

{

Redundancy: When Law Repeats Itself*John M. Golden**To be published in volume 94 of the *Texas Law Review***Abstract**

The idea that law should generally be understood or designed to minimize redundancy informs much legal reasoning and design. Courts invoke forms of anti-redundancy in constitutional law, statutory interpretation, and the reading of contracts. Patent law, an area that substantially straddles public and private law, is no exception. In this area, judges—and in particular judges of the U.S. Court of Appeals for the Federal Circuit—have made notable efforts to limit overlaps between different governing doctrines, have regularly invoked anti-redundancy canons in interpreting claims, and have rejected efforts to “relitigate” issues of claim construction under the doctrine of equivalents. But despite frequent invocation of anti-redundancy principles in patent law and elsewhere, redundancy seems continually to appear, whether in the form of apparently superfluous language in a legal document or in the form of at least partial overlaps in the domains of different doctrines, institutions, or procedures. In some areas, especially with respect to certain procedural and institutional arrangements, redundancy appears to have been actively embraced. But at least in terms of conventional legal rhetoric, anti-redundancy seems more commonly to hold sway. This article examines the general phenomena of redundancy and anti-redundancy and gives particular attention to their deployment in patent law. The article suggests that anti-redundancy should commonly be no more than a factor, as opposed to a source of presumption, in the interpretation of legal documents. Further, the article concludes that, where law looks to mediate between competing social interests, anti-redundancy can have merit as a principle for doctrinal design. Even in such situations, however, concerns underlying anti-redundancy can commonly be satisfied through doctrinal design that secures two-way interests in predictability and accuracy while reserving a place for redundancy and the value it can add.

* Professor, University of Texas School of Law; Visiting Professor, Harvard Law School (spring 2015). For helpful comments, I thank David Adelman, David Anderson, Mitch Berman, Sergio Campos, Tun-Jen Chiang, Laurence Claus, Einer Elhauge, Richard Fallon, William Fisher, Willy Forbath, Charles Fried, Janet Freilich, Jeanne Fromer, Steven Goode, Lino Graglia, Louis Kaplow, Jennifer Laurin, Thomas Lee, Sandy Levinson, John Manning, Tom McGarity, Maggie McKinley, Michael Meurer, Susan Morse, Scot Powe, Intisar Rabb, Todd Rakoff, Karen Sandrik, Steve Shavell, Ted Sichelman, Henry Smith, Holger Spamann, Jordan Steiker, Matthew Stephenson, Graham Strong, Eric Talley, Molly van Houweling, Adrian Vermeule, and participants in the 2014 Intellectual Property Scholars Conference and in workshops at the Boston University School of Law, Harvard Law School, the University of Texas School of Law, and the University of San Diego School of Law.

}

TABLE OF CONTENTS

INTRODUCTION.....	1
I. Redundancy and Anti-Redundancy Overview.....	6
A. Redundancy and Anti-Redundancy in Context.....	6
1. Procedural and Institutional Design.....	6
2. Interpretation.....	14
3. Doctrinal Structure.....	16
B. Forms of Redundancy.....	18
C. Redundancy and Anti-Redundancy as Design Principles.....	23
II. Redundancy and Anti-Redundancy in Patent Law.....	36
A. Claim Construction and Differentiation.....	37
B. Doctrinal Compartmentalization.....	47
1. Long-Term Trend Toward Compartmentalization.....	48
2. No Vitiating Doctrine and the Doctrine of Equivalents.....	56
3. Recent Pushback on Subject Matter and Remedies.....	60
4. Alternative Institutions and Procedure.....	64
III. Reconciling Redundancy and Anti-Redundancy.....	65
CONCLUSION.....	73

{

INTRODUCTION

The idea that law should generally be understood or designed to minimize redundancy is a force in legal reasoning and design. Judges and lawyers frequently cite this notion as a basis for an interpretation of a legal document, as an objection to “relitigation” of certain disputes or issues, or as a reason to understand legal doctrines to be not only distinct but also substantially segregated in analysis or coverage.¹ Judges have invoked anti-redundancy in interpreting any of various forms of legal documents, including constitutions, statutes, regulations, patent claims, and contracts. Trial courts commonly criticize efforts to “relitigate” similar questions under ostensibly different legal headings. Judges make conscious efforts to limit overlapping coverage by different domains of law, such as contract and tort, and suspicion can greet arguments based on legal doctrines such as unconscionability or substantive due process that serve—or could serve—as at least partially redundant “backups” to other, more specific doctrines.

The too easy hold of simply stated anti-redundancy is both troubling and peculiar. For decades, information theory, data compression, and ordinary persons’ success in communicating with unconventional conciseness via modern-day “text” or historical telegram have made clear how full of redundancy standard human communication tends to be² and often desirably is.³ Further, attention to the actual results or motivations of

¹ See, e.g., *Gustafson v. Alloyd Co.*, 513 U.S. 561, 574 (1995) (invoking as a “sensible rul[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 redundancy.”).

² C. E. Shannon, *Prediction and Entropy of Printed English*, 30 BELL SYS. TECH. 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.”).

³ 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, *Theory of “Stare Decisis”*, 1 J. LEGAL STUDIES 125, 126 (1972) (noting that a communications engineer “finds it wise ... to introduce redundancy ...

{

legal drafting suggests that drafters of legal documents ranging from statutes to contracts pay no more than limited heed, if any, to concerns with avoiding redundancy.⁴ To the extent one considers the generation of legal documents or doctrines as a problem of “legal engineering,” the desirability of a general rule against redundancy is highly questionable. 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.⁵ Consistent with conclusions about “high-reliability organizations”⁶ in business or government, the U.S. Constitution enshrines a governmental system of “checks” that falls far short of an ideal of minimalist

because otherwise any loss of information due to malfunctions in the transmission system would be undetectable and irremediable”).

⁴ See, 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, 934-35 (2013) (reporting that a survey of 137 congressional staffers indicated that drafters of statutory provisions “intentionally err on the side of redundancy”); Lemley, *supra* note 61, at 1394 (“Patent applicants who draft multiple claims quite often *are* trying to be redundant.”); see also *Marx v. Gen’l Revenue Corp.*, 133 S. Ct. 1166, 1177 (2013) (“[R]edundancy is ‘hardly unusual’ in statutes addressing costs.”).

⁵ See PATRICK D.T. O’CONNOR & ANDRE KLEYNER, PRACTICAL RELIABILITY ENGINEERING 146 (5th ed. 2012) (observing that, “[i]n 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 BASOVSKY, RELIABILITY THEORY AND PRACTICE 97 (Dover ed., 2004; original printing 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 (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 (“[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.”).

⁶ ROBERT POOL, BEYOND ENGINEERING: HOW SOCIETY SHAPES TECHNOLOGY 265 (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”).

{

design.⁷ Indeed, in many respects, recognition of the desirability of redundancy to protect against human limitations pervades the law.⁸ Yet somehow when fallible, limited humans or human institutions generate legal documents or doctrines, there seems a persistent tendency to view—or at least presumptively to view—these artifacts of human endeavor as heroically lacking in redundancy.⁹

This article explores the puzzle of legal anti-redundancy and examines how legal doctrine might be designed to obtain important benefits from redundancy while substantially mitigating legitimate 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 certain contexts and for certain purposes. In law as in other areas, any positive value that redundancy provides might be counterbalanced by negative tradeoffs.¹⁰ Redundancy can reflect or promote inefficiency, whether of expression,

⁷ 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* 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* 1 (2013) (observing that, under the U.S. federal system, “[e]nforcement redundancy [of federal law] is the norm”), available at <http://ssrn.com/abstract=2252982>.

⁸ 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 ...”).

⁹ 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.”).

¹⁰ EBELING, *supra* note 5, 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”).

{

thought, or institutional design. 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 contrast, clear definition and distinction of legal doctrines—aspects of law commonly associated with anti-redundancy—can facilitate more precise and self-consistent legal reasoning as well as the development of a deeper case law and body of experience within crisply defined channels.

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 technical nature of patent law and its subject matter,¹¹ as well as the frequent complexity of associated legal disputes,¹² might predictably lead judges to grope for legal tools, such as anti-redundancy doctrines, that at least superficially promise to streamline decision-making in a way that evades a technical morass.¹³ Hence, anti-redundancy might be predictably prominent in the technical process of patent claim construction, which involves interpreting numbered clauses of a patent document in order to determine

¹¹ See *Teva Pharms. 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.’” (citation omitted)).

¹² 2003-2004 DISTRICT COURT CASE-WEIGHTING STUDY: FINAL REPORT TO THE SUBCOMMITTEE ON JUDICIAL STATISTICS OF THE COMMITTEE ON JUDICIAL RESOURCES OF THE JUDICIAL CONFERENCE OF THE UNITED STATES 5 tab.1 (2005) (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).

¹³ 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 canons to avoid having to immerse themselves in highly complex technical areas of the law where the probability of error is particularly high”).

{

patent scope.¹⁴ Further, heavy demands for predictability in patent law¹⁵ might help explain its historical trends toward increased doctrinal differentiation and compartmentalization, trends that have both fed and fed off anti-redundancy.

As one might expect, the United States Court of Appeals for 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 for patent law,¹⁶ the circuit has commonly—if sometimes grudgingly—received praise for success in clarifying various aspects of patent law's content and application.¹⁷ 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 various patent law doctrines.

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 the compartmentalization of legal doctrines can also multiply opportunities for loophole seekers and can help distance the daily operation of law from constitutional or statutory aims. In patent law, the United States Supreme Court's recent interventions on questions of subject-matter eligibility appear partly understandable as a reaction against efforts to delineate patent law in parsimonious ways that sacrifice richness in favor of

¹⁴ 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 had “reemphasized the importance of the rule that claims must be construed from the perspective of one having ordinary skill in the relevant technological art”).

¹⁵ *Cf. id.* at 322 (“Patents play a critical role in modern business planning and finance.”).

¹⁶ 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”).

¹⁷ *See id.* at 681 (observing that 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”).

}

superficially clearer direction.¹⁸ In like vein, the Federal Circuit itself has sometimes reacted against anti-redundancy—for example, by intervening to damp district courts’ deployment of a doctrine against “vitiating” claim constructions to prevent inquiry into infringement by equivalence.¹⁹

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. Part III acknowledges that anti-redundancy can reflect legitimate concerns in situations where the law seeks to mediate between conflicting social interests. Part III contends, however, that, even in situations where anti-redundancy concerns appear significant, these concerns can be substantially satisfied through intelligent 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, at least under equilibrium conditions. 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.

I. REDUNDANCY AND ANTI-REDUNDANCY OVERVIEW

A. REDUNDANCY AND ANTI-REDUNDANCY IN CONTEXT

1. Procedural and Institutional Design

Generally speaking, adherence to redundancy and anti-redundancy seems reasonably evenly balanced with respect to procedural and institutional issues in United States law. Indeed, redundancy in relation to procedure or institutions commonly seems to be appreciated as a positive value—even a

¹⁸ See *infra* Part II.B.3.

¹⁹ See *infra* Part II.B.2.

{

positive requirement—in the context of U.S. law. Of course, as in engineering, inclinations toward redundancy ultimately become subject to practical concerns and limits. In procedural and institutional contexts, there appears common recognition that redundancy in the form of processes or institutions to “check” decisions by one governmental entity or another can generate value but also impose costs.²⁰ A general 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 by institutions or processes as well as the opportunity costs that redundancy and redundancy-related transaction costs can impose by diverting government and private energies and by delaying or possibly even frustrating government decision-making or action.²¹

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.²² 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

²⁰ See, e.g., Adam 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).

²¹ See Vermeule, *supra* note 8, 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”); 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”).

²² 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 “believ[ed] 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”).

}

overlap so that each branch remains subject to restraint by the others.²³ 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.”²⁴ Much more recently but along related lines, Laurence Tribe has highlighted that the “separated and divided powers” model of U.S. government²⁵ 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 without which independence can become domination.”²⁶ At a relatively fundamental level, a commitment to checks and balances has commonly demanded or supported the presence of multiple, semi-redundant “veto-gates” in legislative processes.²⁷ Although this redundancy imposes the added costs of maintaining separate “checking” institutions or undergoing separate “checking” procedures, including a potential risk of undue “gridlock,”²⁸ there remains a common commitment to the notion that, as “a

²³ THE FEDERALIST NO. 48 (Madison) (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.* 1 TRIBE, *supra* note 7, § 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”).

²⁴ THE FEDERALIST NO. 51 (Madison)

²⁵ 1 TRIBE, *supra* note 7, § 2-2, 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”).

²⁶ 1 TRIBE, *supra* note 7, § 2-2, at 121 (emphasis omitted).

²⁷ 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, 1466 (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”).

²⁸ 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).

{

feature and not a bug,” redundancy can commonly be expected to generate better governing results.²⁹

Of course, as with linguistic and doctrinal redundancies, procedural and institutional redundancies—e.g., review by both houses of Congress, review by the President, and, for many questions, potential later judicial review³⁰—are, like doctrinal redundancies, generally not “pure redundancies” because each of the major institutional reviewers may be viewed as having different characteristics and competences and because reviewers might examine somewhat different sets of related issues under different standards of review.³¹ Consequently, each institutional reviewer might provide an at least partly distinct kind of review—a less than wholly redundant form of review—even if there are substantial overlaps between the subject matter they cover.³² Nonetheless, the level of even partial redundancies in U.S. federal law on procedure and institutions is striking when one considers the historical and contemporary employment of apparently plausible alternatives such as unicameral legislatures, single-house-dominated legislatures, or more limited judicial review.³³ Likewise, the U.S. commitment to judicial review of administrative decisions, commonly presumed to be available or explicitly made available by statute,³⁴

²⁹ LEVINSON, *supra* note 28, at 163.

³⁰ *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).

³¹ *Cf.* Vermeule, *supra* note 8, at 1445 (commenting on “[w]hole versus partial [second] opinions” (emphasis omitted)); *id.* at 1446 (“Some second-opinion mechanisms require two opinions from different individuals or institutions.”).

³² 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”).

³³ See Chafetz, *supra* note 28, at (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 612 (observing that the U.S. version of “judicial review of legislation” has been “so robust that many other countries long rejected the idea”).

³⁴ *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) ;

{

testifies to an embrace of at least partially redundant checks and balances through provisions for different individuals or institutions to do the checking.³⁵

Even beyond traditional checks and balances, commitment to substantial redundancy in legal institutions and process appears through common recognition of rights to appeal the decisions of trial courts.³⁶ The redundancy here might be viewed as more complete than between initial administrative review and subsequent judicial review because of a likely greater commonality between the outlooks and competences of trial and appellate judges, and, to the extent anti-redundancy concerns retain much bite in procedural and institutional contexts, this view might help explain the longtime failure to recognize a federal constitutional right to appellate review of trial-court judgments.³⁷ Nevertheless, even between trial and appeal courts, redundancy tends to be only partial because appellate courts frequently differ significantly in composition and operation from trial courts. For example, adjudication in the trial courts often involves only one judge, might involve a jury in addition to the judge, and generally involves

RICHARD J. PIERCE, JR., SIDNEY A. SHAPIRO & PAUL R. VERKUIL, *ADMINISTRATIVE LAW AND PROCESS* § 5.1.5, at 133 (5th ed. 2009) (“When legislative intent is not clear, courts presume that Congress intended to provide a right to judicial review of an agency action.”); BERNARD SCHWARTZ, *ADMINISTRATIVE LAW* § 8.2, at 471 (3d ed. 1991) (observing that federal “statutes provide for judicial review of the acts of most important federal regulatory agencies”).

³⁵ See THE FEDERALIST NO. 62 (Madison) (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”); *id.* No. 73 (Hamilton) (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”); *id.* No. 78 (Hamilton) (describing the “independence of judges” as “requisite to guard the Constitution and the rights of individuals”).

³⁶ 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.”); 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”).

³⁷ Robertson, *supra* note 36, at 1221 (“[T]he Supreme Court has repeatedly declined to recognize a due process right to appeal in either civil or criminal cases.”).

{

presentation of evidence in addition to legal argument. In contrast, appellate adjudication commonly involves a panel of judges,³⁸ generally does not involve a jury,³⁹ and generally does not involve presentation of new evidence beyond materials, such as legislative history or dictionary definitions, of which a court may take judicial notice.⁴⁰ In any event, the common tolerance or active embrace of redundancy between trial and appellate courts might reflect not only concerns with error correction (especially the task of correcting legal errors for which appellate courts might have special competence⁴¹) but also desires to facilitate uniformity and predictability in the treatment of cases⁴²—ends not so tightly related to redundancy as opposed to the generally 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. Over four decades ago, Martin Shapiro

³⁸ Evan H. Caminker, *Precedent and Prediction: The Forward-Looking Aspects of Inferior Court Decisionmaking*, 73 TEX. 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”).

³⁹ 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”).

⁴⁰ See *Salve Regina College v. Russell*, 499 U.S. 225, (1991) (“With the record having been constructed below and settled for purposes of 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 CAL. L. REV. 1185, 1201 (2013) (discussing how, relative to appellate courts, trial courts possess “superior factfinding competence” (quoting Charles Alan Wright, *The Doubtful Omniscience of Appellate Courts*, 41 MINN. L. REV. 751, 782 (1957)))

⁴¹ Caminker, *supra* note 38, at 42 (“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.”).

⁴² 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.”).

{

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.”⁴³ 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 redundancy⁴⁴—indeed, levels of redundancy that can help make lawyers, legal academics, and their work product notorious.⁴⁵ Shapiro diagnosed the high level of redundancy in legal discourse as “the standard solution predicted by communications theory for any acute noise problem”—in this instance, “the noise problem of a non-hierarchical organization like the courts” that engages in incremental decision-making.⁴⁶

Shapiro’s thesis is consistent with the notion that our society and legal system has come to accept or even embrace substantial forms of redundancy as a matter of process and institutional design and has done so apparently for reasons commonly quite similar to those for accepting or embracing redundancy in engineering or communication. Of course, 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 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, and one might study in detail the extent to which pushback against such redundancy reflects a sort of cost-benefit analysis of redundancy’s advantages and disadvantages or a more general hostility to redundancy that common commitments to checks, balances, and opportunities for error correction only partly overcome. U.S. legal systems exhibit many tendencies that seek to promote closure in legal proceedings

⁴³ Shapiro, *supra* note 3, at 127.

⁴⁴ *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?”).

⁴⁵ 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’”).

⁴⁶ Shapiro, *supra* note 43, at 134.

{

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.⁴⁷ Limitations on collateral review of legal judgments, including limitations on habeas review despite such review’s 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.⁴⁸ Likewise, concerns about parallel litigation in state and federal courts have supported at least a limited allowance for federal-court abstention “out of deference to pending state court proceedings.”⁴⁹ 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.⁵⁰

Nonetheless, for purposes of the present investigation of redundancy and anti-redundancy in law, there seem sufficient grounds for distinguishing questions relating to institutional and procedural design from questions relating to the interpretation of legal documents and the structure and relationship of legal doctrines. In institutional and procedural contexts, limitations to redundancy seem commonly to reflect 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 productively into the future. 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.

⁴⁷ *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)).

⁴⁸ *Shea v. Louisiana*, 470 U.S. 51, 59-60 (1985) (distinguishing between direct appeal and collateral review based on “considerations of finality in the judicial process” and the sense that “[s]omewhere, the closing must come”); *Travelers Indem. Co. v. Bailey*, 557 U.S. 137, (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.” (internal quotation marks and citations omitted; ellipsis in original)).

⁴⁹ ERWIN CHERMERINSKY, *FEDERAL JURISDICTION* § 14.2, at 821 (3d ed. 1999).

⁵⁰ 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”).

}

2. 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.⁵¹

In constitutional law, the canon against superfluity received one of its most prominent articulations in *Marbury v. Madison*.⁵² 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.”⁵³ 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.⁵⁴

As Akhil Amar has noted, multiple commentators have pointed out that Marshall’s use of the anti-surplusage rule in *Marbury* is flawed.⁵⁵ 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 not take away.⁵⁶ Nonetheless, the canon against superfluity is a generally

⁵¹ See, e.g., Anita S. Krishnakumar, *Statutory Interpretation in the Roberts Courts’ 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”).

⁵² 5 U.S. (1 Cranch) 137 (1803).

⁵³ *Id.* at 174.

⁵⁴ *Id.*

⁵⁵ 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.’”).

⁵⁶ *Id.* (“As a matter of logic, perhaps the clause could be read as setting forth a constitutional minimum rather than maximum quantum of jurisdiction.”).

{

acknowledged part of U.S. constitutional law, and judges have commonly cited *Marbury* as support for its use.⁵⁷

Judges similarly cite anti-surplusage 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.”⁵⁸ 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 the meaning to be given to each part so as to avoid rendering any part superfluous.”⁵⁹ In accordance with this principle, patent law’s much-invoked doctrine of claim differentiation acts “as an anti-redundancy canon”⁶⁰ by implementing “a rebuttable presumption that each claim in a patent has a different scope.”⁶¹ 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.”⁶²

⁵⁷ See, e.g., *Griswold v. Conn.*, 381 U.S. 479, 490-91 (1965) (“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.”); *Noel 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 “ru[n] afoul of the principle that every phrase of the Constitution must be given effect”).

⁵⁸ *TRW Inc. v. Andrews*, 534 U.S. 19, 31 (2001) (internal quotation marks omitted).

⁵⁹ *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))).

⁶⁰ ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 777 (6th ed. 2013).

⁶¹ *Dow Chem. Co. v. United States*, 226 F.3d 1334, 1341 (Fed. Cir. 2000); see also Mark A. Lemley, *The Limits of Claim Differentiation*, 22 *BERKELEY TECH. L.J.* 1389, 1392 (2007) (observing that “[c]ourts rely heavily on the doctrine of claim differentiation”).

⁶² *Wintermute v. Kan. Bankers Sur. Co.*, 630 F.3d 1063, 1068 (8th Cir. 2011); see also *Foskett v. Great Wolf Resorts*, 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

{

In short, courts seem to have generally 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.”⁶³

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,”⁶⁴ 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.”⁶⁵ 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.⁶⁶ 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

avoid render[ing] portions of a contract meaningless, inexplicable or mere surplusage.” (internal quotation marks omitted); E. ALLAN FARNSWORTH, *CONTRACTS* § 7.11, at 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.”).

⁶³ MERGES & DUFFY, *supra* note 60, at 777.

⁶⁴ U.S. Const. amend. V; *id.* amend. XIV, § 1.

⁶⁵ *Id.* amend. IV.

⁶⁶ *County 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 where 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.” (internal quotation marks and citations omitted)); *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 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”).

}

“prevent[ing] the piling on of duplicative remedies.”⁶⁷ 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 potentially patentable—should be considered to be entirely distinct from questions about “[t]he ‘novelty’ of any element or steps in a process, or even of the process itself,” novelty being a separate requirement for patentability.⁶⁸ The Federal Circuit’s predecessor 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,⁶⁹ and the Federal Circuit, which adopted CCPA precedent as its own,⁷⁰ arguably turned this separation between analyses under sections 101 and 102 of the U.S. Patent Act into a model for strongly compartmentalized analysis under each of various separate statutory provisions.⁷¹

In addition to helping to focus 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 aegis. In patent law, such frustration can arise when a patentee first loses on a question of patent claim construction—a question

⁶⁷ *All-Tech Telecom, Inc. v. Amway Corp.*, 174 F.3d 862, 869 (7th Cir. 1999) (Posner, C.J.); 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.”).

⁶⁸ *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.”).

⁶⁹ *In re Taner*, 681 F.2d 787, 791 (1982).

⁷⁰ *South 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”).

⁷¹ *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.”).

{

about the literal scope of patent claims—and then follows this defeat with argument that, despite the unfavorable claim construction, an accused product or process nonetheless infringes under the doctrine of equivalents. Under the doctrine of equivalents, an accused product or process that fails to fall within the literal scope of a patent claim can nonetheless be held to be infringing if the product or process contains one or another element that is at least equivalent to each element of the claim.⁷² Arguments for infringement by equivalence can often closely track arguments about patent claims’ literal scope,⁷³ and the result can be judicial complaint that equivalence arguments effectively amount to an effort to relitigate claim construction, a complaint likely to be accompanied or followed by rejection of the equivalence argument and a grant of summary judgment of no infringement.⁷⁴ The result can be an effective collapse of the “two bites” at the apple, the overlapping coverage, that the doctrines of literal infringement and of infringement by equivalence seem fundamentally intended to provide.

B. FORMS OF REDUNDANCY

Having set the table for this article’s project by discussing anti-redundancy in law, I now take some time to describe forms of redundancy with which this article is concerned. These forms are largely indicated by anti-redundancy’s targets, with the exception of this article’s distinction between redundancy and the more general category of superfluity, a distinction that relevant judicial canons do not necessarily draw but that is significant for an article looking to compare redundancy’s treatment in law with its treatment in other areas such as engineering. For purposes of this article, redundancy involves a form of superfluity, but it involves only a

⁷² *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.” (some internal quotation marks omitted)).

⁷³ 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.”).

⁷⁴ 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.”).

{

subset of such forms. Most tellingly, redundancy does not encompass situations where language of a legal document, a legal rule or doctrine, or an institution or process is, generally speaking, rendered legally superfluous because of an irreconcilable conflict with an alternative source of authority. Likewise, redundancy does not encompass a situation in which legal language, a legal doctrine, or a legal institution or process is left without any practical significance by trumping legal authority that acts as an override or that effectively eliminates the body of subject matter on which the language, doctrine, institution, or process was meant to act. Thus, for example, if contract language providing (severably) for a waiver of a particular warranty is made superfluous by a statute establishing that such a warranty is not waivable, this language is superfluous but not redundant for purposes of this article. Instead, redundancy corresponds to forms of apparent superfluity that result from separate language, provisions, institutions, or processes that provide at least partially overlapping coverage of subject matter and at least to some degree work in parallel while at the same time avoiding a relevant irreconcilable conflict.

Significantly, redundancy need not be “complete” to be considered redundancy for purposes of this article. Truly complete redundancy accounts for only a subset of instances of redundancy and might be relatively trivial in significance when compared to other forms of redundancy. But it does occur. This truly complete redundancy, which I term “bidirectionally complete” redundancy, occurs where there is an essentially complete identity between the two legal phenomena being compared. Thus, for example, if a legal provision includes two synonymous terms presented in the alternative, as some might suggest “arbitrary” and “capricious” are in the statutory language on ‘arbitrary or capricious’ review in the Administrative Procedure Act,⁷⁵ one would have bidirectionally complete redundancy. The Administrative Procedure Act is far from alone in arguably featuring such redundancy. Legal writing commonly uses couplets or even triplets of terms that appear to be essentially redundant—for example, “cease and desist”; “aid and abet”; “will and testament”; (in a will) “give, devise, and bequeath.”⁷⁶ A possibly less

⁷⁵ 5 U.S.C. § 706(2)(A).

⁷⁶ See Jonathan K. Van Patten, *On Editing*, 60 S.D. L. REV. 1, 7 (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,

}

trivial example of apparently complete redundancy comes in the form of the first two prongs of a test for permanent injunctions relatively recently embraced by the United States Supreme Court. Under this test, a movant for an injunction must show “(1) that it has suffered [sic] an irreparable injury” and “(2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury.”⁷⁷ At least in the permanent injunction context, these required showings seem fundamentally “one and the same.”⁷⁸

Beyond bidirectionally complete redundancy, there are multiple forms of more partial redundancy. Redundancy might be only “unidirectionally complete” and, at the same time, “unidirectionally partial,” with a first legal phenomenon providing a full backstop for the other (thereby rendering that other wholly redundant) but with that first redundant phenomenon also reaching beyond the scope of the other and thus having aspects that the other does not render redundant. 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 of situations in which enforcing a contract as written could be considered unconscionable.⁷⁹ Perhaps less controversially, “safe harbors” in tax and other areas of law

and bequeath; right, title, and interest; rest, residue, and remainder; ordered, adjudged, and decreed; and ... necessary and proper.”).

⁷⁷ eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006).

⁷⁸ 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 John M. Golden, *The Supreme Court as “Prime Percolator”: A Prescription for Appellate Review of Questions in Patent Law*, 56 UCLA L. REV. 657, 695 (2009) (“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.”).

⁷⁹ 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 of resulting unfairness.”).

}

commonly have a relationship of unidirectionally partial and unidirectionally complete overlap with more general standards.⁸⁰

Finally, redundancy might be “bidirectionally partial,” with neither of the redundant phenomena providing full coverage of the scope of the other. An example here might be appellate review, under which the appellate court is generally confined to the factual record developed by the trial court, offers only limited review of trial-court factual findings, but also has a 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. The following figure provides a graphic representation for different types of redundancy classified in terms of the extent of overlap.

Forms of Redundancy: Non-Conflicting Overlaps

- **Zero** 
- **Bidirectionally Partial** 
 - Example: Appellate Review
- **Unidirectionally Complete/Partial** 
 - Example: “Safe Harbor” Laid Over a More General Standard
- **Bidirectionally Complete (Total)** 
 - Arguable Examples: “Aid & Abet”; “Arbitrary or Capricious”; eBay Test Prongs 1 & 2

A further axis for differentiation of forms of redundancy relates to redundancy’s provenance. First, there can be fully intended redundancy, deliberately entered into and perhaps reflecting a drafter’s desire to reinforce a message to help ensure against its being misunderstood. An example could be the drafting of separate patent claims that are fundamentally intended to cover the same scope of subject matter but that use different language to try

⁸⁰ 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”).

{

to protect against narrowing misinterpretations of one or another claim. A second form of redundancy is probabilistic redundancy, which, in a claim drafting context, could result from, for example, a claim drafter providing different claims that the drafter realizes might be later viewed as redundant even though the drafter might hope that one or another claim is viewed as having somewhat broader or narrower scope.⁸¹ A third form is accidental redundancy, which is not intended at all but which results from language being construed differently from what the drafter contemplated.⁸² Thus, for example, if the drafter 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, but a later interpreter might view “circular” as broadly encompassing “circle-like” shapes and thus providing unidirectionally complete redundancy with the term “octagonal.”⁸³ Such accidental redundancy could evolve from an evolutionary process, in which the scope of the term “circular” gradually stretches over time. Alternatively, it could result more immediately from a contemporaneous mistake about how others are likely to understand the term.

In sum, there are various forms of redundancy that can arise or be built deliberately into the fabric of law. On the other hand, although the scope of the term redundancy in this article is intended to be quite broad, there are forms of superfluity that are not instances of redundancy even though a thesaurus might present the terms “redundant” and “superfluous” as synonyms.⁸⁴

⁸¹ 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).

⁸² Cf. David A. Anderson, *The Origins of the Press Clause*, 30 UCLA L. REV. 455, 533 (1983) (“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.”).

⁸³ The hypothetical example loosely derives from the fact pattern in *Winans v. Denmead*, 56 U.S. 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 (internal quotation marks omitted), effectively encompassed a car having a cross-section that “was octagonal instead of circular,” *id.* at 340.

⁸⁴ See, e.g., DOUBLEDAY ROGET’S THESAURUS 566 (1977) (making the term “superfluous” the first-listed synonym for the term “redundant”).

}

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, as indicated above, anti-redundancy can run contrary to actual norms of human communication and legal design. Unless one believes that anti-redundancy doctrines carry no real weight with courts and are instead only convenient means for post hoc rationalization,⁸⁵ they might therefore be expected to lead courts astray in interpreting and applying relevant law. Second, to the extent anti-redundancy leads to less redundancy either in original legal design or in legal doctrines as understood and applied by the courts, anti-redundancy might lead to less clarity and reliability in law and its application.⁸⁶

This possibility of reduction in law's effectiveness and clarity as a result of strict application of anti-redundancy is suggested by the use of redundancy in both natural and engineered systems to ensure robust performance of critical functions.⁸⁷ In engineered systems, redundancy is commonly used to ensure safety or otherwise to protect against system failure. For example, dual braking systems in many vehicles feature a commonly pedal-operated "fluid braking system" using hydraulics and a hand-operated, emergency "mechanical braking system" using a cable, and these redundant subsystems protect against total brake failure by requiring that "[b]oth subsystems ... fail in order for the [overall braking] system to fail."⁸⁸ Most car owners are familiar with a more mundane example of redundancy in the form of a spare tire kept in the car's trunk to back up the tires current in use. Similarly, in biological systems, redundancy can be a

⁸⁵ See FARNSWORTH, *supra* note 62, § 7.11, at 456 (describing the use of maxims of interpretation in judicial opinions as "often more ceremonial ... than persuasive").

⁸⁶ Cf. Amar, *supra* note 55, at 10 (identifying "a certain kind of good redundancy represented by various clauses that are clarity-enhancing and doubt-removing").

⁸⁷ Martin Landau, *Redundancy, Rationality, and the Problem of Duplication and Overlap*, 29 PUB. ADMIN. REV. 346, 349 (1969) (noting that "the phenomenon of 'duplication'" is not "overlooked in the design of automobiles, computers, and aircraft ..., as with the dual braking system"); 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 "promot[e] robustness by 'backing-up' important functions").

⁸⁸ EBELING, *supra* note 5, at 91.

{

key way to ensure robustness—i.e., the capacity of “a system to maintain its functions despite external and internal perturbations.”⁸⁹ As maintaining key bodily functions tends to be crucial for living, it is perhaps no surprise that many organisms contain “apparently redundant genes” that “perfor[m] the same function,” apparently to secure the result “that inactivation of one of these genes has little or no effect” on the organism’s ability to survive.⁹⁰ 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 back-up or alternative to the possibility of communicating through speech.⁹¹

Language can be viewed as an engineered system for communication in which redundancy helps ensure against failure, protecting against discrete errors or limitations in the transmission, reception, and comprehension of messages.⁹² 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 four-letter word. 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 otherwise lost meaning. Through reinforcing or clarifying effect, overlapping legal doctrines or linguistic redundancy in legal drafting can similarly help ensure that critical communicative or decisional errors are avoided.⁹³ In this sense, John Manning and Matthew Stephenson have noted that technically redundant language can serve a meaningful purpose: a text’s

⁸⁹ Hiroaki Kitano, *Biological Robustness*, NATURE REVIEWS, Nov. 2004, at 826, 826.

⁹⁰ Martin A. Nowak et al., *Evolution of Genetic Redundancy*, NATURE, July 10, 1997, at 167, 167.

⁹¹ M. Randles et al., *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 utilized, to accomplish the same outcome, such as sign language . . .”).

⁹² Landau, *supra* note 87, at 346 (“[I]t is precisely the liberal use of redundancy that provides linguistic expression with an extraordinary measure of ‘reliability.’”).

⁹³ Cf. Randy E. Barnett, *The Virtues of Redundancy in Legal Thought*, 38 CLEVE. ST. L. REV. 153, 154 (1990) (contending “that the degree of confidence we have in any of our beliefs largely depends on the degree to which the different methods we use to critically assess our beliefs converge on the same conclusion”).

{

inclusion of apparently unnecessary words can help clarify or reinforce the intended meaning of other language in the text.⁹⁴

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, such 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 as a result of one legal doctrine or another. Thus, for example, if a claimed invention differs at best by only a "hairsbreadth" from a previously publicly available device,⁹⁵ there might be cause for debate over whether, under one claim construction or another, the claimed invention survives patent law's novelty requirement because the hairsbreadth suffices to distinguish the claimed invention from the device.⁹⁶ But there might be no real debate over whether the claimed invention is in fact patentable: although the hairsbreadth might suffice to establish novelty, it might be entirely clear that it does not suffice to satisfy patent law's partially redundant "super-novelty" requirement,⁹⁷ 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

⁹⁴ MANNING & STEPHENSON, *supra* note 2, 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 3, 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").

⁹⁵ *Sibia Neurosci., 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).

⁹⁶ *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'").

⁹⁷ MUELLER, *supra* note 96, 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.").

}

relevant technological art would have found to be obvious.⁹⁸ An example of reinforcing doctrinal overlaps can also be derived from a famous fact pattern in contract law. To the extent that contract law doctrines of misunderstanding and mistake overlap and provide alternate grounds for finding an apparent agreement to have been tellingly defective, one might have alternative supports for the outcome in the famous *Peerless* case or variants thereof.⁹⁹ More generally, 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.¹⁰⁰

⁹⁸ See 35 U.S.C. § 103; *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 Industries, 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 pertinent prior art.”).

⁹⁹ See, e.g., RESTATEMENT (SECOND) OF CONTRACTS § 20 illus. 1-4 (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’”). *But cf.* Benjamin Alarie, *Mutual Misunderstanding in Contract*, 46 AM. BUS. L.J. 531, 531-33 (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 Corbin mentioning “‘three cases on mutual mistake of fact (as contrasted with ‘misunderstanding’ as in the *Peerless* case)’” (some initial quotation marks omitted)).

¹⁰⁰ *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.”).

{

The relationship between patent law’s novelty and nonobviousness requirement points to a further, more subtle, but perhaps also 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 invention¹⁰¹—because it is reinforced by the further, more complicated test for obviousness, which can require considering combinations of the disclosures of different prior-art references,¹⁰² determination of whether such references should be considered to be “analogous art,”¹⁰³ and assessment of the capacities of a person of ordinary skill in the art from whose perspective obviousness is to be judged.¹⁰⁴ As Henry Smith has suggested, a similar relationship between simpler, front-end rules and more complex or hazier standards might be understood to exist in common relationships between law and equity, with equitable “safety valves” providing backstopping support for more straightforward legal rules that can provide substantial clarity for at least a significant set of real-world situations.¹⁰⁵

¹⁰¹ See *supra* note 96 and accompanying text.

¹⁰² See *supra* note 98 and accompanying text.

¹⁰³ *Innovation Toys, LLC v. MGA Entertainment, 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.”).

¹⁰⁴ *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”).

¹⁰⁵ Henry E. Smith, *On the Economy of Concepts in Property*, 160 U. PA. L. REV. 2097, 2124-2125 (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*, 56 L. & CONTEMP. PROBS., summer 1993, at 53, 53 (“We should stop thinking of equity as separate and marginal, as consisting of extraordinary measures, supplemental doctrines, and occasional exceptions . . .”).

{

Another advantage of overlapping legal doctrines is that, like two-dimensional maps that cover different but overlapping regions of the globe,¹⁰⁶ 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 somewhat different perspective that a distinct but at least partially overlapping doctrine embodies might improve the law's self-correcting potential as well as its ability to adapt to new circumstances. The Uniform Commercial Code suggests that contract law's unconscionability doctrine plays such a role in relation to doctrines regarding public policy or contract interpretation with which the unconscionability doctrine's reach can be viewed as overlapping.¹⁰⁷ 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,"¹⁰⁸ might play a similar role in relation to doctrines requiring that a claimed invention meet patentability requirements of utility, novelty, and nonobviousness.¹⁰⁹ A somewhat flexible subject-matter analysis that features at least the possibility of overlaps with other patentability analyses can help prevent avoidance of the intended force of the separate patentability requirements through artful claim drafting.¹¹⁰

¹⁰⁶ Cf. STEPHEN HAWKING & LEONARD MLODINOW, *A BRIEFER HISTORY OF TIME* (2008) (describing the possibility of a unified theory of physics that uses multiple formulas having distinct but overlapping coverage).

¹⁰⁷ UCC § 2-302 cmt. 1 (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").

¹⁰⁸ *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 ("[L]aws of nature, natural phenomena, and abstract ideas' are not patentable." (citations omitted)).

¹⁰⁹ *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]").

¹¹⁰ *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.").

}

In light of the above advantages of redundancy, why has anti-redundancy remained so strong? Courts continue to invoke them regularly across legal contexts, and even Karl Llewellyn, a great skeptic of the persuasive weight of canons,¹¹¹ offered only a relatively weak counter-canon to the anti-redundancy canon for statutory construction—the relatively limited canon that, “[i]f inadvertently inserted or if repugnant to the rest of the statute, [words in a statute] may be rejected as surplusage.”¹¹² Randy Barnett has suggested that “[a]t least three reasons explain why [in legal contexts] the virtues of redundancy are so commonly overlooked”:

- (1) “[M]oral philosophers and legal intellectuals do not spend much time worrying about easy cases where differing modes of analysis converge.”
- (2) Perhaps as a consequence of oft-theorized “physics envy,”¹¹³ “modern intellectuals are trained to accept the principle of parsimony—or ‘Ockham’s razor.’”¹¹⁴
- (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.”¹¹⁵

¹¹¹ 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”).

¹¹² *Id.* at 404 (providing this pro-surplusage canon as a counter to an anti-surplusage canon); cf. 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”); 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).

¹¹³ Andrew W. Lo & Mark T. Mueller, *WARNING: Physics Envy May Be Hazardous to Your Wealth!* 2 (2010) (“examining the intellectual milieu that established physics as the exemplar for economists”), available at <http://ssrn.com/abstract=1563882>.

¹¹⁴ 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.”).

¹¹⁵ Barnett, *supra* note 93, at 157-58.

{

But whatever the truth of these suggested reasons, there is the additional fact that anti-redundancy does have actual functional bases for appeal. In addition to anti-redundancy's association with relative efficiency or elegance,¹¹⁶ an association that at least partly tracks engineers' concern with the cost of introducing and maintaining redundant systems, there are bases for argument that anti-redundancy adds value by promoting any of at least four ends: (1) increased expectation of tracking the intent of relevant actors; (2) improvements in the behavior of the drafters of relevant legal documents or provisions;¹¹⁷ (3) increased predictability and functional quality of official interpretations and applications of law; and (4) supply of courts with transubstantive decision rules that can make their work more manageable across a variety of diverse and often technical contexts. In a variant of Llewellyn's account of canons and counter-canons, however, each of these potential bases for justification have problems.

First, there is a substantial argument that the last candidate 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, all-purpose tools."¹¹⁸ 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 make-judicial-work-easier argument were assumed to be normatively sound as a matter of principle, it would seem an extraordinarily weak reed on which to rely. There are dozens of other canons and interpretive tools that judges can deploy as alternatives to anti-

¹¹⁶ Cf. Amar, *supra* note 55, at 6 ("[T]he anti-redundancy maxim, sensibly understood, is merely one aspect of a general preference of grace over awkwardness").

¹¹⁷ 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.").

¹¹⁸ Macey & Miller, *supra* note 13, 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.").

{

redundancy.¹¹⁹ In this context, removing an anti-redundancy presumption from judges' arsenal would seem unlikely to substantially impair judges' ability to generate a decision with a plausibly legal-sounding justification regardless of the judges' true competence to decide the merits—again, even assuming we think that, perhaps because of an interest in some means for socially acceptable dispute resolution, such a legal papering over of deficiency is a desirable social goal.

For the remaining three candidate justifications for anti-redundancy, the arguments seem stronger but also substantially mitigated by significant counter-possibilities 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.¹²⁰ A canon might do this directly because the relevant actors' intent tends to track the canon's assumptions¹²¹ or because, as suggested by James Landis, contemplation or recitation of such canons helps generate a proper judicial state of mind.¹²² Landis' 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 that they in fact track

¹¹⁹ William N. Eskridge, Jr., *The New Textualism and Normative Canons*, 113 COLUM. L. REV. 531, 536 (2013) (“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.”).

¹²⁰ See, e.g., Gluck & Bressman, *supra* note 4, at 935 (describing as a “primary justification” of the anti-surplusage canon the proposition that “the rule helps faithful-agent judges effectuate congressional intent”).

¹²¹ See Henry J. Friendly, *Mr. Justice Frankfurter and the Reading of Statutes*, in HENRY J. FRIENDLY, *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.’”).

¹²² 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”).

{

legal drafting practice. This argument has commonsense appeal. Why would drafters of legal documents engage in the apparently wasteful, often affirmatively costly¹²³ activity of repeating the substance of what a legal document already says?¹²⁴ Further, given frequent condemnation of redundancy as a matter of style, shouldn't we, if only as a form of "interpretive charity," presume that legal drafters were not "truly terrible writers"?¹²⁵

Despite such commonsense appeals, the increased-fidelity justification for anti-redundancy canons as interpretive principles has received wide and well-justified criticism. As noted above, redundancy is rife in ordinary human communication,¹²⁶ 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 drafter's relevant audience predictably makes accurate and effective communication difficult and makes accuracy and effectiveness while stressing parsimony more difficult still.

Under such circumstances in which noisiness of communication and its reception is to be expected, a drafter might predictably use both linguistic redundancy (redundant language) and substantive redundancy (overlapping substantive provisions) to try to ensure that a legal document will ultimately be interpreted and applied as desired, at least with respect to the most critical interests of concern.¹²⁷ Consequently, drafters of patent claims are trained to

¹²³ Menell, Powers & Carlson, *supra* note 59, 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").

¹²⁴ See SCALIA, *supra* note 112, 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 59, at 753 (describing the doctrine of claim differentiation as having roots in common sense).

¹²⁵ Amar, *supra* note 55, at 6 (describing "the anti-redundancy maxim" with respect to the U.S. Constitution as reflecting "interpretive charity").

¹²⁶ See *supra* notes 92-94 and accompanying text.

¹²⁷ *Spectrum Health v. N.L.R.B.*, 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'").

{

provide multiple claims that seek to cover the same invention.¹²⁸ Likewise, judges have observed that contracts often include not only “truly redundant phrases”¹²⁹ but also belt-and-suspenders provisions that provide overlapping coverage of significant substantive points.¹³⁰ Moreover, a recent survey of congressional staffers by Abbe Gluck and Lisa Bressman provides evidence that legislators “intentionally err on the side of redundancy” not only to ensure coverage of “the intended terrain” but also to satisfy the demands of various political actors to have their own favored language in the statute.¹³¹ An even more extreme, albeit micro-level, example of redundancy as a response to separation or heterogeneity among drafters and audience members might come in the form of Anglo-American law’s famed doublets—redundant pairings of words such as “act and deed,” “aid and abet,” and “will and testament”—which apparently date to a post-Norman Conquest practice of using both French and English synonyms as a matter of either courtesy or communicative efficacy.¹³² In short, anti-redundancy appears to be a principle that drafters across a variety of legal contexts frequently ignore in writing texts addressed to a heterogeneous and often uncertain audience.

¹²⁸ See *infra* notes 156-162 and accompanying text.

¹²⁹ *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’l Ins. Co.*, 619 F.3d 574, 577 (6th Cir. 2010) (emphasis omitted) (observing that “redundancies abound” in “insurance contracts”).

¹³⁰ *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)”; *Certain Interested Underwriters 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”); *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’”).

¹³¹ Gluck & Bressman, *supra* note 4, 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 (emphasis omitted)); cf. Posner, *supra* note 44, at 812 (noting that a statute “may contain redundant language as a by-product of the strains of the negotiating process”).

¹³² J.F. Macdonald, *The Influence of Latin on English Prose Style*, PHOENIX, summer 1951, at 31-34 (“When a Norman used a French word, he tried to use the English word for it also, and Englishmen returned the courtesy.”).

{

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 for such principles—namely, that they can productively encourage the drafters of legal documents to conform to their presumptions by limiting redundancy in their writing. One problem is that this goal of encouraging lack of redundancy in legal writing presumes that redundancy is unproductive and wasteful, whereas, as we have seen, redundancy can in fact be a positive good, although the intensity of redundancy must often be restrained so that its benefits outweigh its costs. An additional problem is that anti-redundancy often seems to fail to have much visible effect on the drafting practices it targets. Gluck and Bressman’s survey results indicate that, although legislative drafters know of the anti-surplusage canon of construction, they deliberately disregard it.¹³³

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 highly questionable, in large part because the anti-surplusage canon cuts against so much actual drafting practice. Indeed, disjunction between the canon and reality might support a vicious cycle: courts find frequent cause to rebut the anti-surplusage canon, and such rebuttals further erode drafters’ confidence (or worry) that an anti-surplusage rule will in fact be applied, with the result being continued or even enhanced departures from the canon in actual drafting practice.¹³⁴ 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 counter-canons or, likely even more significantly, alternative canons pointing in different directions¹³⁵—the notion that the anti-surplusage

¹³³ Gluck & Bressman, *supra* note 4, at 954 (concluding that canons such as the anti-surplusage canon “cannot be justified as draft-teaching tools because our respondents already know that courts apply the rules but still disregard them” (emphasis omitted)).

¹³⁴ Gluck & Bressman, *supra* note 4, 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.”).

¹³⁵ CROSS, *supra* note 118, at 101 (“The canons are too often indeterminate in direction, making them vulnerable to easy manipulation ”); Eskridge, *supra* note 119, at 545 (“In most cases involving any interpretive difficulty, . . . the problem will be that there are a dozen

}

canon generally increases the predictability of legal interpretations seems somewhat Panglossian.¹³⁶

On the other hand, there seems a substantially better case for the notion that an anti-redundancy principle that encourages courts to presume a relative lack of doctrinal overlaps—separations in coverage or in forms of analysis—might, at least in some categories of circumstances, foster greater predictability and perhaps even accuracy in legal judgments about what the law does or does not require. The possibility of this result 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.”¹³⁷ 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 under hazier notions of fundamental rights, notions that might not have been so frequently deployed in relation to the set of fact patterns at issue.¹³⁸ 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,”¹³⁹ one might also think that the more specific provision, by attracting a thicker body of case law, could be more likely to generate better social results. This might be particularly true when the more specific provision already includes relatively non-specific hedge words invoking broad standards of “reasonableness,” “fairness,” or “substantiality” that can help ensure that the more specific provision encompasses most,

or more canons that are applicable to the issue and they will push the interpreter in cross-cutting ways.”).

¹³⁶ 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.”).

¹³⁷ *County of Sacramento v. Lewis*, 523 U.S. 833, 842 (1988).

¹³⁸ Cf. *id.* at 850 (“Rules of due process are not ... subject to mechanical application in unfamiliar territory.”).

¹³⁹ 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’”).

}

major social concerns. Thus, for example, one might hope that the notion of protection “against unreasonable searches and seizures” under the Fourth Amendment¹⁴⁰ would largely cover the ground encompassed by concerns of “due process” under the Fifth or Fourteenth Amendments.¹⁴¹

In short, there might be something to the notion that concerns of predictability, administrability, and substantive effectiveness can in fact be advanced when anti-redundancy operates to cause courts to distinguish and analytically separate different legal doctrines, perhaps effectively displacing coverage by one in favor of coverage by another. But it is worth noting that this potential justification does not provide general justification for anti-redundancy canons of interpretation, which, by comparison, 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. For at least four reasons, 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:

- (1) the centrality of issues of interpretation, in particular the interpretation of patent claims;¹⁴²
- (2) a long-term historical trend toward increased subdivision and separation of legal questions, such as those regulating patentability;
- (3) centralization of appeals in the U.S. Court of Appeals for the Federal Circuit, which has contributed to delineation and

¹⁴⁰ U.S. Const. amend. IV.

¹⁴¹ *Id.* amends. V, XIV.

¹⁴² See Golden, *supra* note 14, 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 61, at 1389 (“The process of claim construction is the most important part of patent litigation.”).

{

- distinction of patent law doctrines in ways that give redundancy and anti-redundancy principles much with which to work; and
- (4) relentless pressure for institutional and procedural developments to try to reduce system costs, delays, and errors.

The first factor means that there is no dearth of interpretive situations in patent law 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 now quite 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 interactions that can be argued to generate unseemly redundancy. Finally, continuing institutional developments have predictably manifested tension between interests in obtaining the upfront advantages of streamlined procedure and obtaining the value of at least partly redundant procedures as checks against error or the value of offering alternative opportunities for dispute resolution through, for example, potentially speedier means.

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 mull questions of the proper interpretation of patent claims. The most prominent of these is the doctrine of claim differentiation, under which different patent claims are presumptively to be construed to have different scope.¹⁴³ In other words, the doctrine of claim differentiation embodies an anti-redundancy principle that presumes against bidirectionally 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.

Deployments of anti-redundancy in the context of claim construction partake of many of the defects and weaknesses, as well as the advantages, of anti-redundancy principles for interpretation of legal documents generally. But in the claim construction context, anti-redundancy might have one

¹⁴³ See *supra* text accompanying notes 60-61.

}

additional advantage or justification, at least as it is commonly deployed. Courts appear commonly to invoke a general anti-redundancy principle 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 the scope of a claim beyond what other language in the claim requires.¹⁴⁴

When an anti-redundancy principle is used to favor narrower interpretations of claims, its application corresponds with another common principle for construing legal documents that have been drafted by one or more interested parties—namely, the principle of construing the document against the drafter.¹⁴⁵ 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.¹⁴⁶ 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 or amendment but other members of the public not directly involved.¹⁴⁷ Thus and at least in theory, whereas a

¹⁴⁴ 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 non-limiting); *Bicon, Inc. v. The 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").

¹⁴⁵ See, e.g., BLACK'S LAW DICTIONARY 327 (6th ed. 1990) (defining "contra proferentem" as a term "to the effect that an ambiguous provision is construed most strongly against the person who selected the language"); FARNSWORTH, *supra* note 62, § 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").

¹⁴⁶ MERGES & DUFFY, *supra* note 60, 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.").

¹⁴⁷ See Bryan Blumenkopf, *Exposing Latent Patent Infringement*, 19 RICH. J.L. & TECH. 7, 76 (2013) ("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.").

{

later accused infringer generally played no role in the patent document's shaping, a patentee or the patentee's predecessor in interest had an opportunity to draft claim language that relatively unambiguously has the scope that the patentee later asserts. In particular, if allegedly superfluous language is now in dispute, the patentee or patentee's predecessor in interest had the opportunity to omit that supposedly superfluous claim language. Given the notice purpose of patent claims¹⁴⁸ 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,"¹⁴⁹ reading a claim comparatively narrowly by reasonably rejecting a patentee's argument that certain claim language is non-limiting and therefore superfluous might seem especially well justified from a policy standpoint.¹⁵⁰

In claim construction, however, anti-redundancy principles most prominently manifest themselves through the doctrine of claim differentiation,¹⁵¹ and this embodiment of anti-redundancy principles 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 inventions" so that the application covers only "one of the inventions."¹⁵² Further, the USPTO has strong incentive to use this power of "restriction" because it protects the revenue expected from the agency's

¹⁴⁸ 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").

¹⁴⁹ 35 U.S.C. §112(b).

¹⁵⁰ 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.").

¹⁵¹ See Lemley, *supra* note 61, 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.").

¹⁵² 35 U.S.C. § 121.

{

per-application fee structure and “ensures the integrity of the [USPTO’s] classification system.”¹⁵³ 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.”¹⁵⁴ 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.¹⁵⁵

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.¹⁵⁶ 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 be later understood to be narrower than hoped¹⁵⁷ or that certain claims, most likely among the broader claims, will later be found invalid.¹⁵⁸

¹⁵³ *Applied Materials, Inc. v. Advanced Semiconductor Materials Am., Inc.*, 98 F.3d 1563, 1576 (Fed. Cir. 1996).

¹⁵⁴ Jon W. Henry, *Ten Misconceptions of Division of Inventions for Examination Purposes*, 86 J. PAT. & TRADEMARK OFFICE SOC’Y 581, 582 (2004).

¹⁵⁵ *See, e.g., id.* at 1170 (“In general, European standards on which inventions may be claimed together are quite liberal, and the same is true of Japan.”); 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.”); Etienne de Villers, *The Patent Prosecution Highway: Canada as Office of First Filing*, 2 LANDSLIDE, no. 3, at 30, 31 (Jan./Feb. 2010) (“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.”).

¹⁵⁶ *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.”).

¹⁵⁷ *See* Lemley, *supra* note 61, 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.”).

¹⁵⁸ *See* MERGES & DUFFY, *supra* note 60, 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).

{

In accordance with this purpose, 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 but only do this to ensure essentially the same level of broad coverage—or, at least, the maximal level of coverage possible (i.e., potentially to generate bidirectionally complete redundancy with other, similarly broad claims).¹⁵⁹ In short, claim drafters are 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 choose to use.¹⁶⁰ Although the imposition of patent fees for the inclusion of claims exceeding numerical thresholds of three independent claims and twenty claims overall might have some limiting influence on this exercise, the numerical thresholds still allow significant room for redundant drafting, and, in light of patent attorney billing rates of hundred dollars per hour, the standard fees of \$80 per each claim beyond twenty and \$420 for each independent claim beyond three seem unlikely to be generally preclusive.¹⁶¹ In this context, the doctrine of claim differentiation, which instructs courts to presume that differently worded claims have different scope, can be perverse.¹⁶²

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, does not refer to

¹⁵⁹ See DAVID PRESSMAN, *PATENT IT YOURSELF* 245 (13th ed. 2008) (suggesting to patent claim drafters that, after writing a first set of claims, they should “consider writing another set of claims” because, even though such claims “will not always give your invention broader coverage,” they “will provide alternative weapons”).

¹⁶⁰ See SLUSKY, *supra* note 81, 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 using different combinations of functional and structural recitations”).

¹⁶¹ See 37 C.F.R. § 1.492(d)-(e) (listing claim fees).

¹⁶² See Lemley, *supra* note 61, 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”).

{

another claim, and contains all its pertinent claim language.¹⁶³ 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.¹⁶⁴ The relationship between a dependent claim and the parent claim from which it depends supports an expectation that the dependent claim will generally be narrower than the parent claim,¹⁶⁵ and 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.¹⁶⁶ 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 scope¹⁶⁷—seems likely to accord with common drafting intent and reader expectations.

In contrast, with respect to claims that are only horizontally related, there seems no general cause for expectation that the breadth of the claims will have any specific relation. Given the purposes of claim drafters to try to ensure a certain viable scope of claims despite the vagaries of claim construction and validity analysis, as well as the possibilities of later-developed information relating to design-around options or the prior art, they

¹⁶³ MUELLER, *supra* note 96, at 98 (“[A]n independent claim stands alone without referring to any other claim.”).

¹⁶⁴ *Id.* (“A dependent claim includes (i.e., incorporates by reference) all limitations of the claim from which it depends, and also adds some further limitations.”). 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.”

¹⁶⁵ *Cf.* MERGES & DUFFY, *supra* note 60, at 31 (“Often the claims in a patent begin with the broadest claim which is then ‘qualified’ in a series of dependent claims.”).

¹⁶⁶ *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.”); U.S. Patent No. 6,521,030 col. 16 ll. 38-43 (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)).

¹⁶⁷ *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.”).

{

might reasonably intend for independent claims to have essentially or identically the same scope under their initially favored claim constructions.¹⁶⁸ On the other hand, they might draft even their independent claims to have a portfolio of scopes, at least as a probabilistic matter, 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 seems likely to be construed 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, one could imagine an independent claim that specifies that a particular process will run at a pH of approximately 5.0 or above, whereas another claim specifies that the process will run at a pH of between 4.0 and 7.0.

Appropriately, the Federal Circuit has characterized the doctrine of claim differentiation as only establishing a rebuttable presumption,¹⁶⁹ and the Federal Circuit has indicated that this presumption is somewhat weaker between horizontally related claims.¹⁷⁰ But at least between horizontally related claims, it is not clear that it makes sense to have any presumption at all.

Moreover, because a common effect of the presumption, even when operating vertically, can be the relative inflation of patent claims' overall scope,¹⁷¹ its operation might be especially perverse, not only benefiting patentees who might be responsible for ambiguous claim language that courts

¹⁶⁸ See Lemley, *supra* note 61, at 1394 (“The doctrine [of claim differentiation] leads to a fruitless search for gradations of meaning that simply may not exist.”).

¹⁶⁹ *E.g.*, *Regents of 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 overc[ame] the presumption” generated by the doctrine of claim differentiation in the instant case).

¹⁷⁰ *Cf.* *Interdigital Communications, LLC v. U.S. Int’l Trade Comm’n*, 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”).

¹⁷¹ See SLUSKY, *supra* note 81, 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”).

{

later use the presumption to inflate, but also providing extra reason for patent applicants to pepper their applications with a multiplicity of claims with potentially inflationary language.¹⁷² Indeed, the leading treatise on claim drafting explicitly instructs that, “[i]n 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.”¹⁷³ A further manual on claiming 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. 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 suite¹⁷⁴

Hence, 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 possibly even greater use of arguably ambiguous language to which the doctrine of claim differentiation might later decisively apply.

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 or perhaps in the absence of a doctrine of claim differentiation or similar redundancy principle, the term “nail” in the first claim might be understood, in accordance with a dictionary definition, to

¹⁷² Cf. Lemley, *supra* note 61, 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 ...”).

¹⁷³ ROBERT C. FABER, *FABER ON MECHANICS OF PATENT CLAIM DRAFTING* § 8.3, at 8-4 (6th ed. 2014).

¹⁷⁴ SLUSKY, *supra* note 81, at 125.

{

mean “a small metal spike.”¹⁷⁵ 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 make it more likely that the first claim will be read more broadly.¹⁷⁶

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.*¹⁷⁷ In this case, the key dispute was over the meaning of the term “baffles” in claim 1 of the patent.¹⁷⁸ After reciting an apparently dictionary-derived definition of “baffles” as “objects that check, impede, or obstruct the flow of something,”¹⁷⁹ 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 a starting 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.¹⁸⁰

¹⁷⁵ THE POCKET OXFORD AMERICAN DICTIONARY OF CURRENT ENGLISH 524 (2002) (first listed definition of “nail”).

¹⁷⁶ Cf. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004) (“As the 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. U.S.*, 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.”).

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

¹⁷⁸ *Id.* at 1309-11 (concluding that the circuit had to “determine the correct construction of the structural term ‘baffles’”).

¹⁷⁹ *Id.* at 1324.

¹⁸⁰ *Id.*

}

The Circuit followed this anti-redundancy salvo with two additional claim-based shots along anti-redundancy lines.¹⁸¹ 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.”¹⁸² Here, the Circuit acknowledged that the specification made “clear that the invention envisions baffles that serve [the] function” of “deflect[ing] projectiles” such as bullets and, to serve this function, must presumably be nonperpendicular.¹⁸³ But the Circuit countered this contention 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.¹⁸⁴

Although the Circuit’s opinion ultimately relied on more than claim differentiation and other anti-redundancy principles to support its conclusion, the prime place accorded to concerns of claim differentiation and redundancy seems telling. Further, even if not decisive, claim differentiation is here seen to favor the claim inflation described earlier: in *Phillips*, the Circuit deploys the doctrine to favor a conclusion that an independent claim should be construed broadly so that it might have distinct scope from presumptively narrower dependent claims.

The inflationary effect of claim differentiation and the perverse incentives that it can provide for claim multiplication and imprecision might not be a substantial concern if the processes of reading claims and assessing their scope were costless. But these processes are far from costless, and claim construction in particular is notoriously difficult.¹⁸⁵ Moreover, the

¹⁸¹ 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.* The Circuit closed its round of anti-redundancy salvos by asserting that, “[i]f the baffles in claim 1 were inherently placed at specific angles, or interlocked to form an intermediate barrier, claim 6 would be redundant.” *Id.* at 1325.

¹⁸² *Id.* at 1315 (internal quotation marks omitted).

¹⁸³ *Id.* at 1325.

¹⁸⁴ *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.”).

¹⁸⁵ See Golden, *supra* note 142, at 324 (“[C]laim construction jurisprudence continues to bear hallmarks of unpredictability.”).

{

inflationary effect of the doctrine of claim differentiation seems to exacerbate 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.¹⁸⁶ Further, the way claim differentiation's inflationary effect can depend on relatively subtle relationships between claims can reduce already low confidence that time-strained patent examiners can avoid having the wool drawn over their eyes. In the hypothetical example involving the term "nail," a time-strained examiner, sensibly paying less heed to dependent claims in the first instance,¹⁸⁷ might easily overlook the fact that the word "nail" did not have its common meaning of "small metal spike" because of claim differentiation's interaction with a dependent claim adding language specifying that the nail is made of metal. The examiner might then examine the independent claim for validity based on an incorrect assumption that the word "nail" would be construed more narrowly than the doctrine of claim differentiation made likely.¹⁸⁸

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 whose interests the examiners are meant to represent. Despite representing an anti-redundancy principle, the doctrine of claim differentiation can even have the perverse effect of encouraging the drafting of additional, at least partially redundant claims. Because of these pathological aspects of the doctrine's operation, there seems a strong argument that a claim drafter should not generally be able to rely on the doctrine of claim differentiation to tip the claim-construction balance in favor of broader patent scope.

B. DOCTRINAL COMPARTMENTALIZATION

¹⁸⁶ See JAMES BESSEN & MICHAEL J. MEURER, *PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK* (2008).

¹⁸⁷ MERGES & DUFFY, *supra* note 60, 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").

¹⁸⁸ *Cf.* Lemley, *supra* note 61, 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.").

{

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 basic 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 novelty or nonobviousness arguments, enablement arguments, or indefiniteness arguments, rather than subject-matter eligibility arguments. Underlying such questions often seems to be either an assumption or a conclusion that policymakers would ideally identify a single doctrinal rubric through which the arguments at issue will be channeled. A long-term trend toward increased doctrinal compartmentalization has facilitated these questions and associated background assumptions in at least two ways: (1) by providing more distinctly defined doctrinal rubrics whose domains might plausibly be argued to be essentially exclusive and (2) by providing momentum for efforts to further distinguish and separate these rubrics' domains.

1. Long-Term Trend Toward Compartmentalization

In the past few centuries, 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.¹⁸⁹ The United States introduced “a formal system of examination with professional examiners” in 1836.”¹⁹⁰ Likewise, patent claims, specific portions of the patent document meant to delineate the scope of an alleged invention and the associated patent rights, first began to play a prominent role in patent law in the nineteenth century.¹⁹¹ The nonobviousness requirement

¹⁸⁹ MERGES & DUFFY, *supra* note 60, at 6 (describing as “[a]n important change” “the increasingly stringent requirement that the applicant describe his or her invention clearly and completely”).

¹⁹⁰ *Id.* at 8.

¹⁹¹ *See id.* at 750 (discussing the history of patent claims).

{

for patentability arose relatively slowly and was not codified in the U.S. Patent Act until 1952.¹⁹²

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 and the questions on which they focus. A prominent example of such a development was a noticeable judicial shift in the 1970s toward stronger distinctions between questions of patent claims' validity and questions of patent scope, with the courts tending to move to the relative sidelines a previously more central canon that patent claims should be construed so as to preserve their validity.¹⁹³

Some more recent refinements have reflected pressure to distinguish issues in ways that facilitate proper allocation of responsibilities to judge and jury, a more strongly felt need after a norm of bench trials gave way to a norm of jury trials at the end of the twentieth century.¹⁹⁴ Probably the most prominent of such developments is the Supreme-Court-sanctioned holding that claim construction is a process to be carried out by judges¹⁹⁵ 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)¹⁹⁶ to juries, rather than judges.¹⁹⁷ In contrast, at least into the third quarter of the

¹⁹² See *id.* at 610 (discussing the nonobviousness "doctrine's relative youth").

¹⁹³ Golden, *supra* note 142, 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.").

¹⁹⁴ 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 trials being jury trials in the last quarter of the twentieth century)

¹⁹⁵ *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).

¹⁹⁶ 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, 1374 (2010) (predicting "that the future of the doctrine of equivalents will be trial court summary judgments adverse to the patentee").

¹⁹⁷ See *Hilton Davis Chem. Co. v. Warner-Jenkinson Co., Inc.*, 62 F.3d 1512, 1522 (Fed. Cir. 1995) (en banc) ("[I]nfringement under the doctrine of equivalents is an issue of fact to be

{

twentieth century, judicial decisions, which previously had come predominantly in cases involving bench trials,¹⁹⁸ 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.¹⁹⁹

The refinements and distinctions that have emerged over the centuries have in many respects been improvements, helping to bring greater clarity, reproducibility, and comprehensibility to various forms of legal analysis and argument. But particularly as patent law's individual doctrines tend to be, at best, rough proxies for desirable social goals,²⁰⁰ the resulting compartmentalization of legal doctrines has also raised the risk of losing a sense of general perspective and orientation toward what the law is meant to accomplish as a whole. 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.²⁰¹ An associated backlash has featured a shift toward greater opportunities for more "holistic" analysis²⁰² of

submitted to the jury in a jury trial with proper instructions, and to be decided by the judge in a bench trial."), *rev'd in irrelevant part*, 520 U.S. 17, 38 (1997).

¹⁹⁸ See *supra* text accompanying note 194.

¹⁹⁹ *Id.* 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.").

²⁰⁰ See John M. Golden, *Patentable Subject Matter and Institutional Choice*, 89 TEX. 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 TEX. 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.").

²⁰¹ 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.").

²⁰² 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).

{

questions relating to patent rights’ validity and effective power—perhaps most prominently in evaluation of subject-matter eligibility and judicial assessments of infringement remedies.

A quick way to gain some appreciation for the historical trend toward refinement and compartmentalization is to compare the 1790 Patent Act²⁰³ with the Patent Act of the present day. 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.²⁰⁴ 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.”²⁰⁵ Section 1 also indicated that the grant of a patent contained an additional discretionary aspect that has dropped out of U.S. patent statutes—namely, whether the “Secretary of State, the Secretary of 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.”²⁰⁶ 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.”²⁰⁷ Sections 3 through 7 added provisions on the public availability of specifications and models,²⁰⁸ on remedies for patent

²⁰³ Patent Act of 1790, ch. 7, 1 Stat. 109 (repealed 1793).

²⁰⁴ *Id.* at 109-12.

²⁰⁵ *Id.* § 1, at 109-10.

²⁰⁶ *Id.* § 1, at 110.

²⁰⁷ *Id.* § 2, at 110.

²⁰⁸ *Id.* § 3, at 111 (imposing on the Secretary of State a “duty” to make available copies of specifications and opportunities to copy models on request).

}

infringement,²⁰⁹ on challenges to patent rights,²¹⁰ and on fees for patent issuance.²¹¹

In contrast, the modern Patent Act spans dozens of pages and has dozens of sections.²¹² These sections are, in turn, often broken down into specifically itemized subsections.²¹³ 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*.²¹⁴

More significantly for purposes here, the current Patent Act reflects a significant amount of separation, refinement, and supplementation—as well as various modifications—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 section 1 of the 1790 Act are spread among three separate sections 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”;²¹⁵

§ 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;²¹⁶ and

²⁰⁹ *Id.* § 4, at 111 (providing for damages and for forfeiture of infringing articles).

²¹⁰ *Id.* §§ 5-6, at 111-12 (enabling challenges to patent rights).

²¹¹ *Id.* § 7, at 112 (specifying fees to be paid “to the several officers employed in making and perfecting” a patent).

²¹² *See generally* 35 U.S.C.

²¹³ *See id.*

²¹⁴ U.S. PATENT & TRADEMARK OFFICE, *MANUAL OF PATENT EXAMINING PROCEDURE* 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 law, the table of contents would span about three pages of double-column text. *See id.*

²¹⁵ 35 U.S.C. § 101.

²¹⁶ *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 &

}

§ 103 setting forth the nonobviousness requirement of patentability.²¹⁷

Courts and commentators have frequently ascribed legal significance to the spinning off of sections 102 and 103 from section 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 have become commonly viewed as the virtually exclusive domains of sections 102 and 103 on novelty and nonobviousness. Indeed, one of the primary authors of the 1952 Patent Act described § 103, which represented the first time a requirement of nonobviousness was codified in the U.S. Patent Act,²¹⁸ as having been intended "to substitute ... for the requirement of 'invention' and for all prior case law" on that requirement.²¹⁹ In 1981, the U.S. Supreme Court examined the legislative history behind the development of § 102 as a freestanding novelty section separate from § 101.²²⁰ 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 or nonobviousness under § 103 are fundamentally separate:²²¹ 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."²²² By explaining at length the distinction of § 101 questions from § 102 questions and § 103 questions, the Supreme Court's 1981 opinion thus exemplifies—and perhaps also helped promote—the

DUFFY, *supra* note 60, at 493 (distinguishing between novelty and statutory bars under pre-AIA law).

²¹⁷ *Id.* § 103.

²¹⁸ MERGES & DUFFY, *supra* note 60, at 624 ("Section 103 of the 1952 Act was the first legislative attempt to structure judicial thinking about obviousness.").

²¹⁹ 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 TEX. L. REV. 1, 43 (2007) ("In the midst of general unhappiness with the Court's invention standard ... Congress stepped in").

²²⁰ *Diamond v. Diehr*, 450 U.S. 175, 190-91 (1981) (discussing "[t]he legislative history of the 1952 Patent Act").

²²¹ *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 and emphasis omitted)).

²²² *Id.* at 191.

}

tendency of members of the patent community to “bin” certain issues by statutory section or subsection.

Modern analogs of the adequate disclosure provisions of section 2 of the 1790 Act are likewise spread over three 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,²²³

§ 113 requiring the provision of “a drawing where necessary for the understanding of the subject matter to be patented”;²²⁴ 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.”²²⁵

Moreover, the first subsection of § 112 is now recognized to impose three distinct requirements: (1) a requirement of a “written description” sufficient to “reasonably conve[y] 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,²²⁶ (2) a further requirement that the written description enable one of skill in the art “to make and use” the invention,²²⁷ and (3) the now significantly less enforceable requirement²²⁸ that the written description disclose the “best mode.”²²⁹

²²³ 35 U.S.C. § 112. 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.

²²⁴ 35 U.S.C. § 113.

²²⁵ 35 U.S.C. § 114.

²²⁶ *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

²²⁷ *See id.* at 1344 (holding that the written description and enablement requirements are “two separate description requirements”).

²²⁸ *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).

²²⁹ MUELLER, *supra* note 96, 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” (emphasis omitted)); *see also Ariad*, 598 F.3d at 1344 (agreeing that the first subsection of § 112 imposes “three separate requirements”).

{

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, 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).²³⁰ 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 sections of the Act.²³¹ 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* infringement"²³² and on damages "adequate to *compensate* for the infringement"²³³ 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.²³⁴

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 some combination of doctrines, and greater opportunities for the proliferation of arguments for such compartmentalization and associated anti-redundancy principles.

²³⁰ *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)").

²³¹ 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).

²³² *Id.* § 283.

²³³ *Id.* § 284.

²³⁴ See John M. Golden, *Injunctions as More (or Less) than "Off Switches": Patent-Infringement Injunctions' Scope*, 90 TEX. 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.").

{

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,²³⁵ has generated one of the more interesting fronts between redundancy and anti-redundancy in patent law. The doctrine of equivalents 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.²³⁶ 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.”²³⁷ Consequently, the doctrine acts as a sort of failsafe 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.²³⁸

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 similarity”²³⁹ as well as recent Supreme Court pronouncement that the doctrine should not be reduced to a more precise formula.²⁴⁰ The doctrine’s fuzziness raises notice concerns for

²³⁵ See *supra* text accompanying notes __.

²³⁶ MUELLER, *supra* note 96, at 468 (“United States patent law also recognizes the possibility of ‘nonliteral’ or ‘nontextual’ infringement under the doctrine of equivalents.”).

²³⁷ Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 21 (1997).

²³⁸ 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”).

²³⁹ MUELLER, *supra* note 96, at 475 (describing tests for infringement by equivalence).

²⁴⁰ 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”).

{

a public that would like to plan ahead based on an accurate understanding of what patent law does and does not allow.²⁴¹

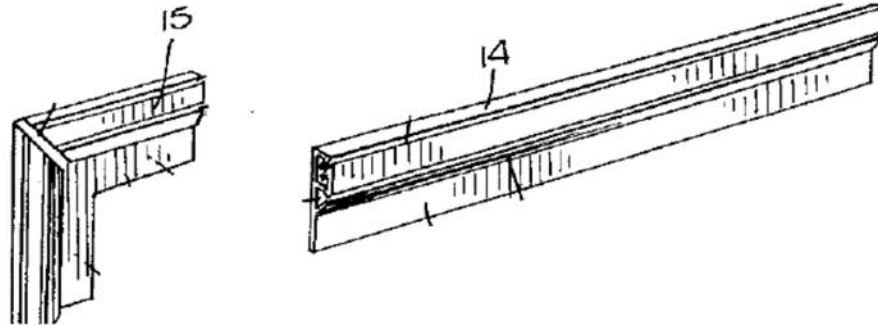
Moreover, the doctrine of equivalents can draw judicial fire for yet another reason. The doctrine can invite arguments that are in many respects repetitious of arguments already made—and presumably already lost—in a patentee’s efforts to win a broader claim construction, an understanding of the literal scope of the claims that would have encompassed an accused product or process without resort to the doctrine of equivalents. The patentee’s 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.²⁴²

The case of *Unique Concepts, Inc. v. Brown*²⁴³ 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.

²⁴¹ 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 196, at 1374 (describing the doctrine of equivalents as “foster[ing] uncertainty”).

²⁴² See *Packless Metal Hose, Inc. v. Exttek Energy Equipment (Zhejiang) Co.*, No. 2:09-CV-265-JRG (E.D. Tex. Feb. 22, 2013), available at 2013 WL 682845 at *7 (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”).

²⁴³ 939 F.2d 1558 (Fed. Cir. 1991).



Excerpt from Fig. 2 of U.S. Pat. No. 4,108,260 (issued Apr. 19, 1977) (various matter removed)

Unique Concepts involved a patent directed “to an ‘assembly of border pieces’ used to attach a fabric wall covering to a wall.”²⁴⁴ The patentee argued that the claim term “right angle corner border pieces” should be construed to encompass not only single-unit right-angle structures but also multiple-unit right-angle structures that were formed by arranging two separate linear structures at a right angle.²⁴⁵ 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 distinguish “linear border pieces” that the claims separately required.²⁴⁶ 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.²⁴⁷

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 with some form of full 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

²⁴⁴ *Id.* at 1559.

²⁴⁵ *See id.* at 1561 (internal quotation marks omitted).

²⁴⁶ *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.”).

²⁴⁷ *Id.*

}

piece.” Thus, as with *Marbury v. Madison*,²⁴⁸ 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 more 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.²⁴⁹ 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.”²⁵⁰ 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 pieces” and single-part “preformed corner pieces” by indicating that “a preformed corner piece is somewhat easier for a do-it-yourselfer to work with.”²⁵¹

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 “vitate” claim language. It is perhaps no wonder therefore that the Federal Circuit needs to periodically admonish lower courts

²⁴⁸ See *supra* text accompanying notes 52-57.

²⁴⁹ *Id.* at 1563-64 (discussing equivalence arguments and their resolution by the district court).

²⁵⁰ *Id.* at 1564 (discussing the function-way-result test for infringement by equivalence).

²⁵¹ *Id.* at 1562 (internal quotation marks omitted); see also *id.* at 1564 (discussing and affirming district court’s resolution of arguments on infringement by equivalence).

}

that the “no vitiating” doctrine should not be invoked lightly²⁵² lest it improperly vitiate the doctrine of equivalents itself.²⁵³

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 helped enable patent law to slip too 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;²⁵⁴ 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.²⁵⁵

The Supreme Court has issued four decisions on subject-matter eligibility in the last half decade.²⁵⁶ In each one, the Court has found at least some of the patent claims at issue to be invalid or unpatentable because they

²⁵² See, e.g., *Charles Mach. Works, Inc. v. Vermeer Mfg. Co.*, 723 F.3d 1376, 1381 (Fed. Cir. 2013) (“hold[ing] 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 (2014) (quoting *Deere* and reversing a failure to grant summary judgment of infringement by equivalence).

²⁵³ *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.”).

²⁵⁴ See *infra* text accompanying notes 256-261.

²⁵⁵ 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 the Federal Circuit have together limited the availability or value of patent-infringement remedies”).

²⁵⁶ See Golden, *Flook*, *supra* note 110, at 1768-69.

}

encompassed ineligible subject matter.²⁵⁷ In so doing, the Court’s opinions have overrun the apparently sharp distinction between questions of subject-matter eligibility and questions of novelty or nonobviousness that language from a prior Court opinion had embraced.²⁵⁸ 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.²⁵⁹ 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”²⁶⁰ while also satisfying other, more refined tests for patentability such as novelty and nonobviousness.²⁶¹

The Court’s concerns can be illustrated by the case of *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*²⁶² In that case, the Court confronted a patent claim for a “method of optimizing” treatment of certain gastrointestinal diseases.²⁶³ This claim involved three basic parts.

²⁵⁷ *Id.*

²⁵⁸ *See supra* text accompanying notes 220-222.

²⁵⁹ *See, e.g.,* *Alice Corp. Pty. Ltd. 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 activit[ies]’” (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 Collaborative Servs. v. Prometheus Labs.*, 132 S. Ct. 1289, 1294 (2012) (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*, 130 S. Ct. 3218, 3231 (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)).

²⁶⁰ *Alice*, 134 S. Ct. at 2354.

²⁶¹ *See Alice*, 134 S. Ct. at 2360 (“This Court has long ‘warn[ed] .. against’ interpreting § 101 ‘in ways that make patent eligibility depend simply on the draftsman’s art.’” (quoting *Mayo*, 132 S. Ct. at 1294) (some internal quotation marks omitted)).

²⁶² 132 S. Ct. 1289 (2012).

²⁶³ *Id.* at 1925 (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—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. The third part reflected the actual advance made by the inventors: their discoveries of a particular ceiling and a particular floor for metabolite levels, with a measured metabolite level above the ceiling indicating that the 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 drug dosage was likely to be ineffective for treating the patient and therefore should be increased.²⁶⁴

The discovery of the relevant ceiling and floor values for the associated metabolite was an apparently novel, nonobvious, and also socially valuable discovery—the sort of discovery that one might imagine a patent system should be happy to reward. But the Supreme Court viewed this discovery, quite defensibly, as a discovery of laws of nature that by themselves were not patent-eligible. Further, although conceding that one may patent an “application” of laws of nature,²⁶⁵ the Court rejected the notion that the patent claim failed to escape the bar against patenting laws of nature by attaching to the recitation of the natural laws the drug-administration and metabolite-measurement steps. The Court explained that “[s]imply appending conventional steps, specified at a high level of generality, [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).

²⁶⁴ *Mayo*, 132 S. Ct. at 1297-98; *id.* at 1295.

²⁶⁵ *Id.* at 1294 (“We must determine whether the claimed processes have transformed these unpatentable natural laws into patent-eligible applications of those laws.”).

{

‘enough’ to supply an inventive concept”²⁶⁶ necessary to distinguish the claimed invention from an effort to patent laws of nature.²⁶⁷ 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 separate 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.”²⁶⁸

The “new” remedies analysis can also be viewed as chafing at the compartmentalization of patent law doctrine by reviving the need for cross-cutting analysis that can require detailed attention to the precise nature of an invention, as bounded and defined by prior art, in assessing patent-infringement remedies. After the Supreme Court’s decision in *eBay Inc. v. MercExchange, L.L.C.*,²⁶⁹ 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.²⁷⁰ 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.²⁷¹ 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 that interact with patent law’s doctrinal rubrics for patentability and infringement while also reaching beyond

²⁶⁶ *Id.* at 1300 (internal quotation marks omitted).

²⁶⁷ *Alice*, 134 S. Ct. at 2355 (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]” (internal quotation marks omitted, alteration in original)).

²⁶⁸ *Mayo*, 132 S. Ct. at 1304.

²⁶⁹ 547 U.S. 388 (2006).

²⁷⁰ *Id.* at 391 (setting forth “a four-factor test” that a patentee must satisfy before obtaining a permanent injunction).

²⁷¹ *Id.* (listing factors involving consideration of “the balance of hardships” and “the public interest”).

{

them.²⁷² In sum, cross-cutting analysis of legal and practical concerns has emerged on multiple fronts despite earlier trends toward anti-redundant compartmentalization of patent law doctrines.

4. Alternative Institutions and Procedure

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,²⁷³ can be viewed as an example of revitalization of a pre-existing 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 U.S. Patent and Trademark Office (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.²⁷⁴ 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 offering of *ex parte* reexamination of issued patents.²⁷⁵ Nearly two decades later, Congress added an option of *inter partes* reexamination.²⁷⁶ Finally, in the America Invents Act of 2011, Congress replaced *inter partes* reexamination with so-called *inter partes* review and

²⁷² 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”).

²⁷³ John M. Golden, *The Supreme Court as “Prime Percolator”: A Prescription for Appellate Review of Questions in Patent Law*, 56 UCLA L. REV. 657, 670 (2009) (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”).

²⁷⁴ 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 “concern about improper grants” and patent quality).

²⁷⁵ MERGES & DUFFY, *supra* note 60, at 1039 (discussing the enactment of provisions for *ex parte* reexamination in 1980).

²⁷⁶ *Id.* (discussing the enactment of provisions for *inter partes* reexamination in 1999).

{

introduced two additional forms of post-grant proceedings.²⁷⁷ 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 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, particularly in patent claims, as well as in often substantially atextual reasoning about the scope and interaction of different substantive legal doctrines. Over the course of two centuries, 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. 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 can inform anti-

²⁷⁷ *Id.* at 1046 (noting that the America Invents Act of 2011 "accelerate[d] the trend toward administrative review of patent validity decisions").

{

redundancy while facilitating intelligent use of redundancy as a principle of legal design.

One could argue that there is no need to look to a new synthesis at all 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.²⁷⁸ 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 even the fundamental motivations of claim drafters, but also perversely providing positive encouragement for redundant claim drafting in hopes of thereby obtaining subtly expanded patent scope.²⁷⁹ Somewhat similarly, the compartmentalization 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.²⁸⁰ 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

²⁷⁸ See, e.g., CROSS, *supra* note 118, at 101 (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”).

²⁷⁹ See *supra* notes 170-188 and accompanying text.

²⁸⁰ See *supra* notes 256-272 and accompanying text.

}

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 tradeoffs 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. 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,²⁸¹ 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

²⁸¹ 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.

}

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 bars’ 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,”²⁸² 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.”²⁸³ Although I generally agree with the Supreme Court’s move to revive subject-matter eligibility doctrine and to 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, one might worry that the presence of novelty-and-nonobviousness-infused subject-matter eligibility analysis could lead to a degradation of the quality of decision-making on novelty and nonobviousness themselves: if subject-matter eligibility questions tend to be decided first, this could lead to courts and the USPTO not to reach important novelty and nonobviousness issues as often, thereby potentially causing the predictability

²⁸² *Harries v. Air King Prods. Co.*, 183 F.2d 158, 162 (2d Cir. 1950) (L. Hand, J.); *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”).

²⁸³ Golden, *Flook*, *supra* note 110, at 1770.

}

and precision of those doctrines to deteriorate over time.²⁸⁴ In such a context, one predictably finds expressions of concern about the mixing of subject-matter eligibility and novelty or nonobviousness analyses,²⁸⁵ and one can anticipate calls for return to a simpler, more strictly compartmentalized doctrinal structure.²⁸⁶

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.”²⁸⁷ 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 expansive subject-matter eligibility analysis creates.²⁸⁸ If the critics are right, emergence of a subject-

²⁸⁴ Cf. Crouch & Merges, *supra* note 156, 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]”).

²⁸⁵ Mark A. Lemley, *Point of Novelty*, 105 NW. UNIV. 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”).

²⁸⁶ 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 “fi[t] in one of the statutory categories”).

²⁸⁷ MUELLER, *supra* note 96, at 271; see also MERGES & DUFFY, *supra* note 60, at 605 (“Many patent lawyers consider nonobviousness the most important of the basic patent requirements; it has been called ‘the ultimate condition of patentability.’” (citation omitted)).

²⁸⁸ See Crouch & Merges, *supra* note 156, at 1686 (describing empirical studies suggesting that “a substantial number of patent claims lacking subject matter eligibility ... also fail to

{

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.²⁸⁹

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”²⁹⁰ as formulated broadly enough to encompass all principal social concerns with searches and seizures 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 have come to a substantially optimal balance of competing social interests—or, alternatively but less optimistically, one might think that the courts have at least done as well as can reasonably be expected with such a broad inquiry, even though present results might seem substantially poor.²⁹¹ With a general rubric of “reasonableness” already in place, the opening of a new line of decision-making under the general rubric of due process might be thought likely to add relatively little of substantive value, while introducing—or increasing—debilitating uncertainty that could have an undesirably chilling effect on law enforcement.²⁹²

satisfy at least one other validity test”); Risch, *supra* note 286, 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”).

²⁸⁹ Cf. Louis Kaplow, *Rules v. Standards: An Economic Analysis*, 42 DUKE L.J. 558, 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”).

²⁹⁰ U.S. CONST. amend. IV.

²⁹¹ See, e.g., Akhil Reed Amar, *Fourth Amendment First Principles*, 107 HARV. L. REV. 757, 757 (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”).

²⁹² See *supra* note 66 and accompanying text.

{

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 to mediate competing social concerns, rather than simply one. Just as specialization of the functions of institutions and individuals can generate improved 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 over time. 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. 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.

But there are two other approaches to doctrinal design that might answer the above concerns with overlapping standards. First, one could explore the possibility of turning one of the doctrines into a more rule-like doctrine with 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. For example, there is the common phenomenon of law overlaying a background standard with provisions for safe harbors or “sure shipwrecks.”²⁹³ 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.²⁹⁴ The nonobviousness-overlapping demands of the novelty requirement can thereby facilitate efficient decision-making by providing a

²⁹³ See Susan C. Morse, *Safe Harbors, Sure Shipwrecks* (unpublished manuscript, 2015).

²⁹⁴ MUELLER, *supra* note 96, 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.”).

{

comparatively straightforward rule for when a sub-category of patent claims should be held invalid.

The rule-as-overlay-to-fundamental-standard approach might not be a viable redundant design for certain situations, however. With respect to subject-matter eligibility, for example, prior efforts to confine the doctrine in a rule-like way ultimately led to the growth of concerns that triggered the doctrine's standard-like revival. Likewise, a fundamental purpose of the nonobviousness doctrine is to act as a standard-like complement to corresponding novelty doctrine. For such a situation in which neither of two overlapping doctrines (here, subject-matter eligibility doctrine and nonobviousness doctrine) is a good candidate for the imposition of rule-like precision, we might need a different approach to addressing concerns about predictability and doctrinal degradation through the deployment of overlapping standards.

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 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 vague standard so that, at least in a state of relative legal equilibrium, the standard generates results that differ from those that would otherwise apply only in relatively exceptional circumstances. Hence, there is the typical requirement for the deployment of the unconscionability doctrine of some combination of both substantive and procedural unconscionability,²⁹⁵ 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."²⁹⁶ 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,

²⁹⁵ FARNSWORTH, *supra* note 62, § 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").

²⁹⁶ U.C.C. § 2-302 cmt. 1.

{

such limited damage might be viewed as plausibly counterbalanced by the additional assurance provided to risk-averse parties on at least one side of a social divide that, at least along some axes, one or another overlapping standard will help prevent extreme outcomes.

In short, consideration of the general phenomena of redundancy and anti-redundancy provides some cause for hope that present concerns about the destabilizing effects of modern subject-matter eligibility doctrine can be resolved. Through the actions of courts and other policymakers, the legal system might ultimately re-equilibrate with the cross-cutting standard of subject-matter eligibility ultimately taking on a more moderate, day-to-day role, somewhat like that of unconscionability doctrine in the realm of contract law. If such re-equilibration can be achieved, subject-matter eligibility doctrine will add to the list of examples of ways to achieve a more rational balance between concerns of redundancy and anti-redundancy through prudent doctrinal design.

CONCLUSION

Analysis of legal redundancy and anti-redundancy suggests that anti-redundancy has commonly had excessive rhetorical sway. In U.S. patent law in particular, anti-redundancy appears to have generated negative practical results, including subtly inflated patent scope and too easily exploited gaps between patentability requirements. Redundancy in terms of overlapping and reinforcing language, legal doctrines, processes, and institutions is a justifiably frequent feature of law and merits less grudging recognition of its value-adding potential.

Redundancy does not come without cost, however, and there can be legitimate concerns about redundancy's potential to sow more error and confusion than it resolves. Anti-redundancy concerns might be strongest in situations involving analytically overlapping standards that attempt to mediate between competing social interests. 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 can chill legitimate and 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 reinforces and backstops the substance of multiple patentability doctrines and that does not add intolerably to the high levels of uncertainty that innovators face. Even in such situations, properly restrained redundancy can improve, rather than degrade, legal performance, bettering law's ability to serve as a mediator and guide in a diverse society marked competing backgrounds, understandings, and interests.