the standards—call it the “primary standard”—seems sufficient to perform the bulk of desired doctrinal work. In such a situation, there might be reasonable cause to suspect that the secondary standard adds uncertainty without adding much value in terms of better substantive results. In patent law, for example, a common view is that nonobviousness is “the ultimate condition of patentability.”³⁵⁵ Thus, to the extent one worries that a revived subject-matter eligibility analysis will effectively degrade analysis under this primary standard, one would likely lean toward arguing that subject-matter eligibility analysis should be more strictly confined. Further, critics of expansive subject-matter eligibility analysis argue that the substantive outcomes that advocates of revived subject-matter eligibility analysis seek can be almost entirely, if not entirely, obtained through nonobviousness analysis and other patentability doctrines that lack the notice problems that

352. Cf. Crouch & Merges, *supra* note 213, at 1691 (arguing for decision makers to seek to decide patentability questions on other grounds before entering “the swampy terrain of [subject-matter eligibility analysis]”).

353. Mark A. Lemley, *Point of Novelty*, 105 NW. U. L. REV. 1253, 1278 (2011) (critiquing “point of novelty” analysis in the subject-matter eligibility analysis of a 1978 Supreme Court decision); Mark A. Lemley, Michael Risch, Ted Sichelman & R. Polk Wagner, *Life After Bilski*, 63 STAN. L. REV. 1315, 1335 (2011) (describing “[t]he problematic aspect of [the same 1978 Supreme Court decision on subject-matter eligibility as] its apparent reliance on ‘point of novelty’ analysis”).

354. See, e.g., Michael Risch, *Everything Is Patentable*, 75 TENN. L. REV. 591, 607 (2008) (advocating “rigorous patentability” analysis under which subject-matter eligibility requires only that a claimed invention “fit into one of the statutory categories”).

355. MUELLER, *supra* note 146, at 271; see also MERGES & DUFFY, *supra* note 106, at 605 (“Many patent lawyers consider nonobviousness the most important of the basic patent requirements; it has been called ‘the ultimate condition of patentability.’”).

expansive subject-matter eligibility analysis creates.³⁵⁶ If the critics are right, emergence of a subject-matter eligibility standard that overlaps analytically with requirements of novelty and nonobviousness offers (1) little, if anything, in the way of improved accuracy (i.e., improved line drawing with respect to what should and should not be patentable); (2) much in the way of reduced predictability; and (3) relatedly and at least presumptively, much increased dispute-resolution cost.³⁵⁷

A similar form of argument could be made with respect to the question of whether due process concerns should play a role in the constitutional regulation of searches and seizures. If, for example, one views the Fourth Amendment's prohibition of "unreasonable searches and seizures"³⁵⁸ as formulated broadly enough to encompass all principal social concerns with searches and seizures that are of plausible constitutional import, one might hope that the courts, in working out the detailed legal and practical meaning of this prohibition over the course of decades, will foster a substantially optimal balance of competing social interests or, alternatively but less optimistically, will do about as well as can reasonably be expected in fostering an appropriate balance.³⁵⁹ With the Fourth Amendment's general rubric of "reasonableness" already in place, the opening of a new line of inquiry under the rubric of due process might be thought likely to add relatively little substantive value, while simultaneously introducing—or increasing—uncertainty that could have an undesirably chilling effect on law enforcement.³⁶⁰

Indeed, although dismissal of the possibility of dynamic improvement through the opening of a second line of inquiry might tend to come too rapidly, degradations of accuracy, predictability, and dispute-resolution efficiency seem to be generally plausible possibilities when a system encompasses two overlapping standards that mediate between competing concerns of comparable social weight. Just as specialization of the functions of institutions and individuals can generate improved

356. See Crouch & Merges, *supra* note 213, at 1686 (describing empirical studies suggesting that "a substantial number of patent claims lacking subject matter eligibility . . . also fail to satisfy at least one other validity test"); Risch, *supra* note 353, at 595 (claiming to "demonstrate that abandoning subject matter restrictions in favor of rigorous application of [other] patentability requirements will not necessarily lead to more patents in controversial areas").

357. Cf. Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557, 622–23 (1992) (noting that, "[w]hen legislators leave the details of law to courts (or to agencies that do not promptly issue regulations), individuals may be left with little guidance for years or decades, while substantial legal costs are incurred" (footnote omitted)).

358. U.S. CONST. amend. IV.

359. See, e.g., Akhil Reed Amar, *Fourth Amendment First Principles*, 107 HARV. L. REV. 757, 757–58 (1994) (describing the Fourth Amendment as "an embarrassment" under which the Supreme Court has provided "ultimately misguided" instruction and "a vast jumble of judicial pronouncements").

360. See *supra* note 112 and accompanying text.

performance, specialization of legal doctrines to answer specific, discrete concerns might help focus judicial minds, foster comparatively well-ordered bodies of case law, and facilitate at least the local optimization of doctrinal boundaries. It might seem presumptive folly to give up these potential advantages in favor of launching a new project of mapping the boundaries of a distinct but overlapping legal doctrine, one perhaps not so historically attuned to the specific concerns or fact patterns in question. Moreover, if there is uncertainty about the desirability of protecting even supposedly core interests or legal positions, redundancy that fortifies those interests or positions might impede socially beneficial legal development, rather than aid it. Under such circumstances, an anti-redundancy principle forbidding recognition of overlapping coverage and thus leaving the field to the more specialized doctrine might seem a course of wisdom as well as of convenience.

Quite generally, the likelihood of positive or negative effects from redundancy might be estimated by envisioning redundancy as having a net effect on social welfare ΔW equal to the sum of (1) the “primary value” ΔP of redundancy generated by its direct roles in achieving such social ends as the efficient and effective communication of legal rules or, particularly in the cases of doctrinal or institutional redundancy, the effective protection of relevant social interests; (2) the “administrative value” ΔA of redundancy calculated by netting administrative benefits and costs of redundancy with respect to processes of law development and application; and (3) the “evolutionary value” ΔE of redundancy generated by its ability to foster or retard developments in legal doctrine. In symbols:

$$\Delta W = \Delta P + \Delta A + \Delta E \quad [\text{Eq. 1}]$$

Each of the addends ΔP , ΔA , and ΔE can be positive or negative. Thus, the overall social value ΔW of redundancy likewise can be positive or negative. This Article has already discussed many of the potential sources of positive or negative social contributions from redundancy that inform the values of ΔP , ΔA , and ΔE . But a brief listing seems worthwhile here. Contributions to error correction or prevention are iconic components of the primary value ΔP , but they are not exclusive factors in its ultimate value. Redundancy can contribute positively to the achievement of a primary social end by, for example, (1) directly protecting against errors or other breakdowns of system components designed to help achieve those ends; or, as Andrew Hessick points out, (2) sending a strong signal of law’s “intent” to further that end and thereby encouraging individuals to act in a manner consistent with achievement of the end.³⁶¹ On the other hand, when the law

361. Hessick, *supra* note 1 (manuscript at 22) (“Redundancies in legal doctrine amplify the message expressed through those doctrines.”).

mediates between conflicting interests, redundancy might promote achievement of a first social end but impede achievement of a second social end, thus giving rise to a negative as well as a positive contribution to ΔP . Further, redundancy could undermine pursuit of the very social end it is intended to serve by (1) enabling obfuscation and promoting confusion, rather than clarity,³⁶² or (2) fostering shirking or ill-developed law because efforts at legal development become divided across a number of redundant fronts.³⁶³

With respect to the administrative value ΔA , administrative costs are the most obvious contributors. There can be further costs or savings, however—for example, to processes of drafting redundant language, generating redundant legal doctrines, or creating and maintaining redundant institutions or processes. Policy makers and commentators have long condemned the bureaucratic costs of redundant institutions and procedures.³⁶⁴ Moreover, redundancy in the language and doctrinal substance of legal documents can make them longer and thereby increase costs of drafting and proofing, recordation, transmission, and reception.³⁶⁵ But avoiding redundancy can be costly as well, perhaps particularly at the stage of generating and designing legal documents, doctrines, processes, or institutions.³⁶⁶ As suggested in discussing redundancy's provenance,³⁶⁷ the existence of redundancy is not always clear in advance, and the very pervasiveness of redundancy suggests that there can be savings in refraining from trying to eliminate it root and branch.

362. See *id.* (manuscript at 29) (“[T]he very existence of two doctrinal tests may create pressure on courts to conclude that the two tests are, or at least should be[,] different.”); *id.* (manuscript at 35–36) (discussing ways that judges might use doctrinal redundancies to avoid “public criticism” by obscuring the significance of their decisions); Rick Cazier & Ray Pfeiffer, Say Again? Assessing Redundancy in 10-K Disclosures 7 (Jan. 2015) (unpublished manuscript), <http://ssrn.com/abstract=2487259> [<http://perma.cc/AAG8-LV6R>] (reporting evidence that “10-K disclosure redundancy is associated with less efficient price discovery following 10-K filings, consistent with disclosure redundancy obfuscating the relevant content of the 10-K”).

363. See Gable & Meier, *supra* note 58, at 229 (“Under . . . a ‘regulatory commons problem,’ regulatory agencies evade responsibility by assuming that other agencies with overlapping jurisdiction will address a specific mandate.”); Hessick, *supra* note 1 (manuscript at 31) (“[D]ecisions developing redundant doctrines may be split between those doctrines.”).

364. Gable & Meier, *supra* note 58, at 228 (“Traditional examinations of public administration have been skeptical of redundancy in system design and institutional structure, suggesting the elimination or minimization of redundancies.”).

365. See Cazier & Pfeiffer, *supra* note 362, at 4 (“[R]edundant information directly affects document length and thus increases the costs of reading through the entire 10-K.”).

366. Legislators’ apparent penchant for redundancy, see *supra* note 187 and accompanying text, might partly reflect the fact that they relatively directly confront the drafting (and potential political) costs of avoiding redundancy but might not internalize many of the later administrative costs that redundancy imposes.

367. See *supra* text accompanying notes 54–56.

Redundancy's effects on allocation of power might also be viewed as generating positive or negative process values not captured by ΔP or ΔE . As indicated in section II(B)(1), pressure to allocate responsibilities between judges and juries has apparently intensified a long-term trend toward compartmentalization of patent law doctrines.³⁶⁸ Another way of explaining resulting anti-redundant shifts in the law might be to characterize them as parts of a general effort at jury control, an effort in which courts have effectively taken issues such as claim construction for themselves³⁶⁹ while denigrating and limiting the role of issues, such as infringement under the doctrine of equivalents, that remain more centrally within the province of juries.³⁷⁰ In the opposite direction, numerous overlaps between criminal statutes tend to enhance the power of public prosecutors, giving them enormous discretion in choosing what crimes to charge.³⁷¹ To the extent one believes that redundancy's effects on allocations of power are positive or negative in ways independent of contributions to ΔP or ΔE , one can find that these effects make a positive or negative contribution to ΔA .

Finally, the evolutionary value ΔE of redundancy can reflect positive and negative effects springing from redundancy's capacities to promote adaptability and evolution on the one hand and to generate lock-in on the other. Assessment of the likely sign or size of ΔE can also be complicated by the fact that the relationship between evolutionary capacity and evolutionary value might have an inverted-U shape. Zero evolutionary capacity is frequently less than ideal, but too little stickiness in law can undermine predictability, harm perceptions of a meaningful rule of law, and leave the law overly susceptible to fads or fancies. In any event, whether viewing evolutionary potential as a positive or a negative, various authors have recognized that redundant language, legal doctrines, or institutions can lead to greater possibilities for creativity, adaptation, and experimenta-

368. See *supra* text accompanying note 252.

369. See Jerry A. Riedinger, *Markman Twenty Years Later: Twenty Years of Unintended Consequences*, 10 WASH. J.L. TECH. & ARTS 249, 262 (2015) (reporting that judicial adoption of the rule that patent claim construction is the sole province of judges "arose from severe hostility to juries").

370. See James Farrand et al., "Reform" Arrives in Patent Enforcement: The Big Picture, 51 IDEA 357, 445 (2011) (observing that, as with other "Federal Circuit initiatives [that] have ratcheted back jury power in patent cases," "heavier legal limitations on the [doctrine of equivalents] have decimated juries' powers").

371. See Zachary S. Price, *Enforcement Discretion and Executive Duty*, 67 VAND. L. REV. 671, 681–82 (2014) (noting that the "ever-increasing prosecutorial discretion" reflecting the fact that "[f]ederal statutes . . . often prohibit the same (or closely similar) crimes many times over, allowing punishment of a single transaction under multiple overlapping or lesser-included prohibitions"); James Vorenberg, *Decent Restraint of Prosecutorial Power*, 94 HARV. L. REV. 1521, 1528 (1981) ("[A] criminal act typically involves the possible application of several criminal statutes.").

tion.³⁷² Of course, however, one would also expect that redundancy makes more difficult the substantial erosion of the core interests that redundancy is designed to protect. In short, as with ΔP and ΔA , a mix of positive and negative contributions can enter into the value ΔE .

Having examined the general nature of the addends ΔP , ΔA , and ΔE , let us now consider how Equation 1, the formula for redundancy's overall social value ΔW , might help with understanding the distinctive nature of situations in which law mediates between competing interests of comparable social weight. Where there is essentially only one dominant interest to protect or advance, well-designed redundancy might commonly yield a strongly positive value for ΔP by providing security with respect to protection of that interest without excessively taxing information-processing capacities. This strongly positive value for ΔP might clearly dominate the administrative costs of redundancy embodied in the term ΔA . Moreover, if we are confident of the ongoing desirability of the core interest that redundancy protects, we might have good reason to expect that the evolutionary value ΔE of such redundancy is positive and at least not substantially negative. In short, where law is focused on one dominant interest and we are confident that we will want the law to retain this focus over time, redundancy might well be a good social strategy.

When there are competing interests of comparable social weight, however, using overlapping standards having fuzzy boundaries might be far more difficult to justify on grounds of a strongly positive ΔP . In such a situation, security and signaling with respect to one competing interest might come at the expense of security and signaling with respect to the other. Administrative costs ΔA might be especially high because of the pressure on fine points that strongly competing social interests can generate. Moreover, if one believes that the evolutionary value ΔE of redundancy is likely negligible—perhaps because one is generally hostile to evolution in the understanding of legal texts and doctrines or perhaps because the need to reduce conflict by settling legal issues looms large—the presence of ΔE on the right side of Equation 1 might provide little cause to believe redundancy's overall contribution to be positive. With the likelihood of a positive social welfare effect from redundancy in doubt, one might naturally opt for relative simplicity over relative complexity and declare the field to

372. See, e.g., Cover, *supra* note 12, at 673 (presenting “an argument that innovation in norm articulation is healthier in a federal system”); Gable & Meier, *supra* note 58, at 239 (“Complementarity across overlapping public health laws and systems also can spur innovation in policy and practice . . .”); Hessick, *supra* note 1 (manuscript at 24–28) (noting that doctrinal redundancy “facilitates doctrinal innovation”); Landau, *supra* note 58, at 356 (contending that redundancy “permits flexible responses to anomalous situations and provides a creative potential for those who are able to see it”).

be occupied by the more specific of two potentially applicable standards, the approach of the Supreme Court with respect to the constitutionality of searches and seizures.

But there are alternative approaches to doctrinal design that can answer the above concerns with overlapping standards. First, there is the possibility of turning one of two overlapping standards into a more rule-like doctrine that has comparatively sharply defined boundaries. This could render the contribution to uncertainty from the now more rule-like doctrine relatively negligible compared to the full-fledged standard. Combinations of overlapping rules and standards seem relatively common in law and are often seen as providing improved clarity and predictability relative to a legal system featuring the standard alone. Gideon Parchomovsky and Alex Stein have recently highlighted law's frequent use of "catalogs" in which the scope of a somewhat standard-like, catchall category such as "pets" is illustrated and clarified by the express provision of more specific covered examples such as "cats" and "dogs."³⁷³ Additionally, there is the common phenomenon of law overlaying a background standard with provisions for safe harbors or what Susan Morse calls "sure shipwrecks."³⁷⁴ Relative to patent law's nonobviousness requirement, patent law's novelty requirement might be viewed as instituting a sure shipwreck by making clear that, when a single prior art reference discloses all the limitations of a patent claim, that claim is invalid.³⁷⁵ The nonobviousness-overlapping demands of the novelty requirement can thereby facilitate efficient decision making by providing a comparatively straightforward rule for when a subcategory of patent claims should be held invalid.

The rule-as-overlay-to-fundamental-standard approach might not be a viable design for certain situations, however. With respect to patent law's requirement of subject-matter eligibility, for example, prior efforts to confine the requirement in a rule-like way led to concern that the doctrine had become too easily satisfied or evaded, concern that triggered the requirement's revival in a more robust, standard-like form. The result is a situation in which there are two overlapping and substantially standard-like

373. Gideon Parchomovsky & Alex Stein, *Catalogs*, 113 COLUM. L. REV. 165, 170 (2013); see also *id.* at 168 ("A catalog, as it is defined in this Essay, consists of an outright ban on a detailed, but incomplete, list of specific activities and a general prohibition of all activities falling into the same category.").

374. See Susan C. Morse, *Safe Harbors, Sure Shipwrecks*, 49 U.C. DAVIS L. REV. (forthcoming 2016) (manuscript at 4), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2613543 [<http://perma.cc/N527-XPJ7>] ("A sure shipwreck describes conduct that will definitely violate the law, while other facts remain subject to a standard as applied by the ex post judgment of future decisionmakers.").

375. MUELLER, *supra* note 146, at 176 ("The strict identity rule states that to evidence anticipation . . . a single prior art reference must disclose every element of that invention, arranged as in the claim.").

requirements—subject-matter eligibility and nonobviousness—that play large roles in regulating the patentability of certain types of innovation. For such a situation in which neither of two overlapping doctrines seems a good candidate for rule-like precision, society might need a different strategy to address concerns about the unpredictability and doctrinal degradation that can result from doctrinal overlaps.

Here, instruction can be drawn from how contract law's unconscionability doctrine backstops a host of more specific doctrines on contract defects. In these situations, concerns about the uncertainty and doctrinal degradation threatened by the encroachment of a relatively vague standard appear commonly to be met—at least from the perspective of those who believe they are met—by confining the operation of the overlapping standard so that, at least in a state of relative legal equilibrium, the standard changes the practical results of legal analysis only in relatively exceptional circumstances. Hence, there is the frequent requirement for the deployment of the unconscionability doctrine of some combination of both substantive and procedural unconscionability,³⁷⁶ a demand supplemented by the Uniform Commercial Code's instruction that its doctrine of unconscionability is not meant generally to disturb “allocation of risks” established through “superior bargaining power.”³⁷⁷ As long as such an overlapping vague standard can be reasonably characterized as a backstop or safety valve whose direct effect, under ordinary circumstances, is relatively limited in frequency or intensity, its damage to two-way concerns of predictability and accuracy can likewise be viewed as limited. Moreover, such limited damage might be viewed as plausibly counterbalanced by the additional assurance provided to at least some risk-averse parties that a backstopping standard will help prevent extreme outcomes.

In short, consideration of the general phenomena of redundancy and anti-redundancy provides cause for hope that legal policy makers and decision makers have ways to answer present concerns about the potentially destabilizing effects of overlapping standards, such as patent law's subject-matter eligibility and nonobviousness standards. Through the actions of

376. FARNSWORTH, *supra* note 108, § 4.28, at 301 (describing “‘unreasonably favorable’ terms” as “substantive” unconscionability and “absence of meaningful choice” as “procedural” unconscionability); *id.* at 302 (“Most cases of unconscionability involve a combination of procedural and substantive unconscionability . . .”); *cf.* Melvin Aron Eisenberg, *The Role of Fault in Contract Law: Unconscionability, Unexpected Circumstances, Interpretation, Mistake, and Nonperformance*, 107 MICH. L. REV. 1413, 1416 (2009) (contending that “[c]ontracts made on competitive markets will rarely be unconscionable” and that, “[r]egardless of the nature of the market on which a contract is made, a contract will not be unconscionable without the element of moral fault”).

377. U.C.C. § 2-302 cmt. 1 (AM. LAW INST. & NAT'L CONFERENCE OF COMM'RS ON UNIF. STATE LAW 1987).

courts and others, the legal system can re-equilibrate with one of the cross-cutting standards ultimately taking on only a relatively moderate and moderating role. If such re-equilibration can be achieved with respect to subject-matter eligibility in patent law, this result will add to the list of examples of how intelligent doctrinal design can rationally balance concerns of redundancy and anti-redundancy.

Conclusion

Analysis of legal redundancy and anti-redundancy suggests that anti-redundancy has commonly had excessive rhetorical sway. Although one can find examples of the application of anti-redundancy principles in virtually any major area of public or private law, U.S. patent law offers especially graphic examples through the doctrine of claim differentiation, complaints about “relitigation” under the doctrine of equivalents, and a long-term trend toward doctrinal compartmentalization. Moreover, patent law’s examples illustrate how anti-redundancy can generate negative practical results. The doctrine of claim differentiation can perversely inspire more, rather than less, redundancy in claim drafting and can lead to subtly inflated patent scope that escapes the notice of overburdened patent examiners. Meanwhile, the compartmentalization of doctrines regulating patentability can lead to too easily exploited gaps, loopholes that the Supreme Court’s revitalized case law on subject-matter eligibility has to some degree tried to fill.

To counter tendencies toward thoughtless and injurious anti-redundancy, legal policy makers and decision makers should openly recognize that redundancy is a justifiably frequent feature of law. Redundancy, which often appears in the form of partly, but not completely, overlapping and reinforcing language, legal doctrines, processes, and institutions, can enable the law to operate with complexity and nuance while retaining robustness and certainty on key points of concern. By ensuring that core concerns are secure while offering means for flexibility, redundancy can also promote the law’s evolutionary potential. By preventing realization of such benefits of redundancy, anti-redundancy can do social harm.

Redundancy does not come without cost, however, and there can be legitimate concerns about redundancy’s capacity to sow error and confusion. Anti-redundancy can be justifiably strong in situations involving analytically overlapping standards that attempt to mediate between competing interests of comparable social weight. In such situations, use of two analytically overlapping standards might be overkill, a step that at best generates only limited gains in the quality of legal outcomes while multiplying uncertainty and unpredictability that chill desirable behavior on one or another side of a social divide. But even in such situations, the example provided by unconscionability as a backstop

doctrine in contract law suggests that recognition of substantially overlapping coverage by a new or alternative standard need not introduce uncertainty or inaccuracy that outweighs likely gains. Similarly, one might hope that patent law's revived requirement of subject-matter eligibility can evolve into a reasonably defined but flexible standard that backstops multiple patentability doctrines and does not add intolerably to the uncertainties that innovators face.

More generally, the aim of legal decision makers and policy makers, as well as drafters of legal documents, should be not to eliminate or ignore redundancy but to optimize its recognition and use. Optimization requires balancing redundancy's advantages against its costs, the concerns of anti-redundancy. Appropriate balancing might involve the use of multipolar or layered structures of partly, but not completely, redundant procedures, institutions, language, and legal doctrine. Safe harbors, catalogs, checks and balances, and doctrinal safety valves are but a few of the ways in which properly restrained redundancy can improve, rather than degrade, legal performance in situations involving significantly competing social interests. Indeed, well-designed redundancy might be crucial to law's ability to serve as mediator and guide in modern plural societies. By considering possible forms of redundancy and exploring how to make them realities, we can hope to progress toward a more sophisticated and socially productive use of redundancy in law.