
Discovery Hydraulics

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Discovery reforms invariably have unexpected consequences. But the growth of electronically stored information has led to one constant — an ever-increasing pressure on the finite resources of both the judiciary and litigants. Courts, through their discovery rules, direct where that pressure will be channeled. However, like any force in a closed system, it must be sent somewhere, ultimately requiring difficult tradeoffs amongst the three mainstay procedural justice norms of accuracy, efficiency, and participation. Discovery Hydraulics explores this phenomenon, cataloging how recently proposed or implemented document discovery reforms affect these norms.

In creating the first purposive taxonomy of recent document discovery reforms, Discovery Hydraulics makes three main contributions to the literature by: (1) articulating an understanding of how the treatment of costs and information volume correspond to the accuracy, efficiency, and participation norms; (2) systematically collecting and organizing the plethora of suggestions that have been offered to address the burdens associated with the growth of electronically stored information; and (3) laying out the normative and instrumental benefits of discovery reforms that focus on reducing costs without losing information. Last, but not least, a significant practical benefit is that this analytical approach should provide courts with the tools needed to assess, ex ante, the potential normative effects of changes to document discovery processes.

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INTRODUCTION

Efforts to reform document discovery — to address changes in the broader world — inevitably have had unexpected consequences.¹ But one constant in contemporary civil litigation is that the continuing growth of electronically stored information (“ESI”) places pressure, which cannot be avoided, on both the judiciary and litigants.² Instead, at most, procedural rules can direct the stress, roughly prioritizing the attendant normative and practical tradeoffs.

In this way, civil discovery acts like a hydraulic system.³ The finite resources available to litigants are subjected to ever-increasing pressure by the massive volume of ESI.⁴ Moreover, the courts direct where that pressure will be channeled through their discovery rules.

¹ See, e.g., Samuel Issacharoff & George Loewenstein, *Unintended Consequences of Mandatory Disclosure*, 73 TEX. L. REV. 753, 760-85 (1995) (arguing in 1995 that the unintended consequence of mandatory disclosure, introduced by the 1993 amendment to the Federal Rules of Civil Procedure, would be to reduce the number of settlements in cases where no real discovery cost would otherwise have been incurred); see also Lisa Bernstein, *Understanding the Limits of Court-Connected ADR: A Critique of Federal Court-Annexed Arbitration Programs*, 141 U. PA. L. REV. 2169, 2215-30 (1993) (describing how compulsory alternative dispute resolution processes may, in direct opposition to its goals, actually reduce settlements and disadvantage financially less well-off litigants); Robert G. Bone, *Lon Fuller’s Theory of Adjudication and the False Dichotomy Between Dispute Resolution and Public Law Models of Litigation*, 75 B.U. L. REV. 1273, 1320-21 (1995) (suggesting that a rule limiting the number of interrogatories to reduce litigation costs might actually increase them by making trial more attractive and reducing the number of settlements). See generally Geoffrey P. Miller, *An Economic Analysis of Rule 68*, 15 J. LEGAL STUD. 93 (1986) (explaining how Rule 68 can distort settlement offers rather than encourage settlement).

² See ERNST & YOUNG LLP, INSIDERS’ GUIDE TO TECHNOLOGY-ASSISTED REVIEW 1 (2015) (describing problem of voluminous ESI); Seth Katsuya Endo, *Technological Opacity & Procedural Injustice*, 59 B.C. L. REV. 821, 851-62 (2018) (discussing how burdens of ESI have led to normative tradeoffs); Judge Andrew Jay Peck, *Foreword*, 26 REGENT U. L. REV. 1, 3 (2014) (noting that “[t]he amount of digital information that is created everyday is staggering, and many companies preserve almost everything”). The growth of ESI, of course, is not the only external pressure. See, e.g., Richard D. Freer, *Exodus from and Transformation of American Civil Litigation*, 65 EMORY L.J. 1491, 1491-92 (2016) (discussing the perception that excessive caseloads are a problem for the judiciary as a driver of procedural rule changes). And the procedural justice norms are not the only legal values burdened by ESI. See, e.g., Natalie M. Banta, *Death and Privacy in the Digital Age*, 94 N.C. L. REV. 927, 928-30 (2016) (describing impact of ESI on privacy rights).

³ This, naturally, is meant to evoke Samuel Issacharoff & Pamela S. Karlan, *The Hydraulics of Campaign Finance Reform*, 77 TEX. L. REV. 1705, 1705-08 (1999) (explaining, in the context of campaign finance regulation, that “the desire for political power cannot be destroyed, but at most, channeled into different forms” and “political money, like water, has to go somewhere”).

⁴ See *infra* notes 72-74 and accompanying text; see also *infra* Part III.B–C.

But, like any force in a hydraulic system, it must be channeled somewhere.⁵

This metaphor illuminates a fundamental reason that federal reform efforts have not ameliorated lawyer and judicial discontent with document discovery. While there has always been dissatisfaction with how the document discovery rules allocate costs and benefits,⁶ the tremendous growth of ESI has created a new world where the overarching problem is not intentional discovery abuse but merely the inability of traditional practices to keep up with the explosion of the universe of discoverable material.⁷ Thus, discovery reform efforts cannot target a set of bad actors or some misconduct. Instead, they necessarily must make difficult tradeoffs between the procedural justice norms of accuracy, efficiency, and participation.

With increasing competition between important values, procedure jurisprudence and scholarship have had to pay commensurately more attention to discovery reform. In the past three years, there have been over a hundred law review articles that either propose or evaluate rule changes or related doctrinal developments.⁸

While prior scholarship has surveyed the significant shifts in federal civil procedure under the Roberts Court⁹ and proposed different

⁵ See *Hickman v. Taylor*, 329 U.S. 495, 505 (1947) (“The deposition-discovery rules create integrated procedural devices.”). The intention of the chief drafter of the Federal Rules of Civil Procedure to create an integrated set of discovery rules is discussed further in Charles E. Clark, *Special Problems in Drafting and Interpreting Procedural Codes and Rules*, 3 VAND. L. REV. 493, 502 (1950).

⁶ See, e.g., Victor Marrero, *The Cost of Rules, the Rule of Costs*, 37 CARDOZO L. REV. 1599, 1607 (2016) (“Commentators have repeatedly noted the persistence of unhappiness and faultfinding with federal procedures despite perennial efforts to address the problem through new rule amendments.”).

⁷ See Peck, *supra* note 2, at 2-3.

⁸ This estimate follows from a Westlaw search in the Secondary Sources database for “DISCOVERY” within the same paragraph as “RULE” and “DOCUMENT!” and “CHANG!” or “AMEND!” or “MODIF!” within the same sentence as “2015.”

⁹ See, e.g., Edward A. Purcell, Jr., *From the Particular to the General: Three Federal Rules and the Jurisprudence of the Rehnquist and Roberts Courts*, 162 U. PA. L. REV. 1731, 1764-65 (2014) (arguing that decisions construing Federal Rules 8, 23, and 56 illustrate how conservative Supreme Court justices have “steadily and methodically remade the law to serve the substantive policies and partisan values of the contemporary Republican ‘conservatism’ from which they sprang”); Sarah Staszak, *Procedural Change in the First Ten Years of the Roberts Court*, 38 CARDOZO L. REV. 691, 692 (2016) (identifying how Chief Justice Roberts has used his power to appoint individuals to the Judicial Conference and its subcommittees to inform the trend towards more limited court access); Stephen N. Subrin & Thomas O. Main, *The Fourth Era of American Civil Procedure*, 162 U. PA. L. REV. 1839, 1885-88 (2014) [hereinafter *The Fourth Era*] (linking procedural developments in the Rehnquist and

theories for interpreting procedural rules and changes,¹⁰ this Article is the first to engage in a purposive taxonomy that links recent document discovery reforms' treatment of cost and information-volume to the likely normative effects.¹¹ The goal of this taxonomy is to provide courts with a tool to assess, *ex-ante*, the potential normative effects of discovery processes.

As to the taxonomy, most of the recently proposed and implemented reforms can be divided into three categories. The first set of reforms places new limitations on the amount of discovery, reducing the direct litigation costs at the expense of potentially missing out on valuable information.¹² These are meant to privilege efficiency and mostly ignore structural inequities amongst the parties.¹³ The second set of reforms tries to reduce costs, without losing the informational benefits of the expanded universe of discoverable material, by using tactical or technological innovations like sampling and predictive coding.¹⁴ These reforms attend to

Roberts Courts to describe a new period of procedure that puts case management above merits determinations); Howard M. Wasserman, *The Roberts Court and the Civil Procedure Revival*, 31 REV. LITIG. 313, 331-32 (2012) (describing trends in the Supreme Court's then-recent civil procedure jurisprudence, including an apparent hostility to the use of litigation to vindicate rights).

¹⁰ See, e.g., Brooke D. Coleman, *Civil-Izing Federalism*, 89 TUL. L. REV. 307, 310 (2014) [hereinafter *Civil-Izing Federalism*] (identifying concerns underlying procedural decisions by the Roberts Court); David Marcus, *Two Models of the Civil Litigant*, 64 DEPAUL L. REV. 537, 538-39 (2015) (explaining how the Roberts Court has emphasized individuals' control over their participation in litigation); Lumen N. Mulligan & Glen Staszewski, *Civil Rules Interpretive Theory*, 101 MINN. L. REV. 2167, 2167 (2017) (distinguishing the Federal Rules of Civil Procedure from statutes and suggesting that an administrative law approach is the best way to interpret the Rules); Elizabeth G. Porter, *Pragmatism Rules*, 101 CORNELL L. REV. 123, 125-26 (2015) (describing two methodological approaches to procedure taken by the Roberts Court); Dana Shocair Reda, *What Does It Mean to Say That Procedure Is Political?*, 85 FORDHAM L. REV. 2203, 2203-05 (2017) (assessing the political nature of procedural reforms).

¹¹ The Article looks back at a sample of proposed and implemented reforms for the federal system from the past decade, using the 2006 amendments to the Federal Rules of Civil Procedure as a rough start to the formal e-discovery era. See Kenneth J. Withers, *Electronically Stored Information: The December 2006 Amendments to the Federal Rules of Civil Procedure*, 4 NW. J. TECH. & INTELL. PROP. 171, 172 (2006) [hereinafter *December 2006 Amendments*] (noting that a package of amendments addressing "the myriad issues associated with the discovery and production of information in digital form" would go into effect on December 1, 2006).

¹² See *infra* Part IV.A (describing reform proposals).

¹³ See Part IV.A; see also *infra* Section II.C (explaining relationship between norms and treatments of cost and information volume).

¹⁴ See *infra* Part IV.B (describing reforms proposals).

efficiency but also may enhance accuracy and participation.¹⁵ The third set of reforms focuses on the underlying pragmatic concern, proposing ways for the courts to reallocate discovery costs between the parties.¹⁶ The accuracy and participation implications are least apparent, but the proposals should enhance efficiency.¹⁷

Part II of the Article briefly describes the underlying procedural justice norms generally embodied within discovery and the rules governing document discovery. Part III of the Article details the growth of ESI and explains the pressures it places on discovery in civil litigation. Part IV presents a critique and taxonomy of recent reforms, suggesting that courts should focus on the set that attempts to reduce discovery costs without losing the participation benefits that come from robust discovery. Part V concludes with a summary of the previous points, a discussion of the broader implications, and some questions for future investigation.

I. PROCEDURAL JUSTICE NORMS & DOCUMENT DISCOVERY RULES

An underlying premise of this Article is that document discovery reforms should be evaluated by how well they serve the underlying procedural justice norms animating the rules and doctrines.¹⁸ To anchor this approach, this section begins by briefly explaining the three mainstay elements of procedural justice — accuracy, efficiency, and participation. It then provides a short history of the document discovery rules. Finally, it explains how the procedural justice norms are embodied within the existing document discovery rules.

¹⁵ See Part IV.B; see also *infra* Part II.C (explaining relationship between norms and treatments of cost and information volume).

¹⁶ See *infra* Part IV.C (describing reforms proposals).

¹⁷ See *infra* Part IV.C; see also *infra* Part II.C (explaining relationship between norms and treatments of cost and information volume).

¹⁸ See Martin H. Redish, *Electronic Discovery and the Litigation Matrix*, 51 DUKE L.J. 561, 567 (2001) (noting that “[s]cholarly debate about the procedural system traditionally has focused on second-level analysis, taking for granted the underlying normative goal structure on which generalized rules ultimately are premised”). Implicitly, this Article applies a variant of Hart and Sacks’s Legal Process/purposive approach. See William L. Reynolds & Spencer Weber Waller, *Legal Process and the Past of Antitrust*, 48 SMU L. REV. 1811, 1815 (1995) (“A Legal Process judge, in short, engages in what Hart and Sacks call ‘reasoned elaboration’ — honest, that is to say forthright, explanations of why the facts will lead to identified goals.”).

A. Procedural Justice Norms Background

As used in this Article, the term “procedural justice” speaks to the reasonableness and fairness of judicial methods and practices.¹⁹ In assessing these two dimensions, the Article relies on Professor Lawrence Solum’s seminal work in which he identified participation, accuracy, and efficiency (described as “balancing”) as the three norms comprising a robust notion of procedural justice.²⁰ And, as described below in Subsection II(C), the discovery jurisprudence, which effectively mirrors the general process test in *Mathews v. Eldridge*, weighs these norms when addressing disputes over scope.²¹

The participation norm captures the benefits of process that are not reducible to either accuracy or cost.²² It is “the right to observe, to

¹⁹ See *Civil Procedure*, BLACK’S LAW DICTIONARY (10th ed. 2014); *Justice*, BLACK’S LAW DICTIONARY (10th ed. 2014); see also Victor D. Quintanilla, *Taboo Procedural Tradeoffs: Examining How the Public Experiences Tradeoffs Between Procedural Justice and Cost*, 15 NEV. L.J. 882, 889 (2015) (“Procedural justice research measures the extent to which the public experiences legal procedures and dispute resolution as fair and legitimate.”).

²⁰ Lawrence B. Solum, *Procedural Justice*, 78 S. CAL. L. REV. 181, 237, 237, 244-60 (2004) (explaining goal of incorporating accuracy, balancing, and participation models of procedural justice “into a unified theory of procedural justice”). Other scholars have articulated other discovery-specific norms. For example, some scholars identify the value of truth-seeking. See, e.g., Yitshak Cohen, *The Issue of Document Disclosure in General Courts and in Family Courts: A New Model*, 37 HOUS. J. INT’L L. 43, 60 (2015). Professor Martin Redish laid out a more granular description, contending that the procedural rules regulating discovery should promote the following high-level goals: “(1) decisionmaking accuracy; (2) adjudicatory efficiency; (3) political legitimacy; (4) maintenance of the substantive-procedural balance; (5) predictability; and (6) fundamental fairness.” Redish, *supra* note 18, at 594. Each of the additional norms has its own meaning and importance. But, for the purposes of this Article, the truth-seeking norm is effectively co-extensive with Professor Solum’s accuracy norm and Professor Redish’s third through sixth norms comfortably fit under Professor Solum’s participation norm.

²¹ See, e.g., *Seattle Times Co. v. Rhinehart*, 467 U.S. 20, 36 (1984) (noting that the trial court is in the best position to weigh fairly the competing needs and interests of parties affected by discovery); *Mathews v. Eldridge*, 424 U.S. 319, 348 (1976); *Sky Angel U.S., LLC v. Nat’l Cable Satellite Corp.*, 296 F.R.D. 1, 3 (D.D.C. 2013) (finding that the benefit of the requested discovery was outweighed by the burden and expense it would impose upon potential deponents); Andrew Blair-Stanek, *Twombly Is the Logical Extension of the Mathews v. Eldridge Test to Discovery*, 62 FLA. L. REV. 1, 4 (2010) (showing how *Twombly* turned on how the *Mathews* factors applied to whether more discovery was due). But see Jerry L. Mashaw, *The Supreme Court’s Due Process Calculus for Administrative Adjudication in Mathews v. Eldridge: Three Factors in Search of a Theory of Value*, 44 U. CHI. L. REV. 28, 46-47 (1976) (critiquing *Mathews* for using an incomplete utilitarian approach).

²² Solum, *supra* note 20, at 275. At the same time, Professor Solum asserts that the participation principle does not rely on dignity, equality, or autonomy grounds. *Id.* at

make arguments, to present evidence, and to be informed of the reasons for a decision.”²³ And the participation norm serves multiple functions within traditional civil litigation, both enhancing the dignity of the individual and contributing to the outcome.²⁴ To the former, giving an individual who is affected by a decision the opportunity to have a voice implicitly assigns a sense of worth to the individual. It also leads to an individual’s greater satisfaction and perception of fairness with the process, regardless as to whether they win or lose.²⁵ To the latter, processes that permit participation give litigants a chance to influence the outcomes of their cases, which may also improve the chances of a reasoned and accurate decision.²⁶

Turning to accuracy, this norm focuses on whether the process improves the chances that the adjudicative proceeding’s outcome will be substantively correct.²⁷ In other words, the goal is to ensure that the decision relies on an understanding of the information that best reflects what actually happened and that the reasoning is logically sound.²⁸ Processes that enhance accuracy contribute to the legitimacy of judicial decision-making because individual litigants see their substantive rights vindicated.²⁹ Likewise, at the social level, accuracy

286-90. But, even if one accepts this proposition, these values are still linked to participation. *Id.* at 289-90; see also Robert G. Bone, *Statistical Adjudication: Rights, Justice, and Utility in a World of Process Scarcity*, 46 VAND. L. REV. 561 *passim* (1993).

²³ Solum, *supra* note 20, at 280.

²⁴ See Robert G. Bone, *Who Decides? A Critical Look at Procedural Discretion*, 28 CARDOZO L. REV. 1961, 2021-22 (2007) [hereinafter *Who Decides?*] (teasing out how these interests play out in aggregate litigation); Susan P. Sturm, *A Normative Theory of Public Law Remedies*, 79 GEO. L.J. 1355, 1391-92 (1991) (analyzing how this plays out with public law remedies).

²⁵ See Nourit Zimmerman & Tom R. Tyler, *Between Access to Counsel and Access to Justice: A Psychological Perspective*, 37 FORDHAM URB. L.J. 473, 480-83 (2010) (citing to an earlier Tyler study); see also *Goldberg v. Kelly*, 397 U.S. 254, 264-65 (1970); Martin H. Redish, *Procedural Due Process and Aggregation Devices in Mass Tort Litigation*, 63 DEF. COUNS. J. 18, 21 (1996) (explaining link between participation, dignity, and legitimacy of judicial decision-making).

²⁶ See Bone, *Who Decides?*, *supra* note 24, at 2022; Sturm, *supra* note 24, at 1392.

²⁷ See Solum, *supra* note 20, at 306.

²⁸ See John R. Allison, *A Process Value Analysis of Decision-Maker Bias: The Case of Economic Conflicts of Interest*, 32 AM. BUS. L.J. 481, 492-93 (1995); Cynthia R. Farina, *Conceiving Due Process*, 3 YALE J.L. & FEMINISM 189, 226 (1991); see also *United States v. Havens*, 446 U.S. 620, 626 (1980) (“[A]rriving at the truth is a fundamental goal of our legal system.”).

²⁹ See Martin H. Redish, *Pleading, Discovery, and the Federal Rules: Exploring the Foundations of Modern Procedure*, 64 FLA. L. REV. 845, 852 (2012).

matters because it helps effectuate the goals of substantive laws by ensuring that they are appropriately applied.³⁰

The efficiency norm has generally been construed as seeking to optimally balance the aggregate costs against the overall litigation benefits.³¹ Costs have largely been defined as the monetary expenditures involved.³² For example, the U.S. Supreme Court focused on the financial implications of potential discovery efforts in its evaluations of the pleading issues raised in *Bell Atlantic Corp. v. Twombly* and *Ashcroft v. Iqbal*.³³ And the benefits have generally been understood as the probative value of the information for proving the case or how that information changes the expected value of the claim.³⁴ Some scholars, however, have argued for more expansive understandings of costs and benefits, including social costs and non-pecuniary benefits.³⁵

In part, these underlying norms are imbued with a quasi-constitutional dimension that demands attention be paid to the document discovery procedural rules that are designed to effectuate them.³⁶ While this is not to say that there is a general constitutional

³⁰ *Id.*; see also Robert G. Bone, *Securing the Normative Foundations of Litigation Reform*, 86 B.U. L. REV. 1155, 1162 (2006).

³¹ See Brooke D. Coleman, *The Efficiency Norm*, 56 B.C. L. REV. 1777, 1797 (2015) [hereinafter *The Efficiency Norm*]; Solum, *supra* note 20, at 275. There are, of course, other definitions of efficiency. For example, Pareto efficiency states, “[a] legal rule is efficient if it induces people to behave in such a way that no one can be made better off (in terms of [his or] her own preferences) without making someone else worse off.” *Id.* at 1796 (quoting Lewis A. Kornhauser, *An Introduction to the Economic Analysis of Contract Remedies*, 57 U. COLO. L. REV. 683, 688-89 (1986)). And Kaldor-Hicks efficiency is when the “aggregative benefits of an activity outweigh the aggregative costs.” *Id.* (quoting Ora F. Harris, Jr., *The Automobile Emissions Control Inspection and Maintenance Program: Making It More Palatable to “Coerced” Participants*, 49 LA. L. REV. 1315, 1345 n.157 (1989)).

³² See Coleman, *The Efficiency Norm*, *supra* note 31, at 1797-1800 (discussing this phenomena); see also Charles Silver, *Does Civil Justice Cost Too Much?*, 80 TEX. L. REV. 2073, 2073-74 (2002).

³³ *Ashcroft v. Iqbal*, 556 U.S. 662, 686-87 (2009); *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 558 (2007).

³⁴ See, e.g., Robert Cooter & Daniel Rubinfeld, *An Economic Model of Legal Discovery*, 23 J. LEGAL STUD. 435, 451 (1994); Scott A. Moss, *Litigation Discovery Cannot Be Optimal but Could Be Better: The Economics of Improving Discovery Timing in a Digital Age*, 58 DUKE L.J. 889, 914 (2009).

³⁵ See, e.g., Coleman, *The Efficiency Norm*, *supra* note 31, at 1797-800.

³⁶ See Vivian Grosswald Curran, *United States Discovery and Foreign Blocking Statutes*, 76 LA. L. REV. 1141, 1141 (2016); Arthur R. Miller, *Confidentiality, Protective Orders, and Public Access to the Courts*, 105 HARV. L. REV. 427, 464 (1991) [hereinafter *Confidentiality*]; Imre Stephen Szalai, *A Constitutional Right to Discovery? Creating and Reinforcing Due Process Norms Through the Procedural Laboratory of Arbitration*, 15

right to discovery, both scholars and courts have recognized the link between due process and discovery, noting that fundamental fairness sometimes demands that a litigant be given access to certain information that then allows the court to make an informed decision on the merits of the claim.³⁷ One example is when the United States Court of Appeals for the Third Circuit found that a district court's denials of requests for a commission to take a foreign deposition left a plaintiff unable to prove her case.³⁸ The court held that "[d]ue process mandates that a judicial proceeding give all parties an opportunity to be heard on the critical and decisive allegations which go to the core of the parties' claim or defense and to present evidence on the contested facts."³⁹

B. Short History of the Federal Document Discovery Rules

Four years after the passage of the Rules Enabling Act of 1934, the first Federal Rules of Civil Procedure ("F.R.C.P.") were adopted.⁴⁰ The original procedural rules promoted the resolution of cases on the merits after robust fact-finding. In keeping with this goal and expanding on the English tradition, the early rules permitted liberal discovery.⁴¹ In particular, then — as now — Rules 26 through 37 dealt with discovery.⁴²

In both 1948 and 1970, these discovery rules were substantially amended to adapt to the changing times and to respond to challenges

PEPP. DISP. RESOL. L.J. 337, 372-73 (2015).

³⁷ See Curran, *supra* note 36; see also *In re Extradition of Singh*, 123 F.R.D. 108, 126 (D.N.J. 1987) (holding that "although a litigant has no *general* constitutional right to discovery, there may be circumstances under which *specific* discovery must be afforded as a matter of due process"); Vaughn v. Vaughn, 56 So. 3d 1283, 1287-88 (Miss. Ct. App. 2011); Jimenez v. Brooks, No. LLICV1460113145, 2016 WL 1443594, at *4 (Conn. Super. Ct. Mar. 15, 2016).

³⁸ Bankers Trust Co. v. Bethlehem Steel Corp., 752 F.2d 874, 889 (3d Cir. 1984).

³⁹ *Id.* at 890 (emphasis omitted).

⁴⁰ Subrin & Main, *The Fourth Era*, *supra* note 9, at 1843.

⁴¹ See Stephen N. Subrin, *Fishing Expeditions Allowed: The Historical Background of the 1938 Federal Discovery Rules*, 39 B.C. L. REV. 691, 710, 716 (1998) [hereinafter *Fishing Expeditions*] (describing the development of procedural rules over time); see also 8 CHARLES ALAN WRIGHT ET AL., FEDERAL PRACTICE & PROCEDURE § 2002 (3d ed. 2017); Brooke D. Coleman, *Recovering Access: Rethinking the Structure of Federal Civil Rulemaking*, 39 N.M. L. REV. 261, 282 (2009) [hereinafter *Recovering Access*]; Edson R. Sunderland, *An Inquiry Concerning the Functions of Procedure in Legal Education*, 21 MICH. L. REV. 372, 381-82 (1923) [hereinafter *Procedure in Legal Education*].

⁴² See WRIGHT ET AL., *supra* note 41.

learned through experience with the rules in practice.⁴³ Of particular importance for this Article, the 1970 amendment made Rule 26 the basic rule governing the scope of all discovery.⁴⁴

In a recent article, Professor Stephen Subrin and Professor Thomas Main identified that federal civil procedure has entered a new era which focuses on constrictive case management rather than full merits determinations, using techniques like heightened pleading standards and more liberal grants of summary judgment.⁴⁵ Indirectly, these practices impact discovery by curtailing cases before trial and, in the case of the heightened pleading standards, before the discovery phase at all.⁴⁶ And even for the cases that survived to discovery, the procedural rules governing document discovery have generally been growing more restrictive since the 1980s.⁴⁷ For example, in 1983, Rule 26's language was changed to remove any suggestion that discovery requests had no limitations.⁴⁸ And, in 2000, the scope of discovery was reduced from any matter "relevant to the subject matter involved in the action" to those "relevant to any party's claim or defense."⁴⁹

Not all of the changes, however, have constricted discovery. For example, in 1980, Rule 26 was amended to entitle counsel to the assistance of the court in discovery planning.⁵⁰ And, in 1993, affirmative initial disclosures and pre-discovery planning conferences were introduced.⁵¹

⁴³ *Id.*

⁴⁴ *Id.* § 2003.

⁴⁵ Subrin & Main, *The Fourth Era*, *supra* note 9, at 1848-49.

⁴⁶ *Id.*

⁴⁷ *Id.* at 1850 (citing Glenn S. Koppel, *Toward a New Federalism in State Civil Justice: Developing a Uniform Code of State Civil Procedure Through a Collaborative Rule-Making Process*, 58 VAND. L. REV. 1167, 1211-12 (2005); Jeffrey W. Stempel, *Politics and Sociology in Federal Civil Rulemaking: Errors of Scope*, 52 ALA. L. REV. 529, 544 (2001)); *see, e.g.*, WRIGHT ET AL., *supra* note 41, § 2003.1 (describing 1983 amendments to Rule 26, charging courts to monitor overuse).

⁴⁸ FED. R. CIV. P. 26(a) advisory committee's note to 1983 amendment; *see also* WRIGHT ET AL., *supra* note 41, § 2003.1; Hiro N. Aragaki, *Constructions of Arbitration's Informalism: Autonomy, Efficiency, and Justice*, 2016 J. DISP. RESOL. 141, 157 n.112 (2016).

⁴⁹ FED. R. CIV. P. 26(b) advisory committee's note to 2000 amendment; Aragaki, *supra* note 48.

⁵⁰ FED. R. CIV. P. 26 advisory committee's note to 1980 amendment; Aragaki, *supra* note 48.

⁵¹ FED. R. CIV. P. 26(a), (f) advisory committee's note to 1993 amendment; William W. Schwarzer, *The Federal Rules, the Adversary Process, and Discovery Reform*, 50 U. PITT. L. REV. 703, 721 (1989).

Two modern changes are most salient to this Article's focus on ESI. First, in 2006, the term "electronically stored information" was added to Rule 26, explicitly bringing in this type of material.⁵² Second, as discussed in greater detail, in 2015, a direct proportionality limitation to discovery was added to Rule 26.⁵³

C. How the Procedural Justice Norms Are Embodied Within the Document Discovery Rules

There is no easy way to measure the procedural justice norms as they play out in the context of civil discovery⁵⁴ and, thus, this discussion starts by laying out some assumptions about how the norms relate to the amount of information shared. Quantity is the logical starting place because it is both the easiest characteristic to identify and it goes to the general nature of most discovery disputes. The majority of discovery disputes turn on whether a party has to produce more information — whether through documents or a deponent.⁵⁵ And the parties often specify the amount of material at issue in their briefing when there are disputes.⁵⁶ Accordingly, even when the quantity cannot be specified with exactness, both the parties and the courts know that a ruling in a discovery dispute generally will probably result in either more or less information.

But, before moving on to a deeper examination of how the quantity of material correlates with the norms, this Article must acknowledge that its general assumption that the quantity of material exchanged positively correlates with the amount of salient information exchanged, is ultimately just a convenient heuristic. Quantity is not synonymous with quality.⁵⁷ The relationship between quantity and

⁵² FED. R. CIV. P. 26(b) advisory committee's note to 2006 amendment.

⁵³ FED. R. CIV. P. 26(b) advisory committee's note to 2015 amendment.

⁵⁴ See, e.g., James S. Kakalik, *Analyzing Discovery Management Policies: Rand Sheds New Light on the Civil Justice Reform Act Evaluation Data*, 1998 JUDGES' J. 22, 27 n.3 ("We also had insufficient data to evaluate methods lawyers use to manage discovery outside the court's purview or to evaluate the quality and appropriateness of discovery on the study cases.").

⁵⁵ See Paula Schaefer, *Attorneys, Document Discovery, and Discipline*, 30 GEO. J. LEGAL ETHICS 1, 8 (2017). There are, of course, the rare occasions in which a discovery dispute goes to issues like the conditions under which certain material may be examined.

⁵⁶ See, e.g., PSEG Power N.Y., Inc. v. Alberici Constructors, Inc., No. 1:05-CV-657, 2007 WL 2687670, at *3 (N.D.N.Y. Sept. 7, 2007).

⁵⁷ See Betsy Barry et al., *The Big ESI: Going from Big to Better in E-Discovery*, 10 I/S: J.L. & POL'Y FOR INFO. SOC'Y 721, 721-22 (2015); see also *In re Citric Acid Litig.*, 996 F. Supp. 951, 956 (N.D. Cal. 1998), *aff'd*, 191 F.3d 1090 (9th Cir. 1999) ("Apparently

quality is particularly variable in our digital world where it is easy to generate a myriad of duplicates.⁵⁸ Additionally, discovery processes that encourage interactive participation of the parties — like early disclosures and planning conferences — may improve accuracy even though the quantity of shared material might decline.⁵⁹ For example, when litigants discuss the contours of the cases early, the exchanged knowledge may permit the parties to better tailor their requests, getting more salient information from a reduced volume.⁶⁰ Such participatory information exchanges also may reduce the cost side of the ledger by discouraging motion practice over disputes.⁶¹

With those caveats, the Article now examines how the quantity of documents or other information-containing material relates to the three procedural justice norms, starting with accuracy. In the scholarly literature and jurisprudence addressing discovery and evidence issues, most scholars and courts assume a positive correlation between the volume of material and accuracy.⁶² In part, this starts with an underlying assumption that the amount of probative information

hoping that quantity will substitute for quality, plaintiffs have submitted voluminous but weak circumstantial evidence that they argue indicates that Cargill was a member of the conspiracy.”); *M&G Polymers USA, LLC v. Carestream Health, Inc.*, No. CIV.A.07C-11-242, 2010 WL 1611042, at *63 (Del. Super. Ct. Apr. 21, 2010), *affd sub nom.* *Carestream Health, Inc. v. M&G Polymers USA, LLC*, 9 A.3d 475 (Del. 2010) (discussing *Qualcomm Inc. v. Broadcom Corp.*, 2010 WL 1335937, at *5-7 (S.D. Cal. Apr. 2, 2010), wherein the court sanctioned Qualcomm for failing to timely produce requested material based on the quality and content of the material, not just the volume).

⁵⁸ See Ronald J. Hedges, *A View from the Bench and the Trenches: A Critical Appraisal of Some Proposed Amendments to the Federal Rules of Civil Procedure*, 227 F.R.D. 123, 123 (2005) (noting “[t]he sheer volume of e-information, which results from the duplication of that information”); Hon. Craig B. Shaffer, *The “Burdens” of Applying Proportionality*, 16 SEDONA CONF. J. 55, 61-62 (2015).

⁵⁹ See Dustin B. Benham, *Proportionality, Pretrial Confidentiality, and Discovery Sharing*, 71 WASH. & LEE L. REV. 2181, 2250-51 (2014).

⁶⁰ *Id.*

⁶¹ *Id.* In the same vein, a shorter discovery period did not result in decreased lawyer satisfaction, suggesting that it did not negatively impact the amount of important information exchanged. See Daniel Klerman, *The Economics of Civil Procedure*, 11 ANN. REV. L. & SOC. SCI. 353, 366 (2015) (describing study results).

⁶² See, e.g., Bruce L. Hay, *Civil Discovery: Its Effects and Optimal Scope*, 23 J. LEGAL STUD. 481, 498 (1994) (“Discovery adds to the accuracy of outcomes not only by eliminating surprises about the evidence but also by expanding the quantity of evidence.”); cf. *Aviva Sports, Inc. v. Fingerhut Direct Mktg., Inc.*, Civ. No. 09-1091 (JNE/JSM), 2012 WL 12894846, at *3 (D. Minn. May 11, 2012) (describing a production that turned discovery into “an exercise of looking for a needle in a haystack”). *But see* Barry et al., *supra* note 57, at 721-22.

correlates with volume.⁶³ It further follows from the idea that accuracy is best served when a decision-maker — such as a court — has perfect information.⁶⁴ Presumably, if a decision-maker had access to all of the information-containing materials, it would have this perfect information. And, while this is not feasible, the relationship between the amount of material and important information still should hold.⁶⁵ First, when a decision-maker has access to more material, there are fewer opportunities for key information to remain concealed or otherwise undisclosed.⁶⁶ Second, the volume of information itself might have some probative value, providing important context to the more salient pieces of data.⁶⁷

In litigation settings, the quantity of information available likewise is generally assumed to promote the participation norm.⁶⁸ First, “the exchange of facts is both an expression of and a prerequisite for voice and information gathering.”⁶⁹ Second, robust discovery gives the parties information about what is really at issue, enabling them to better tailor their story to speak most directly to the legal question.⁷⁰

⁶³ See C. Frederick Beckner III & Steven C. Salop, *Decision Theory and Antitrust Rules*, 67 ANTITRUST L.J. 41, 49 (1999); Hay, *supra* note 62, at 497-98.

⁶⁴ See Beckner & Salop, *supra* note 63, at 49.

⁶⁵ See *id.*; see also Hay, *supra* note 62, at 498.

⁶⁶ See Hay, *supra* note 62, at 497.

⁶⁷ See *id.*; see also Peter M. Shane, *Foreword: Big Data Future and the First Decade of an Interdisciplinary Journal*, 10 I/S: J.L. & POL'Y FOR INFO. SOC'Y 671, 677-78 (2015).

⁶⁸ See MICHAEL D. BAYLES, *PROCEDURAL JUSTICE: ALLOCATING TO INDIVIDUALS* 40 (1990) (“The common-law principle of an opportunity to be heard has typically been taken to include rights . . . to pre-hearing discovery. . . .”); see, e.g., Susan G. Clark, *Judicial Review and the Admission of “Additional Evidence” Under the IDEIA: An Unusual Mixture of Discretion and Deference*, 201 Ed. L. Rep. 823, 825 (West) (Nov. 17, 2005) (describing how the IDEIA disclosure requirements give parents the ability to meaningfully participate in the adjudicative process).

⁶⁹ Endo, *supra* note 2, at 831; see also Rebecca Hollander-Blumoff, *The Psychology of Procedural Justice in the Federal Courts*, 63 HASTINGS L.J. 127, 155 (2011) (explaining that “[r]estrictive discovery rules” cause “individuals’ perceptions about their opportunity for voice in litigation” to diminish). Even when courts deny discovery requests, they frequently acknowledge that a certain amount of information sharing is necessary to give litigants a voice in the proceedings. See, e.g., *United States v. Everglades Coll., Inc.*, 855 F.3d 1279, 1291-92 (11th Cir. 2017); *United States v. Ingrassia*, No. CR-04-0455ADSJO, 2005 WL 2875220, at *17 (E.D.N.Y. Sept. 7, 2005) (“The [CVRA] no more requires disclosure of the pre-sentence report to meet its remedial goal of giving crime victims a voice in sentencing than it does disclosure of all discovery in a criminal case to promote the goal of giving victims a voice at plea proceedings.”).

⁷⁰ See Ronald J. Allen & Sarah A. Jehl, *Burdens of Persuasion in Civil Cases: Algorithms v. Explanations*, 2003 MICH. ST. L. REV. 893, 936-37 (2003); see also Benham, *supra* note 59, at 2250-51.

Third, promoting greater exchange of material can encourage the parties to engage in more robust dialogue, rather than stonewalling.⁷¹

The quantity of material and economic efficiency has the most direct relationship in document discovery.⁷² In most cases, the document discovery production costs are positively correlated with the amount of material and the probative value of additional information is likely to decline at the margins.⁷³ To illustrate the sorts of costs, in a class action, a computer search resulted in 493 gigabytes of information, which equaled about 15 million pages that would cost approximately \$10 million to produce.⁷⁴ But, even here, the relationship is not uniform, particularly in cases in which the main discovery costs of producing certain types of ESI come from accessing older legacy technologies.⁷⁵

Given the above, this Article generally assumes that accuracy and participation are enhanced while (economic) efficiency is harmed when discovery processes provide for more, rather than less, production of materials.⁷⁶ And, with these assumptions, it is easy to see how the procedural justice norms play out in document discovery at a high level. Both reasoned decision-making by the court and a meaningful voice by the parties rely on having sufficient information.⁷⁷ As noted above, the discovery rules were promulgated to ensure that each party — and, ultimately, the court — has the information necessary to judge the case.⁷⁸ At the same time, perfect accuracy and participation may come at too great a cost.⁷⁹ And, thus, processes that

⁷¹ See Erica G. Franklin, *Waiving Prosecutorial Disclosure in the Guilty Plea Process: A Debate on the Merits of “Discovery” Waivers*, 51 STAN. L. REV. 567, 587-88 (1999) (describing this phenomenon in the criminal context).

⁷² See Beckner & Salop, *supra* note 63, at 49; John H. Beisner, *Discovering a Better Way: The Need for Effective Civil Litigation Reform*, 60 DUKE L.J. 547, 563 (2010); Cooter & Rubinfeld, *supra* note 34, at 449. The concrete costs of electronic production are further discussed in Part III.B.

⁷³ See Geoffrey P. Miller, *On the Costs of Civil Justice*, 80 TEX. L. REV. 2115, 2118 (2002) [hereinafter *On the Costs*].

⁷⁴ *John B. v. Goetz*, 879 F. Supp. 2d 787, 882 (M.D. Tenn. 2010).

⁷⁵ See Moss, *supra* note 34, at 942.

⁷⁶ See, e.g., Bruce A. Green, *Prosecutors and Professional Regulation*, 25 GEO. J. LEGAL ETHICS 873, 883-85 (2012) (describing the tensions surrounding a prosecutor's discovery obligations in the criminal context). See generally FED. R. CIV. P. 1; Subrin, *Fishing Expeditions*, *supra* note 41, at 716 (describing the early rationale behind expanded discovery).

⁷⁷ See Beckner & Salop, *supra* note 63, at 49.

⁷⁸ See *supra* Part II.B.

⁷⁹ See Miller, *On the Costs*, *supra* note 73, at 2118; Solum, *supra* note 20, at 185.

consider costs bring in the efficiency norm to protect the system from toppling under its own weight.

Looking more closely at particular rules, Rule 1 of the F.R.C.P states the code's broad purpose is "to secure the just, speedy, and inexpensive determination of every action and proceeding."⁸⁰ This "controlling" rule provides a lens through which to interpret the other rules.⁸¹ And, in the context of discovery, Rule 1 itself encourages the exchange of information necessary for the parties to present their claims or defenses, prevent unfair surprises, and to avoid unnecessarily long processes.⁸² Moreover, the primary position of the term "just" implies a concern that goes beyond the tactical elements of winning a case. This broader reading is consistent with the history of the procedural rules, which privileged giving parties a chance to be heard.⁸³

Rule 26 and Rule 34 directly govern document discovery. Rule 26(b)(1)'s definition of the scope of discovery, as amended in 2015, reads as follows:

Unless otherwise limited by court order, the scope of discovery is as follows: Parties may obtain discovery regarding any nonprivileged matter that is relevant to any party's claim or defense and proportional to the needs of the case, considering the importance of the issues at stake in the action, the amount in controversy, the parties' relative access to relevant information, the parties' resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery outweighs its likely benefit.

⁸⁰ FED. R. CIV. P. 1.

⁸¹ See Steven S. Gensler & Lee H. Rosenthal, *Managing Summary Judgment*, 43 LOY. U. CHI. L.J. 517, 519-20 (2012). See generally Robert G. Bone, *Improving Rule 1: A Master Rule for the Federal Rules*, 87 DENV. U. L. REV. 287 (2010) (describing how Rule 1 can affect the way other Rules are interpreted and applied).

⁸² See *Herbert v. Lando*, 441 U.S. 153, 177 (1979) (describing the goal as "adequately informing the litigants in civil trials"); JAY E. GRENIG & JEFFREY S. KINSLER, HANDBOOK OF FEDERAL CIVIL DISCOVERY AND DISCLOSURE § 9:2 (3d ed. 2010); John S. Beckerman, *Confronting Civil Discovery's Fatal Flaws*, 84 MINN. L. REV. 505, 534-35 (2000); Subrin, *Fishing Expeditions*, *supra* note 41, at 716.

⁸³ See Coleman, *The Efficiency Norm*, *supra* note 31, at 1811-12; Coleman, *Recovering Access*, *supra* note 41, at 282; Edson R. Sunderland, *Procedure in Legal Education*, *supra* note 41, at 381-82. See generally Subrin, *Fishing Expeditions*, *supra* note 41, at 710, 716 (describing the history of the procedural rules).

Information within this scope of discovery need not be admissible in evidence to be discoverable.⁸⁴

The new text of Rule 26(b)(1) directly embeds a proportionality requirement into the definition of the scope of discovery. The factors that go into the proportionality requirement include cost. And the standard reading of the revised rule is that the proportionality requirement then turns into a question of economic efficiency.⁸⁵

Likewise, Rule 26(b)(2)(B) explicitly states that a party does not have to “provide discovery of electronically stored information from sources that the party identifies as not reasonably accessible because of undue burden or cost” unless a court orders the production based on a finding of good cause.⁸⁶ This balancing again goes to a notion of efficiency.

Rule 26(f) requires the parties to confer at least twenty-one days before a scheduling conference is to be held or a scheduling order is due.⁸⁷ At the discovery conference, the parties are directed to:

[C]onsider the nature and basis of their claims and defenses and the possibilities for promptly settling or resolving the case; make or arrange for the disclosures required by Rule 26(a)(1); discuss any issues about preserving discoverable information; and develop a proposed discovery plan.⁸⁸

Given the required dialogue, the conference is an opportunity for party participation.⁸⁹ And the initial disclosures are understood to increase the overall procedural fairness and the fairness of the outcome.⁹⁰

Rule 34 lays out the process for requests, productions, and objections.⁹¹ This rule’s main limitation on requests stems from its

⁸⁴ FED. R. CIV. P. 26(b)(1).

⁸⁵ Endo, *supra* note 2, at 828; *see also* Henry H. Perritt, Jr., *The Electronic Agency and the Traditional Paradigms of Administrative Law*, 44 ADMIN. L. REV. 79, 89 (1992).

⁸⁶ FED. R. CIV. P. 26(b)(2)(B).

⁸⁷ *Id.* 26(f)(1).

⁸⁸ *Id.* 26(f)(2).

⁸⁹ *See* The Sedona Conference, *Commentary on Protection of Privileged ESI*, 17 SEDONA CONF. J. 95, 168 (2016) (explaining that lawyers must be prepared to discuss and explain their choices related to ESI production). *See generally* Allen & Jehl, *supra* note 70, at 936-37 (explaining that parties divulge their factual and legal theories through discovery); Benham, *supra* note 59, at 2250-51 (explaining the benefits of discovery sharing).

⁹⁰ Thomas E. Willging et al., *An Empirical Study of Discovery and Disclosure Practice Under the 1993 Federal Rule Amendments*, 39 B.C. L. REV. 525, 535 (1998).

⁹¹ FED. R. CIV. P. 34.

reference to Rule 26(b)(1), which defines the scope of discovery.⁹² Rule 34 further requires that requests describe sought items with reasonable particularity.⁹³ It also provides a mechanism for objecting to requests.⁹⁴ In sum, Rule 34 dictates how parties exchange documents and information about the exchanges. This is especially true after the 2015 amendments, which required that any objections to document requests be stated with specificity.⁹⁵ With its focus on information-sharing, Rule 34 appears to primarily serve the accuracy and participation norms.

One additional wrinkle when considering how the norms are operationalized in the document discovery rules is that lawyers — rather than parties — tend to be the main players in the processes.⁹⁶ At the same time, lawyers are dependent on their clients for directions and much of the sought-after information. And sometimes clients may wish to hide information or otherwise act in a recalcitrant way.⁹⁷

II. SYSTEMIC PRESSURES ACTING ON DISCOVERY

An understanding of the impetus for reform efforts provides meaningful context for evaluating their intended or likely effects. To put it another way, if one is going to assess a solution, one must first know the problem. And, as Judge Diane Wood of the U.S. Court of Appeals for the Seventh Circuit explained while serving as the liaison for the Advisory Committee on Civil Rules, calls for discovery reform in the federal system come from a variety of sources, such as congressional acts, Supreme Court decisions, input from judges, academic research, and lessons drawn from other jurisdictions' practices.⁹⁸ But, whatever the source, the general concern animating

⁹² See *id.* 34(a).

⁹³ *Id.* 34(b)(1)(A).

⁹⁴ See *id.* 34(b)(2).

⁹⁵ FED. R. CIV. P. 34(b)(2)(B); *id.* advisory committee's notes to 2015 amendment; Amii N. Castle, *A Comprehensive Overview: 2015 Amendments to the Federal Rules of Civil Procedure*, 64 U. KAN. L. REV. 837, 855 (2016).

⁹⁶ See Sturm, *supra* note 24, 1392 ("Lawyers possess the expertise in the technical rules necessary to conduct discovery, frame legal arguments, and narrow the issues before the court.").

⁹⁷ See Willging et al., *supra* note 90, at 541 (noting that some lawyers identified clients as the source of discovery issues); see also Stephen Ellmann, *Lawyers and Clients*, 34 UCLA L. REV. 717, 741 (1987); Elizabeth G. Thornburg, *Giving the "Haves" a Little More: Considering the 1998 Discovery Proposals*, 52 SMU L. REV. 229, 264-65 (1999).

⁹⁸ ADVISORY COMM. ON CIVIL RULES, AGENDA BOOK 71 (Apr. 10–11, 2014), <http://www.uscourts.gov/file/15486>.

document discovery reform efforts is outsized costs.⁹⁹ While this widely held perception about the prevalence of problematic discovery costs is strongly contested, there are two pressures — finite litigation resources and the expanding universe of ESI — whose confluence is likely to place increasing pressure on the current document discovery system.

A. Finite Litigation Resources

1. Judicial Resources

Since discovery is meant to be managed by the parties, the process has been thought to pose practically no burden on the judiciary.¹⁰⁰ But concern over finite judicial resources may still drive reform efforts because it theoretically could lead to an overtaxed judiciary and costly delays for the parties, particularly given judges' enhanced managerial role over discovery and their own perceptions of burden.¹⁰¹

As seen in the several amendments to the F.R.C.P., there is a structural push towards more judicial management of discovery.¹⁰²

⁹⁹ See, e.g., David A. Green, *The Fallacy of Liberal Discovery: Litigating Employment Discrimination Cases in the E-Discovery Age*, 44 CAP. U. L. REV. 693, 711 (2016) (“On April 29, 2015, the Supreme Court of the United States approved sweeping changes to the Federal Rules of Civil Procedure that will affect e-discovery. The changes were driven, in large part, by the enormous cost associated with discovery, and more specifically, with e-discovery.”). But see Patricia W. Hatamyar Moore, *The Anti-Plaintiff Pending Amendments to the Federal Rules of Civil Procedure and the Pro-Defendant Composition of the Federal Rulemaking Committees*, 83 U. CIN. L. REV. 1083, 1112-13 (2015) [hereinafter *Anti-Plaintiff Pending Amendments*]; Linda S. Mullenix, *Discovery in Disarray: The Pervasive Myth of Pervasive Discovery Abuse and the Consequences for Unfounded Rulemaking*, 46 STAN. L. REV. 1393, 1432 (1994) [hereinafter *Discovery in Disarray*]; Linda S. Mullenix, *Discovery in Disarray: The Pervasive Myth of Pervasive Discovery Abuse: The Sequel*, 39 B.C. L. REV. 683, 683 (1998); Danya Shocair Reda, *The Cost-and-Delay Narrative in Civil Justice Reform: Its Fallacies and Functions*, 90 OR. L. REV. 1085, 1086 (2012).

¹⁰⁰ See, e.g., Janet Cooper Alexander, *Judges' Self-Interest and Procedural Rules: Comment on Macey*, 23 J. LEGAL STUD. 647, 659 (1994) (“Discovery is party-initiated and largely party-controlled. It requires no expenditure of judicial resources except when discovery disputes are brought to the court for resolution.”).

¹⁰¹ See Judith Resnik, *Managerial Judges*, 96 HARV. L. REV. 374, 380 (1982).

¹⁰² See Kenneth J. Withers, *E-Discovery and Combative Legal Culture: Finding a Way Out of Purgatory*, 2009 ANN. AAJ-PAPERS 5 (2009). See generally FED. R. CIV. P. 26(b) advisory committee's notes to 2015 amendment (“The present amendment again reflects the need for continuing and close judicial involvement in the cases that do not yield readily to the ideal of effective party management.”). And, more generally, the move to a more managerial role for judges has been broadly accepted in the academic literature for some time. See, e.g., Steven S. Gensler, *Judicial Case Management: Caught*

For example, starting in 1980 with the addition of subdivision (f) to Federal Rule of Civil Procedure 26, courts could be brought into discovery planning.¹⁰³ Several years later, the power to affirmatively manage discovery processes — including the use of sanctions — was given to judges.¹⁰⁴ Most recently, going directly to limiting costs, a direct proportionality limitation to discovery was added to Federal Rule of Civil Procedure 26 in 2015.¹⁰⁵

Even with the enhanced role of judges, it is unclear that limited judicial resources should be driving document discovery reform efforts. First, federal judges do not appear overly taxed by document discovery in civil litigation.¹⁰⁶ Additionally, magistrate judges may help alleviate any pressure on the Article III judges.¹⁰⁷ As to the impact of finite judicial resources on the parties, an examination of judges' docket reports shows that "extensive discovery involved" is rarely a significant cause for case delays.¹⁰⁸ Despite this data, judges subjectively perceive document discovery as creating a significant drag

in the Crossfire, 60 DUKE L.J. 669, 670-71 (2010); Robert F. Peckham, *The Federal Judge as a Case Manager: The New Role in Guiding a Case from Filing to Disposition*, 69 CALIF. L. REV. 770, 770 (1981); Resnik, *supra* note 101, at 380.

¹⁰³ See FED. R. CIV. P. 26(b), (g) advisory committee's notes to 1983 amendment (noting that "[i]n an appropriate case the court could restrict the number of depositions, interrogatories, or the scope of a production request").

¹⁰⁴ See FED. R. CIV. P. 26(g) advisory committee's notes to 1983 amendment (noting that "encouraging the imposition of sanctions" helps provide "a deterrent to both excessive discovery and evasion"); Aragaki, *supra* note 48, at 157 n.112 (2016).

¹⁰⁵ See FED. R. CIV. P. 26(b) advisory committee's notes to 2015 amendment.

¹⁰⁶ See Moore, *Anti-Plaintiff Pending Amendments*, *supra* note 99, at 1133-34; see also Patricia W. Hatamyar Moore, *The Civil Caseload of the Federal District Courts*, 2015 U. ILL. L. REV. 1177, 1180 (2015). *But see* Beckerman, *supra* note 82, at 508 (noting increase in discovery disputes and written orders addressing them). To make this more concrete, one estimate suggests that judges only spend about fifteen minutes dealing with discovery in civil rights-employment cases that last a bit over twelve hours in total. See FED. JUDICIAL CTR., 2003-2004 DISTRICT COURT CASE-WEIGHTING STUDY APPENDIX Y: FINAL WEIGHTS MATERIAL PRESENTED TO THE STATISTICS SUBCOMMITTEE 9 (2005), <https://www.fjc.gov/sites/default/files/2012/CaseWtsY.pdf>.

¹⁰⁷ Judge Grimm's survey found that eighty-one percent of the district judges refer discovery disputes to magistrate judges for resolution at least some of the time. See Hon. Paul W. Grimm, *Are We Insane? The Quest for Proportionality in the Discovery Rules of the Federal Rules of Civil Procedure*, 36 REV. LITIG. 117, 135 (2017); see also Alexander, *supra* note 100, at 659 ("[D]iscovery disputes are commonly referred to a magistrate judge, relieving the district judge of the necessity of hearing them."). *But see* T. Michael Putnam, *The Utilization of Judges in the Federal District Courts of Alabama*, 28 CUMB. L. REV. 635, 644-45 (1998) (noting that when the author became a magistrate judge in 1987, over ninety percent of his time was devoted to prisoner litigation and that magistrate judges now take on a wider range of matters).

¹⁰⁸ Moore, *Anti-Plaintiff Pending Amendments*, *supra* note 99, at 1138.

on their time, which might fuel the existing narrative about how document discovery is over-consuming finite judicial resources.¹⁰⁹

2. Litigant Resources/Lawyer-Hours

While there is little empirical data about what drives lawyers' choices in their discovery practices,¹¹⁰ there are several trends that explain the common conception that discovery costs must be constrained, namely the general economic pressures on the legal profession and the commodification of tasks like discovery due to alternative staffing decisions and technological tools.¹¹¹

The 2008 recession placed cost-pressures on law firms as the financial markets shuddered, leading institutional clients to demand discounts and introducing fixed-fee engagements.¹¹² As fees go down, discovery may become seen as an expense that must be borne by the attorney and, accordingly, deemphasized.¹¹³ Similarly, billing hourly is correlated with spending more time on discovery so its decline suggests less lawyer-time devoted to discovery.¹¹⁴

In response to these economic pressures, some law firms also have introduced alternative staffing practices, including the use of contract

¹⁰⁹ See, e.g., Richard J. Corbett & Virginia R. Llewellyn, *The Next Discovery Frontier: Preparing for Backup Data Requests*, 21 ACCA DOCKET 116, 128 (2003).

¹¹⁰ See Judith A. McKenna & Elizabeth C. Wiggins, *Empirical Research on Civil Discovery*, 39 B.C. L. REV. 785, 803 (1998) ("Much of the literature on incentives affecting discovery practice is rooted in economic theory. Yet, there is little information about how lawyers actually make discovery decisions.").

¹¹¹ See Benjamin H. Barton, *The Lawyer's Monopoly — What Goes and What Stays*, 82 FORDHAM L. REV. 3067, 3068 (2014) ("[T]he market for legal services is changing radically, and the portion of the market reserved for lawyers is shrinking . . ."); Bernard A. Burk & David McGowan, *Big But Brittle: Economic Perspectives on the Future of the Law Firm in the New Economy*, 2011 COLUM. BUS. L. REV. 1, 4-5 (2011); Nathaniel Vargas Gallegos, *The Solo Lawyer Proportion: Explanations with the "Push & Pull" Factors Endemic in Legal Firm Organization*, 37 J. LEGAL PROF. 25, 49-50 (2012). One can see large firms, like Paul Hastings LLP, offering fee arrangements other than hourly billing such as fixed-fee engagements in which the client pays a set amount for a specific task. See *Alternative Fee Arrangements*, PAUL HASTINGS (2017), <https://www.paulhastings.com/area/litigation/alternative-fee-arrangements>.

¹¹² See Ronald W. Staudt & Andrew P. Medeiros, *Access to Justice and Technology Clinics: A 4% Solution*, 88 CHI.-KENT L. REV. 695, 695-96 (2013).

¹¹³ See EMERY G. LEE III & THOMAS E. WILLGING, LITIGATION COSTS IN CIVIL CASES: MULTIVARIATE ANALYSIS 6 (2010) (explaining how lawyers working on contingency do less discovery).

¹¹⁴ See *id.* (reporting to the Judicial Conference Advisory Committee on Civil Rules); see also George Shepherd, *Failed Experiment: Twombly, Iqbal, and Why Broad Pretrial Discovery Should Be Further Eliminated*, 49 IND. L. REV. 465, 468 (2016).

attorneys and outsourcing.¹¹⁵ The movement from using full-cost associates to lower-cost internal staff or outside agents altogether demonstrates the commodification of this aspect of practice.

Similarly, lawyers have adopted technological tools like predictive coding to help deal with the volume of discovery.¹¹⁶ The introduction of automated tools further calls into question what clients view as a lawyer's work for which they are willing to pay.¹¹⁷

Given these combined economic pressures on discovery practice, concerns related to finite litigant resources — from both the standpoint of clients and lawyers — likely are a chief driver of reform efforts.

B. "Infinite" ESI

The key aspect of ESI is its quantity.¹¹⁸ As computers of all types — from smartphones to laptops — abound, people are constantly generating an immense amount of digital data.¹¹⁹ According to discovery expert Magistrate Judge Andrew Peck: "The amount of digital information that is created every day is staggering, and many companies preserve almost everything."¹²⁰

Within the next five years, it is estimated that the world will have produced 44 zettabytes (44 trillion gigabytes) of data.¹²¹ And each gigabyte can equal tens of thousands of printed pages.¹²² If each

¹¹⁵ See Burk & McGowan, *supra* note 111, at 82; Larry E. Ribstein, *The Death of Big Law*, 2010 WIS. L. REV. 749, 766 (2010).

¹¹⁶ See Burk & McGowan, *supra* note 111, at 81-82; Daniel Martin Katz, *Quantitative Legal Prediction — or — How I Learned to Stop Worrying and Start Preparing for the Data-Driven Future of the Legal Services Industry*, 62 EMORY L.J. 909, 910-12 (2013).

¹¹⁷ See Katz, *supra* note 116, at 910-12.

¹¹⁸ This is, of course, not the only way in which ESI differs from paper information. ESI also frequently has many more sources and forms that might depend on the system that created it; it can be dynamic, which creates preservation issues; it may contain metadata or other less obvious information; and deleting data does not always actually destroy the data. See RONALD J. HEDGES ET AL., *MANAGING DISCOVERY OF ELECTRONIC INFORMATION* 3 (3d ed. 2017), https://www.fjc.gov/sites/default/files/2017/Managing_Discovery_of_Electronic_Information_3d_ed.pdf.

¹¹⁹ See Withers, *December 2006 Amendments*, *supra* note 11, at 174; see also Barry et al., *supra* note 57, at 723 ("Simply put, the information artifacts of our personal and professional lives are now mostly digital . . .").

¹²⁰ Peck, *supra* note 2, at 3.

¹²¹ *The Digital Universe of Opportunities: Rich Data and the Increasing Value of the Internet of Things, Executive Summary*, IDC (Apr. 2014), <http://www.emc.com/leadership/digital-universe/2014iview/executive-summary.htm>.

¹²² Joshua M. Hummel, *What's in the Future for E-Discovery? New Federal Rules and*

gigabyte of the 44 zettabytes only corresponded to a single printed page, the number of pages would still be greater than the number of grains of sand in the world.¹²³

This volume may have profound cost implications in civil discovery. In a 2012 study, production costs on a per gigabyte basis averaged around \$18,000.¹²⁴ And the aggregate costs of e-discovery continue to rise from \$2 billion in 2006 to almost \$3 billion in 2009.¹²⁵ Given these figures, it is easy to understand why concerns about cost drive many recent document discovery reform efforts.

C. Document Discovery Abuse & ESI

The perception that excessive document discovery commonly leads to expensive and lengthy litigation processes is widespread with high-profile commentators like then-Vice President Dan Quayle and current Chief Justice John Roberts calling for reform.¹²⁶ This “cost-and-delay” narrative featured prominently in the 2015 amendment process.¹²⁷ In support of this position, proponents of reform can point to several studies that show lawyers’ dissatisfaction with document discovery. For example, a study conducted by the Federal Judicial Center (“FJC”) found that about twenty-five percent of lawyers think discovery is disproportional.¹²⁸ Likewise, a report prepared for the Conference on Civil Litigation at the Duke University School of Law — a primary

Big Data Will Require Consideration in the Face of Continued Uncertainty, LAW PRAC., Mar.–Apr. 2015, at 52, 56.

¹²³ See Robert Krulwich, *Which Is Greater, the Number of Sand Grains on Earth or Stars in the Sky?*, NPR (Sept. 17, 2012, 10:19 AM), <http://www.npr.org/sections/krulwich/2012/09/17/161096233/which-is-greater-the-number-of-sand-grains-on-earth-or-stars-in-the-sky>.

¹²⁴ NICHOLAS M. PACE & LAURA ZAKARAS, *WHERE THE MONEY GOES: UNDERSTANDING LITIGANT EXPENDITURES FOR PRODUCING ELECTRONIC DISCOVERY* 20 (2012), http://www.rand.org/content/dam/rand/pubs/monographs/2012/RAND_MG1208.pdf.

¹²⁵ John T. Yip, Comment, *Addressing the Costs and Comity Concerns of International E-Discovery*, 87 WASH. L. REV. 595, 595-96 (2012).

¹²⁶ See Adam N. Steinman, *The End of an Era? Federal Civil Procedure After the 2015 Amendments*, 66 EMORY L.J. 1, 3-4 (2016) (describing belief that document discovery frequently leads to excessive costs and delays); see also EMERY G. LEE III & THOMAS E. WILLGING, *ATTORNEY SATISFACTION WITH THE FEDERAL RULES OF CIVIL PROCEDURE 2* (2010) [hereinafter *ATTORNEY SATISFACTION*].

¹²⁷ Steinman, *supra* note 126, at 4 (discussing 2015 amendments); Reda, *supra* note 99, at 1086 (identifying — and coining the term for — the “cost-and-delay narrative”).

¹²⁸ See Suja A. Thomas & Dawson Price, *How Atypical Cases Make Bad Rules: A Commentary on the Rulemaking Process*, 15 NEV. L.J. 1141, 1149 (2015) (discussing report results).

driver of the 2015 amendments — contended that disproportionate e-discovery was a major issue.¹²⁹

But the empirical case about excessive, disproportionate discovery costs is highly contested.¹³⁰ A RAND report concluded that “[e]mpirical research has not produced evidence of widespread abuse of discovery.”¹³¹ Even the FJC report showed that a significant majority of lawyers thought that discovery was proportional in most cases.¹³² Moreover, surveys about dissatisfaction or belief in the prevalence of disproportionate discovery do not prove that it actually is a common issue.¹³³ Moreover, a recent study showed that judges and lawyers do not privilege quick and inexpensive litigation processes above other procedural values like truth-seeking.¹³⁴

Further complicating the cost-and-delay narrative, it appears that only a relatively small number of cases — perhaps ten percent of total cases — involve expensive discovery.¹³⁵ And these cases tend to be complex litigation actions, which also frequently have high stakes.¹³⁶ To make this more concrete, the FJC study acknowledged that not every case involved discovery — the median total discovery cost in cases that involved discovery was \$15,000, and only in the top five percent were costs much higher, approaching \$1 million for

¹²⁹ JUDICIAL CONFERENCE ADVISORY COMM. ON CIVIL RULES & THE COMM. ON RULES OF PRACTICE & PROCEDURE, REPORT TO THE CHIEF JUSTICE OF THE UNITED STATES ON THE 2010 CONFERENCE ON CIVIL LITIGATION 3 (2010), <http://www.uscourts.gov/rules-policies/records-and-archives-rules-committees/special-projects-rules-committees/2010-civil>.

¹³⁰ See Beckerman, *supra* note 82, at 534-35; LEE & WILLGING, ATTORNEY SATISFACTION, *supra* note 126, at 1 (“The statement, ‘Discovery is abused in almost every case,’ elicited more disagreement than agreement from the ACTL fellows and ABA Section plaintiff attorneys, and more agreement than disagreement from NELA members and other ABA Section members.”).

¹³¹ JAMES S. KAKALIK ET AL., RAND INST. FOR CIVIL JUSTICE, DISCOVERY MANAGEMENT: FURTHER ANALYSIS OF THE CIVIL JUSTICE REFORM ACT EVALUATION DATA xv (1998), https://www.rand.org/pubs/monograph_reports/MR941.html.

¹³² See Thomas & Price, *supra* note 128, at 1149.

¹³³ See Mullenix, *Discovery in Disarray*, *supra* note 99, at 1405-06 (describing additional methodological flaws of older surveys).

¹³⁴ Roger Michalski, *The Clash of Procedural Values*, 22 LEWIS & CLARK L. REV. 62, 96 (2018).

¹³⁵ See Stephen N. Subrin & Thomas O. Main, *Braking the Rules: Why State Courts Should Not Replicate Amendments to the Federal Rules of Civil Procedure*, 67 CASE W. RES. L. REV. 501, 520 (2016) [hereinafter *Braking the Rules*].

¹³⁶ See *id.*

defendants.¹³⁷ Accordingly, the one-size-fits-all worries about cost are inapposite.¹³⁸

Just as surveys about discovery dissatisfaction do not definitively confirm the existence of a problem, the conjunction of both finite litigation resources and a virtually infinite universe of ESI does not necessarily mean that there is a great risk of document discovery abuse. Concerns about the overuse or misuse of document discovery long predate the digital age.¹³⁹ And, there is good reason to think that dissatisfaction will continue.¹⁴⁰

But ESI is different. First and most fundamentally, as discussed above, the volume of ESI is unprecedented.¹⁴¹ And part of that volume is because the nature of ESI lends itself to the creation of more material because it is easy to: generate, create variations, duplicate, and store.¹⁴² Additionally, ESI comes with metadata, which both adds to the volume and may require costly expertise to interpret.¹⁴³ Finally, ESI can be stored on legacy systems that can contribute further to the cost.¹⁴⁴

D. Future-Proofing

While document discovery does not clearly present widespread cost-efficiency issues now, one could imagine how the confluence of finite litigation resources and a virtually infinite amount of discoverable material could lead to those problems. To concretize this, imagine a low-level office employee bringing an individual race discrimination suit against his or her employer after being denied a promotion. The monetary stakes might be fairly low — a study of New York City employment discrimination awards showed an average award of about

¹³⁷ JUDICIAL CONFERENCE ADVISORY COMM. ON CIVIL RULES & THE COMM. ON RULES OF PRACTICE & PROCEDURE, *supra* note 129, at 3.

¹³⁸ See Subrin & Main, *Braking the Rules*, *supra* note 135, at 520.

¹³⁹ See *supra* Part II.B.

¹⁴⁰ See generally Emery G. Lee III & Thomas E. Willging, *Defining the Problem of Cost in Federal Civil Litigation*, 60 DUKE L.J. 765, 765-66 (2010) [hereinafter *Defining the Problem*] (“We begin with a prediction: At some point in the relatively near future, the 2010 Civil Litigation Review Conference (Duke Conference) will be labeled a failure.”).

¹⁴¹ See THE SEDONA PRINCIPLES: BEST PRACTICES RECOMMENDATIONS & PRINCIPLES FOR ADDRESSING ELECTRONIC DOCUMENT PRODUCTION 3 (The Sedona Conference Working Grp. ed., 2d ed. 2007).

¹⁴² *Id.* at 3-5.

¹⁴³ *Id.* at 3, 5-7.

¹⁴⁴ See *id.* at 3.

\$90,000¹⁴⁵ — and the discovery costs could be high if the information that might show a discriminatory intent might be found in a large number of emails and human resources documents that are dispersed across the company.¹⁴⁶ For example, the average corporate worker sends or receives more than 100 emails per day,¹⁴⁷ which means three supervisors' emails alone create a world of more than 100,000 documents over a year. If the relevant time period was five years, this implies a minimum discovery production cost of \$90,000 — the same amount as the average award.¹⁴⁸

Moreover, as Judge Wood pointed out to the Civil Rules Committee, some sorts of problems may change more quickly than the rulemaking process can address them.¹⁴⁹ The growth of ESI appears to present exactly that challenge. The technological elements — both in its creation and in its use in judicial proceedings — are in constant flux, creating a risk of rule obsolescence.¹⁵⁰ Accordingly, to avoid being merely a stop-gap measure, document discovery reform efforts should be designed to address likely future conditions. This practice of future-proofing — that is, crafting law to remain applicable despite potential changes in outside conditions over time — contributes to stability in the procedural rules and doctrines that lends itself to a more uniform and certain system.¹⁵¹ The taxonomy presented below should help make these assessments.

¹⁴⁵ D. Hardison Wood & David Mark Leon, *Measuring Value in Mediation: A Case Study of Workplace Mediation in City Government*, 21 OHIO ST. J. ON DISP. RESOL. 383, 396 (2006) (noting that New York City paid about \$90,000 per claim on average for employment discrimination verdicts).

¹⁴⁶ See Kevin E. Davis & Helen Hershkoff, *Contracting for Procedure*, 53 WM. & MARY L. REV. 507, 545 (2011); Hay, *supra* note 62, at 483-84.

¹⁴⁷ Harrison M. Brown, Comment, *Searching for an Answer: Defensible E-Discovery Search Techniques in the Absence of Judicial Voice*, 16 CHAP. L. REV. 407, 411 (2013).

¹⁴⁸ See PACE & ZAKARAS, *supra* note 124, at 20 (giving cost of producing one gigabyte as \$18,000); LEXIS-NEXIS, HOW MANY PAGES IN A GIGABYTE, https://www.lexisnexis.com/applieddiscovery/lawlibrary/whitePapers/ADI_FS_PagesInAGigabyte.pdf (last visited Sept. 24, 2018) (estimating 100,000 email pages per gigabyte).

¹⁴⁹ ADMIN. OFFICE OF THE U.S. COURTS, ADVISORY COMMITTEE ON RULES OF CIVIL PROCEDURE 71 (Apr. 10-11, 2014), <http://www.uscourts.gov/file/15486>.

¹⁵⁰ See *id.*; see also Orin S. Kerr, *A User's Guide to the Stored Communications Act, and a Legislator's Guide to Amending It*, 72 GEO. WASH. L. REV. 1208, 1214 (2004).

¹⁵¹ See Michael Birnhack, *Reverse Engineering Informational Privacy Law*, 15 YALE J.L. & TECH. 24, 38-39 (2012). One example where a concern about future-proofing has already played out is in expert handwriting analyses after *Daubert*. See D. Michael Risinger, *Cases Involving the Reliability of Handwriting Identification Expertise Since the Decision in Daubert*, 43 TULSA L. REV. 477, 526-27 (2007).

III. TAXONOMY OF CURRENT AND PROPOSED DOCUMENT DISCOVERY REFORMS

One way to make sense of the myriad of proposed and implemented document discovery reforms is to undertake a purposive inquiry that asks whether the changes will effectuate the procedural justice norms — accuracy, efficiency, and participation — that appear in *Mathews* and undergird the entire system of civil procedure.¹⁵² But the interplay of finite litigation resources and effectively infinite discoverable material means that any reform will have to make tough normative tradeoffs amongst that set. And any choice, given how different groups — such as judges, lawyers, for-profit corporate litigants, individual litigants, and so forth — rank these norms, will ultimately be a choice about which groups benefit.¹⁵³

Whether due to capture by powerful interest groups or other factors, most recent reforms have privileged a narrow conception of efficiency that focuses on reducing the costs of discovery.¹⁵⁴ But this elevation of cost efficiency should not be a foregone conclusion. An increasingly large group of academics, practitioners, and judges are exploring techniques that consider more than just reducing the volume of discovery to cut costs.¹⁵⁵ The following taxonomy looks at a sample of recently proposed and implemented reforms since 2006 (the formal integration of ESI into the F.R.C.P.), connecting the reforms' treatment of cost and volume of information with the three procedural justice norms.

At the outset, any taxonomy of contemporary efforts to reform document discovery must include its treatment of costs as a primary characteristic. Over the past forty years, virtually all procedural developments have tried to reduce the burden of discovery with a particular concern about the financial costs.¹⁵⁶ This follows from common conceptions of discovery abuse that turns on whether the

¹⁵² See Mulligan & Staszewski, *supra* note 10, at 2194; see also Coleman, *Civil-Izing Federalism*, *supra* note 10, at 310 (applying purposive approach more broadly to recent developments in civil procedure).

¹⁵³ Michalski, *supra* note 134, at 69.

¹⁵⁴ See generally Brooke D. Coleman, *One Percent Procedure*, 91 WASH. L. REV. 1005 (2016). This is discussed in additional detail below.

¹⁵⁵ See *id.* at 1063-71 (describing a technique that involves, for example, altering the structure of institutions that design and promulgate procedure); see also Moore, *Anti-Plaintiff Pending Amendments*, *supra* note 99, at 1111-13; Steinman, *supra* note 126, at 3-4.

¹⁵⁶ See *supra* Part II.B.

cost of complying with a request exceeds the value added to the requesting party's claim.¹⁵⁷

This definition is not uncontested and, in application, is quickly complicated. As Professor Stephen Burbank remarked, "Everyone admits that there has been abuse of the litigation process in federal courts, but in a formless system, abuse may be in the eye of the beholder."¹⁵⁸ Nonetheless, whatever the normative weight or potential practical ambiguities, as a descriptive matter, variants on this economic cost-benefit approach predominate in the academic literature and the discussions by rule-makers.¹⁵⁹

Given this context, it is no surprise that the majority of current and proposed reforms try to lower the costs of discovery, usually focusing on the costs incurred by the responding party. Still, a minority approach shifts the costs between the parties. And still, others seek to privilege substantive equality or other non-pecuniary values over financial costs.

The second characteristic of recent reform efforts is the amount of information drawn into discovery. As discussed above in Section III, the amount of discoverable material has grown exponentially in recent years, leaving traditional lawyering methods unable to keep up. And, thus, the treatment of this new universe of discoverable material is another significant element of document discovery reforms. Many of the most publicized reforms have reduced by costs by limiting discover — that is, lowering the amount of information that comes into the process. Others use technological or tactical innovations to deal with the new volume of information.

From these two factors, as laid out below in Section IV(A)-(C), most recent proposed and implemented reforms fall into three main groups: (A) cost-reducing and information-reducing/information-neutral; (B) cost-reducing and information-neutral/information-positive, and; (C) cost-shifting and information-reducing.

As explained in Section II(C), cost and volume of information act as rough proxies for procedural justice norms. Cost reduction goes to the

¹⁵⁷ See, e.g., Cooter & Rubinfeld, *supra* note 34, at 450; see also Frank H. Easterbrook, *Discovery as Abuse*, 69 B.U. L. REV. 635, 637-38 (1989).

¹⁵⁸ Stephen B. Burbank, *Complex Litigation: Cases and Materials on Advanced Civil Procedure*, 85 MICH. L. REV. 1463, 1478 (1987) (book review).

¹⁵⁹ See, e.g., *Mancia v. Mayflower Textile Servs. Co.*, 253 F.R.D. 354, 362 (D. Md. 2008); Memorandum from Hon. David G. Campbell, Chair, Standing Comm. on Rules of Practice & Procedure, to Hon. Jeffrey S. Sutton, Chair, Advisory Comm. on Fed. Rules of Civil Procedure (June 14, 2014), http://www.uscourts.gov/sites/default/files/st09-2014-add_0.pdf; Moss, *supra* note 34, at 910.

dominant conception of efficiency while volume of information goes to accuracy and participation. And, again, while these relationships are not absolute, they are easy, logical heuristics that permit *ex ante* normative evaluations of proposed reforms.

A. *Cost-Reducing and Information-Reducing/Information-Neutral*

The ascendant set of reforms establishes standardized limits to document discovery requests or productions. In their most extreme form, these reforms simply restrict the scope or amount of discovery for all cases.¹⁶⁰ Capturing the sentiment behind such reforms, Judge Jon O. Newman of the U.S. Court of Appeals for the Second Circuit once said, “I doubt that discovery should be routinely permitted. Where discovery is needed, I doubt that depositions should be permitted beyond two or three, limited to one hour, that interrogatories should be permitted beyond five or ten, and that any but precisely identified documents need be searched for and produced.”¹⁶¹

One significant example of a cost-focused universal limit is the 2015 amendments to Federal Rule of Civil Procedure 26(b), which integrated a requirement that discovery be “proportional to the needs of the case” directly into the definition of its scope.¹⁶² One of the listed factors that go into the proportionality inquiry is financial cost.¹⁶³

The impact of the amendment has yet to be seen.¹⁶⁴ And some scholars argue that the amendment did not actually change the standard as the proportionality requirement already existed in the F.R.C.P.¹⁶⁵ But there are others who construed it as a mechanism for

¹⁶⁰ See, e.g., Shepherd, *supra* note 114, at 468.

¹⁶¹ Jon O. Newman, Comment, *Rethinking Fairness: Perspectives on the Litigation Process*, 94 YALE L.J. 1643, 1650-51 (1985).

¹⁶² FED. R. CIV. P. 26(b)(1); FED. R. CIV. P. 26(b) advisory committee’s note to 2015 amendment.

¹⁶³ FED. R. CIV. P. 26(b) advisory committee’s note to 2015 amendment.

¹⁶⁴ It is still early for empirical research to come out. Moreover, changes frequently do not immediately shift actual practice. See generally Beisner, *supra* note 72, at 578 (describing how the 2000 amendments, like their predecessors, failed to have much impact on judges’ approaches to discovery abuse). But, at least one expert has not seen any real impact. See generally Robert H. Klonoff, *Application of the New “Proportionality” Discovery Rule in Class Actions: Much Ado About Nothing*, 71 VAND. L. REV. 1949 (2018).

¹⁶⁵ See, e.g., Steinman, *supra* note 126, at 4; see also William H. J. Hubbard, *Testing for Change in Procedural Standards, with Application to Bell Atlantic v. Twombly*, 42 J. LEGAL STUD. 35, 43 (2013) (noting disagreement about whether *Twombly* marked a significant change and finding no change in procedural standards).

reducing costs even at the risk of potentially screening out important information. For example, in his 2015 year-end remarks, Chief Justice Roberts seemed to ratify the notion that the reforms were necessary because “in many cases civil litigation has become too expensive, time-consuming, and contentious, inhibiting effective access to the courts.”¹⁶⁶ And this focus on reducing costs without regard to the information lost is further evidenced by the interests groups — primarily, large corporations that are frequently defendants in civil actions and which perceive themselves as facing disproportionate e-discovery costs — who lobbied for its passage.¹⁶⁷

Other more mechanical universal bright-line limits have been adopted. For example, Arizona presumptively limits document discovery requests in civil cases to ten items or distinct categories of items.¹⁶⁸

Utah has a more complex scheme that, absent a showing of a need for “extraordinary discovery,” limits requests for production based on the amount of alleged damages.¹⁶⁹ In a case with damages of \$50,000 or less, each side may only make five requests for production.¹⁷⁰ For cases involving damages between \$50,000 and \$300,000 or non-monetary relief, each side is permitted ten requests for production.¹⁷¹ And in cases with damages of more than \$300,000, each side is permitted twenty.¹⁷² Amendments to Federal Rule of Procedure 26 based on the Utah system have been proposed.¹⁷³

Another bright-line limit involves the use of mandatory stays. Specifically identifying the costs of e-discovery, one professor has

¹⁶⁶ Victor D. Quintanilla, *Human-Centered Civil Justice Design*, 121 PENN ST. L. REV. 745, 783-84 (2017) [hereinafter *Human-Centered*] (quoting CHIEF JUSTICE JOHN G. ROBERTS, JR., 2015 YEAR-END REPORT ON THE FEDERAL JUDICIARY, U.S. SUPREME COURT 4 (2015), <http://www.supremecourt.gov/publicinfo/year-end/2015year-endreport.pdf>).

¹⁶⁷ See Stephen B. Burbank & Sean Farhang, *Federal Court Rulemaking and Litigation Reform: An Institutional Approach*, 15 NEV. L.J. 1559, 1592 (2015) (citing Memorandum from Robert S. Campbell, Jr., to the Members of the Fed. Civil Procedure Comm., Am. Coll. of Trial Lawyers 1, 3 (Sept. 16, 1999)); Stempel, *supra* note 47, at 610-11.

¹⁶⁸ ARIZ. R. CIV. P. 34; see also Quintanilla, *Human-Centered*, *supra* note 166, at 781 (discussing advocacy groups' reliance on Arizona's scheme for federal proposals).

¹⁶⁹ UTAH R. CIV. P. 26(c).

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² *Id.*

¹⁷³ Philip J. Favro & Hon. Derek P. Pullan, *New Utah Rule 26: A Blueprint for Proportionality Under the Federal Rules of Civil Procedure*, 2012 MICH. ST. L. REV. 933, 977-79 (2012).

proposed a mandatory discovery stay during the pendency of a motion to dismiss in civil cases.¹⁷⁴

One variation on these various limits to the amount of discovery is to apply them only in certain types of cases or categories of information. For example, as a default, the Private Securities Litigation Reform Act stays discovery while a motion to dismiss is pending in securities litigation.¹⁷⁵ Likewise, the Federal Circuit has issued a Model Order that streamlines discovery, limiting email production in particular.¹⁷⁶ And some commentators have proposed introducing mandatory delays in that context.¹⁷⁷ Another proposed reform would limit the production of data related to the Internet of Things.¹⁷⁸

The 2015 amendments to Federal Rule of Civil Procedure 26(b)(2) explicitly gave judges the authority, on their own motion, to limit the amount of document discovery in specific cases — a more *ad hoc* version of the categorical limits discussed above — if proportionality concerns so require.¹⁷⁹ Some ways courts do this is by imposing time or money limits on the efforts of producing parties.¹⁸⁰ For example, in a wrongful termination suit, a judge ordered that the defendant only had to spend up to forty hours searching for the requested documents.¹⁸¹ At least one judge on the U.S. District Court for the Southern District of New York has broadened this to a set of categorical limits on e-discovery, presumptively keeping it to ten key

¹⁷⁴ Gideon Mark, *Federal Discovery Stays*, 45 U. MICH. J.L. REFORM 405, 408 (2012).

¹⁷⁵ Private Securities Litigation Reform Act of 1995, 15 U.S.C. § 78u-4(b)(3)(B) (2018); Mark, *supra* note 174, at 408. Another example is the staying of discovery in qualified immunity cases while the threshold question as to whether the alleged conduct does not violate clearly established statutory or constitutional rights of which a reasonable person would have known is considered. See Kevin J. Lynch, *When Staying Discovery Stays Justice: Analyzing Motions to Stay Discovery When a Motion to Dismiss Is Pending*, 47 WAKE FOREST L. REV. 71, 77 (2012) (discussing *Harlow v. Fitzgerald*, 457 U.S. 800 (1982)).

¹⁷⁶ E-DISCOVERY MODEL ORDER 2 (FED. CIRCUIT ADVISORY COUNCIL 2011), http://www.cafc.uscourts.gov/sites/default/files/announcements/Ediscovery_Model_Order.pdf; see also Lance Shapiro, *E-Discovery: Bargaining Bytes for Settlement*, 27 GEO. J. LEGAL ETHICS 887, 894 (2014).

¹⁷⁷ See, e.g., Brian J. Love & James Yoon, *Predictably Expensive: A Critical Look at Patent Litigation in the Eastern District of Texas*, 20 STAN. TECH. L. REV. 1, 5 (2017).

¹⁷⁸ See J. Travis Laster, *A Milder Prescription for the Peppercorn Settlement Problem in Merger Litigation*, 93 TEX. L. REV. 129, 152-58 (2015).

¹⁷⁹ See FED. R. CIV. P. 26(b)(2) advisory committee's note to 2006 amendment.

¹⁸⁰ See Grimm, *supra* note 107, at 171-72.

¹⁸¹ *Marens v. Carrabba's Italian Grill, Inc.*, 196 F.R.D. 35, 39 (D. Md. 2000).

custodians, material created within the five years before lawsuit, and a total of 160 hours in attorney-time.¹⁸²

B. Cost-Reducing and Information-Neutral/Information-Positive

A second set of reforms designed to reduce the costs associated with the effectively infinite amount of potentially discoverable material tries to do so without losing the related information benefits — which presumably also correlate with the accuracy and participation norms — related to the volume. These reforms use tactical or technological innovations, like sampling and predictive coding, appearing to have developed organically in the judicial system in response to both the 2015 amendments and the underlying pressures that led to those rule changes.¹⁸³

1. Sampling and Phasing

Eschewing the hard limits described above, some courts have experimented with sampling and phasing. These techniques both permit courts to manage costs by starting with some pool of information and then making informed judgments based on that initial set.

Sampling is when the producing party only searches a designated portion of the discoverable material.¹⁸⁴ Then, if the results contain a significant amount of responsive documents, the rest of the discoverable material might be searched. For example, in a case involving an allegedly anticompetitive pricing scheme, the district court ordered that discovery begin by looking for material from only a subset of the potential custodians.¹⁸⁵ The parties were also given permission to come back to the court after they analyzed the results of

¹⁸² HON. LORNA G. SCHOFIELD, INDIVIDUAL RULES AND PROCEDURES FOR CIVIL CASES 4-5 (2015), http://www.nysd.uscourts.gov/cases/show.php?db=judge_info&id=1166.

¹⁸³ See, e.g., *Zubulake v. UBS Warburg LLC*, 216 F.R.D. 280, 281-82 (S.D.N.Y. 2003); *McPeck v. Ashcroft*, 202 F.R.D. 31, 34-35 (D.D.C. 2001); see also Grimm, *supra* note 107, at 134-41 (describing results from survey of judges about techniques used to manage costs of discovery); Favro & Pullan, *supra* note 173, at 953 (discussing sampling). As Chief Justice Roberts described in his year-end speech, the 2015 amendments were, in part, designed to “engage judges in early and active case management,” and that appears to be a trend. CHIEF JUSTICE JOHN G. ROBERTS, JR., 2015 YEAR-END REPORT ON THE FEDERAL JUDICIARY, U.S. SUPREME COURT 5 (2015), <https://www.supremecourt.gov/publicinfo/year-end/2015year-endreport.pdf>.

¹⁸⁴ See, e.g., *McPeck*, 202 F.R.D. at 33-35.

¹⁸⁵ See *Kleen Prods. LLC v. Packaging Corp. of Am.*, No. 10 C 5711, 2012 WL 4498465, at *16-17 (N.D. Ill. Sept. 28, 2012).

the initial samples.¹⁸⁶ Another variation is when the initial sample is taken as representative of the remaining body. For example, in a class action dispute, a court ordered that a twenty percent sample of records was sufficient for the parties to present arguments as to whether the defendant's challenged practices and policies were common across the class.¹⁸⁷

Similar to the first use of sampling, other proposals call for phasing discovery, including mandatory phasing for all cases.¹⁸⁸ Discretionary phasing already is a common practice and might involve initially limiting discovery to certain subject areas, time periods, or custodians who are most likely to have relevant information.¹⁸⁹ And, even before the volume of ESI became a pressing discovery issue, courts routinely phased discovery in cases involving a gated inquiry as seen with *Monell* claims or class certification.¹⁹⁰

The proportionality pressures of ESI, however, have led to calls for mandatory phasing.¹⁹¹ Judge Paul Grimm, who sits on the U.S. District Court for the District of Maryland, notably had a standing order in which parties were required to start with only "the facts that are most important to resolving the case, whether by trial, settlement or dispositive motion."¹⁹² Similar considerations have made it into other local rules such as those for the U.S. District Court for the Western District of Pennsylvania.¹⁹³ This can benefit the requesting party by

¹⁸⁶ See *id.*

¹⁸⁷ *Quintana v. Claire's Boutiques, Inc.*, No. 5:13-CV-00368-PSG, 2014 WL 234219, at *2 (N.D. Cal. Jan. 21, 2014).

¹⁸⁸ See, e.g., Michael Thomas Murphy, *Occam's Phaser: Making Proportional Discovery (Finally) Work in Litigation by Requiring Phased Discovery*, 4 STAN. J. COMPLEX LITIG. 89, 106 (2016) [hereinafter *Occam's Phaser*] ("What this Article proposes is that, in many cases, judges should be *required* to create scheduling orders to require the parties to 'phase' discovery.").

¹⁸⁹ See, e.g., *Lifetime Prods., Inc. v. Russell Brands, LLC*, No. 1:12-CV-00026-DN-EJF, 2013 WL 12131594, at *2 (D. Utah June 26, 2013) (phasing email discovery to start with fifteen custodians most likely to have material information).

¹⁹⁰ See, e.g., *In re Zurn Pex Plumbing Prods. Liab. Litig.*, 644 F.3d 604, 609 (8th Cir. 2011) (noting that the district court phased discovery in a class action, starting with only class certification issues); *Wilson v. Town of Mendon*, 294 F.3d 1, 7 n.15 (1st Cir. 2002) ("In phasing the trial of the case, the court will ordinarily phase discovery as well. Reopening discovery on a plaintiff's municipal liability claims remains an option in the unlikely event that the municipality chooses not to satisfy an adverse phase one judgment.").

¹⁹¹ See, e.g., Murphy, *Occam's Phaser*, *supra* note 188, at 91-93, 106.

¹⁹² *Id.* at 112.

¹⁹³ See W.D. PA. LOCAL CIV. CT. R. 26.2(C).

quickly getting them the most relevant information and by avoiding overproduction issues.¹⁹⁴

Another proposed reform calls for delaying discovery until after summary judgment when the discovery dispute involves a close call about a costly process.¹⁹⁵ This proposal contends that courts should consider the chances that the plaintiff will prevail at trial when assessing the benefits of discovery.¹⁹⁶ And, thus, the suggestion moves difficult discovery issues to a stage in the litigation in which the judge has more information without creating an inflexible hard stop.¹⁹⁷

An almost mirror proposal is to permit limited pre-suit or pre-dismissal discovery to counteract potential information asymmetries and over-screening.¹⁹⁸ The early sharing helps plaintiffs by giving them more information with which to craft their pleadings while also potentially lowering the overall costs to defendants by improving the chances of early settlement or even the abandonment of the suit.¹⁹⁹ Both Texas and Florida have experimented with this sort of discovery, finding that it tends to have these benefits.²⁰⁰

2. Active Judicial Management to Foster Cooperation

Active judicial management to encourage cooperation amongst the parties is another reform technique that is frequently used.²⁰¹ The presentations of both the active judicial management and the cooperation might vary widely across cases but the practices are generally designed to avoid unnecessary disputes — and the associated costs — while still bringing in the information that the parties need to present their case.²⁰²

¹⁹⁴ See Liesa L. Richter, *Making Horses Drink: Conceptual Change Theory and Federal Rule of Evidence 502*, 81 *FORDHAM L. REV.* 1669, 1691 (2013) (“Should a requesting party voice legitimate concerns about ESI dumping, the trial judge can utilize phased discovery to require targeted and sequential productions that are manageable.”).

¹⁹⁵ Moss, *supra* note 34, at 926.

¹⁹⁶ *Id.* at 911.

¹⁹⁷ See *id.* at 926-28.

¹⁹⁸ See Scott Dodson, *New Pleading, New Discovery*, 109 *MICH. L. REV.* 53, 69-72 (2010) (proposing this sort of limited discovery in the wake of *Twombly* and *Iqbal*).

¹⁹⁹ *Id.* at 73-74.

²⁰⁰ See *id.* at 74-75.

²⁰¹ See, e.g., *Kleen Prods. LLC v. Packaging Corp. of Am.*, No. 10 C 5711, 2012 WL 4498465, at *16-17 (N.D. Ill. Sept. 28, 2012); see also Favro & Pullan, *supra* note 173, at 953; K. Alex Khoury, *Electronic Discovery*, 68 *MERCER L. REV.* 971, 980 (2017) (“[C]ourts are taking seriously the commitment to cooperation.”).

²⁰² See The Sedona Conference, *The Case for Cooperation*, 10 *SEDONA CONF. J.* 339,

In this context, the term “cooperation” refers to inter-party behavior that promotes information sharing and discourages waste.²⁰³ Two concrete examples are when parties share information about production decisions or affirmatively circumscribe requests.²⁰⁴

As described in more detail below, the increased active judicial management might take the form of increased use of sanctions, closer supervision of discovery processes, a push for the use of alternative dispute resolution mechanisms to address ESI-related discovery issues, the promotion of technological aids, or more formal rule changes.²⁰⁵

339 (2009) [hereinafter *The Case for Cooperation*].

²⁰³ The Sedona Conference defines cooperation as follows:

Cooperation in this context is best understood as a two-tiered concept. First, there is a level of cooperation as defined by the Federal Rules, ethical considerations and common law. At this level, cooperation requires honesty and good faith by the opposing parties. Parties must refrain from engaging in abusive discovery practices. The parties need not agree on issues, but must make a good faith effort to resolve their disagreements. If they cannot resolve their differences, they must take defensible positions.

Then, there is the second level. While not required, this enhanced cooperative level offers advantages to the parties. At this level, the parties work together to develop, test and agree upon the nature of the information being sought. They will jointly explore the best method of solving discovery problems, especially those involving electronically stored information (“ESI”). The parties jointly address questions of burden and proportionality, seeking to narrow discovery requests and preservation requirements as much as reasonable. At this level, cooperation allows the parties to save money, maintain greater control over the dispersal of information, maintain goodwill with courts, and generally get to the litigation’s merits at the earliest practicable time.

Id.

²⁰⁴ *See id.*

²⁰⁵ *See* Daniel C. Girard & Todd I. Espinosa, *Limiting Evasive Discovery: A Proposal for Three Cost-Saving Amendments to the Federal Rules*, 87 DENV. U. L. REV. 473, 483 (2010) (proposing an amendment to Rule 34 to prevent the use of boilerplate objections); Grimm, *supra* note 107, at 132-33, 177-78 (discussing the advantages of early meetings with the litigants); David R. Hague, *Fraud on the Court and Abusive Discovery*, 16 NEV. L.J. 707, 730 (2016) (arguing that abusive discovery conduct can be considered a sanctionable fraud on the court); Marian Riedy et. al., *Mediated Investigative E-Discovery*, 4 FED. CTS. L. REV. 79, 91-92 (2010) (discussing ESI mediation); Schaefer, *supra* note 55, at 6-7 (proposing an invigorated judge-enforced discipline system for document discovery abuse).

a. *Sanctions*

In defining the pressures of ESI on discovery, one frequent refrain is that judges need to do more to rein in lawyers' abusive conduct.²⁰⁶ Even judges have commented, "[L]itigators and trial lawyers do not deserve all the blame for obstructionist discovery conduct because judges so often ignore this conduct, and by doing so we reinforce — even *incentivize* — obstructionist tactics."²⁰⁷ And, thus, one set of proposed solutions focuses on the use of sanctions to reduce the amount of gamesmanship in ESI discovery. In these schemes, judges are encouraged to use sanctions when attorneys mislead an opposing party or do not perform a duty owed to an opposing party such as filing frivolous discovery requests, not being transparent in their objections, or permitting the spoliation of evidence.²⁰⁸

b. *Informal Guidance and Close Supervision of Discovery Processes*

While sanctions are a stick that courts often are reluctant to use, courts have many other tools to promote cooperation as part of their case supervision. For example, some courts provide informal guidance about the appropriate contours of document discovery requests or permit parties to use informal methods (e.g., joint letters) to raise such discovery issues.²⁰⁹ Courts also encourage the parties to cooperate by

²⁰⁶ See, e.g., Girard & Espinosa, *supra* note 205, at 483 ("The reluctance of courts to impose sanctions under Rule 37 has encouraged the use of evasive and dilatory behavior in response to discovery requests."); cf. AM. COLL. OF TRIAL LAWYERS & INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS., INTERIM REPORT ON THE JOINT PROJECT OF THE AMERICAN COLLEGE OF TRIAL LAWYERS TASK FORCE ON DISCOVERY AND THE INSTITUTE FOR THE ADVANCEMENT OF THE AMERICAN LEGAL SYSTEM A-4 (2008) (reporting about eighty-six percent of respondents who say that discovery sanctions are seldom imposed); Dan H. Willoughby, Jr., et al., *Sanctions for E-Discovery Violations: By the Numbers*, 60 DUKE L.J. 789, 790 (2010) (identifying "230 sanction awards in 401 cases involving motions for sanctions relating to the discovery of electronically stored information (ESI) in federal courts prior to January 1, 2010").

²⁰⁷ *Sec. Nat'l Bank v. Abbott Labs.*, 299 F.R.D. 595, 597 (N.D. Iowa 2014), *rev'd sub nom.* *Sec. Nat'l Bank v. Jones Day*, 800 F.3d 936 (8th Cir. 2015).

²⁰⁸ See Schaefer, *supra* note 55, at 26; see also John E. Motylinski, *E-Discovery Realpolitik: Why Rule 37(e) Must Embrace Sanctions*, 2015 U. ILL. L. REV. 1605, 1643 (2015) (arguing for the application of sanctions if parties refuse to confer and attempt to resolve issues related to lost ESI in good faith).

²⁰⁹ See Grimm, *supra* note 107, at 145 & n.71, 146 & nn.72-73 (citing *Teck Metals, Ltd. v. London Mkt. Ins.*, No. CV-05-411, 2010 WL 4813807, at *2, *4-9 (E.D. Wa. Aug. 25, 2010) (resolving document discovery dispute with an order for the parties to meet and confer while considering the judge's suggestions about how to address the raised issues), *Eisai Inc. v. Sanofi-Aventis U.S., LLC*, No. 08-4168, 2012 WL 1299379, at *1 (D.N.J. Apr. 16, 2012) (permitting the use of informal letters), and other cases);

offering direct exhortations.²¹⁰ Additionally, they may educate the parties about the benefits of cooperation and provide examples or other instructional material to help effectuate that behavior.²¹¹ While any of these techniques might help in the specific moment, more active supervision of discovery by the court also can act as a prophylactic against unproductive gamesmanship or actual misconduct.²¹²

c. ESI Alternative Dispute Resolution Mechanisms

Parties may also be encouraged to mediate document discovery disputes.²¹³ Even if parties in a dispute do not agree to mediation, a court might appoint a special master under Rule 53.²¹⁴ This type of less litigious approach should reduce the costs of dispute by forgoing costly motion practice.²¹⁵

The use of an alternative dispute resolution process alternatively might take the form of outsourcing the discovery to a neutral third-party who takes on both the role of investigator and mediator.²¹⁶ In

see also Hon. James G. Carr, *Fixing Discovery: The Judge's Job*, 38 LITIG., Summer/Fall 2012, at 6, 6 (“[W]hat is needed to repair our current system — overly costly as it is in both money and delay — is a willingness of judges to adjudicate discovery disputes informally and promptly.”).

²¹⁰ Grimm, *supra* note 107, at 149-50 & n.86 (citing *Thompson v. C. & H. Sugar Co.*, No. 12-CV-00391, 2014 WL 595911, at *5-6 (N.D. Cal. Feb. 14, 2014)).

²¹¹ *Id.* at 150 & nn.86 & 89 (citing *Mancia v. Mayflower Textile Servs. Co.*, 253 F.R.D. 354, 357-61, 364-65 (D. Md. 2008), *Tamburo v. Dworkin*, No. 04 C 3317, 2010 WL 4867346, at *3 (N.D. Ill. Nov. 17, 2010), and other cases).

²¹² *See id.* at 147 (“Lawyers are less likely to initiate disproportionate discovery or engage in discovery misconduct when they know the judge is watching and willing to be contacted as soon as a problem arises.”). And this translates into fewer filed discovery motions, enhancing the efficiency of the process. *Id.* at 147-48.

²¹³ *See* Lawrence H. Kolin, *Mediate ESI Issues Early and Get Back to the Merits of Your Case*, AM. B. ASS'N, https://www.americanbar.org/content/dam/aba/events/dispute_resolution/Newsletter%20articles/Kolin.authcheckdam.pdf (last visited Sept. 25, 2018); *see also* Steven C. Bennett, *Mediation as a Means to Improve Cooperation in E-Discovery*, 24 ALB. L.J. SCI. & TECH. 233, 236 (2014); Lela P. Love & Brian Farkas, *Silver Linings: Reimagining the Role of ADR Education in the Wake of the Great Recession*, 6 NE. U. L.J. 221, 238 (2013) (recognizing growing use of neutrals for ESI disputes).

²¹⁴ *See* Allison O. Skinner, *Alternative Dispute Resolution Expands into Pre-Trial Practice: An Introduction to the Role of E-Neutrals*, 13 CARDOZO J. CONFLICT RESOL. 113, 129 (2011).

²¹⁵ *See id.* at 129-30.

²¹⁶ *See* Riedy et al., *supra* note 205, at 91-92; *see also* Marian Riedy & Nancy Greenwald, *Mediating Discovery Disputes: When “Meet and Confer” Alone Is Not Enough*, 17 CARDOZO J. CONFLICT RESOL. 307, 308 (2016) (“Adapted appropriately to account for the many differences between settling the case and agreeing on discovery issues,

addition to reducing costs by sidestepping the costs involved in formally contesting discovery issues before a court, trained ESI investigator-mediators may help prevent certain issues from coming up at all. For example, if engaged early, the investigator-mediator can prevent the inadvertent destruction of evidence and other preservation concerns.²¹⁷ They also may improve the accuracy of the processes by bringing their technical expertise.²¹⁸ All of these benefits should help with the efficiency of the process.²¹⁹

To further explore the potential benefits of expert neutrals in ESI disputes, as early as 2010, Judge Joy Flowers of the U.S. District Court for the District of Western Pennsylvania created the Electronic Discovery Special Masters program.²²⁰ And parties are agreeing to such processes, even adding agreements to mediate ESI disputes into their joint initial status reports.²²¹

d. Uniform Proportionality Analysis

Recognizing the benefits of standardization in preemptively reducing conflicts, Judge Elizabeth D. Laporte — a magistrate judge for the U.S. District Court for the Northern District of California — and Jonathan M. Redgrave — a law firm partner and the chair emeritus of The Sedona Conference Working Group on Best Practices for Electronic Document Retention and Production — have proposed a set of considerations that provide courts and parties with a framework for considering proportionality issues in discovery (the main battleground of ESI disputes).²²² The framework calls for

however, ADR techniques and, specifically, mediation can be a uniquely efficient and effective means of overcoming and preventing discovery disputes . . .”).

²¹⁷ Riedy et al., *supra* note 205, at 96-97.

²¹⁸ See *id.* at 95-96; see also Daniel B. Garrie & Edwin A. Machuca, *E-Discovery Mediation & the Art of Keyword Search*, 13 CARDOZO J. CONFLICT RESOL. 467, 468-70 (2012).

²¹⁹ See Riedy et al., *supra* note 205, at 97-98.

²²⁰ Jason R. Tashea, *Courts Use Special Masters, Mediation to Help Solve E-Discovery Issues*, ABA J. (Jan. 2016), http://www.abajournal.com/magazine/article/courts_use_special_masters_mediation_to_help_solve_e_discovery_issues.

²²¹ See, e.g., *Leading Logistics, Inc. v. B&B Logistics, Inc.*, No. 1:16-cv-06134, 2016 WL 8608401 (N.D. Ill. Oct. 31, 2016) (“At this point in time, the parties do not anticipate e-discovery disputes. The parties agree that if they should arise, the parties are willing to take the issues to the e-mediation panel.”).

²²² Hon. Elizabeth D. Laporte & Jonathan M. Redgrave, *A Practical Guide to Achieving Proportionality Under New Federal Rule of Civil Procedure 26*, 9 FED. CTS. L. REV. 19, 21 (2015) (describing the approach at a high level and suggesting it might “standardize the approach to proportionality in discovery in the same manner that the factors enumerated in Rule 23(a) have led to a largely standardized approach to class

consideration of the following practices: (1) focusing on the specific discovery at issue; (2) recognizing that proportionality is interrelated with relevance; (3) acknowledging that proportionality can support non-binary decisions; (4) assigning the burdens on non-parties more weight than those on parties; (5) raising discovery scope and proportionality issues early in the litigation and then as necessary throughout the litigation; (6) recognizing that the financial value of the claim should not be the controlling factor; (7) acknowledging that discovery will not be perfect; (8) robustly engaging in arguments without relying on superseded case law, rote recitation of the rules, or unsupported assertions about the burden of production; (9) avoiding academic disputes regarding the burden of proof; and (10) remembering that the proportionality factors also apply to preservation issues.²²³ While Judge Laporte's framework has not yet been adopted wholesale, the identified factors are assessed in a wide variety of cases.²²⁴

3. Rule 34 Amendments and Standardized Discovery Protocols

Beyond the individual case management techniques described above, there also are more system-wide reforms and proposals that promote cooperation. While Rule 26 has long required litigants to disclose, amongst other things, the names of individuals likely to have discoverable information, a new example of a rule-based information-sharing mechanism is the 2015 amendments to Rule 34.

An early call to amend Rule 34 to expressly prohibit the use of boilerplate objections came in 2010.²²⁵ And, in 2015, this call was answered. As discussed earlier, Rule 34 now requires parties to state objections to requests with specificity and to state whether anything is being held on the basis of the objection.²²⁶ This rule change is meant to enhance participation by giving the requesting party and the court more information about the legal and practical issues at stake for the producing party.²²⁷ Additionally, the overall efficiency of the case

certification briefing and decisions”).

²²³ *Id.* at 51.

²²⁴ *See, e.g.,* State v. BP Am. Prod. Co., No. CGC12522063, 2016 WL 6270995, at *1 n.1 (Cal. Super. Ct. Sept. 1, 2016) (citing to Judge Laporte's article and stating that the “factors are summarized in [CAL. CIV. PROC. CODE] § 2019.030(a)”).

²²⁵ *See* Girard & Espinosa, *supra* note 205, at 482-83. In a similar vein, these authors also proposed amending Rule 26(g) to directly prohibit evasive responses. *See id.* at 477-79.

²²⁶ FED. R. CIV. P. 34 advisory committee's note to 2015 amendment.

²²⁷ *See* Girard & Espinosa, *supra* note 205, at 483.

should be improved by reducing the uncertainty about what is at issue in both the case and any discovery disputes.²²⁸ Some, however, view the 2015 amendments as insufficient and suggest enhancing the penalties for continued non-compliance by adding a waiver clause to Rule 34.²²⁹

Another more formal tool for reducing costs and promoting cooperation is standardized discovery for specific case types. Just as some courts have experimented with setting discovery limits for certain types of claims to reduce costs and delays, there have been mirror-like efforts for affirmative discovery disclosures in certain contexts.²³⁰ For example, in 2011, the federal judiciary introduced a pilot program that called for standardized discovery in employment discrimination cases.²³¹ The general concept was explored at the 2010 Duke Conference and employment cases were selected because they appear frequently on federal dockets and there are fairly common types of documents that show up in discovery.²³² The protocols call for the parties to exchange robust initial disclosures within thirty days after the first responsive pleading or motion.²³³ And, the protocols require the affirmative exchange of important information going to the claim.²³⁴ For example, the plaintiff must share all documents related to potential employment and the defendant has to turn over relevant workplace policies and the plaintiff's personnel file.²³⁵ And, while the protocols do not prohibit additional discovery, they appear to do a

²²⁸ See *id.*

²²⁹ See, e.g., Amir Shachmurove, *Policing Boilerplate: Reckoning and Reforming Rule 34's Popular — Yet Problematic — Construction*, 37 N. ILL. U. L. REV. 203, 273-74 (2017).

²³⁰ Compare examples in Part IV.A, with Laura McNabb, *Pilot Project Reduces Delay and Cost in Federal Litigation*, 41 LITIG., Spring 2015, at 55, 56 (describing federal pilot program), and Douglas L. Toering, *Michigan's Business Courts: Experimenting with Efficiency and Enjoying the Results*, 94 MICH. B.J., Nov. 2015, at 38, 39 (describing Macomb County Circuit Court's initial discovery protocols "for disputes involving breach of contract, business organizations (shareholder disputes), employment, and noncompete cases"). Several states also have standardized interrogatories for employment discrimination cases, but that does not really address the ESI volume issue that is the focus of this Article. See Jessica Erickson, *Heightened Procedure*, 102 IOWA L. REV. 61, 79 & n.80 (2016) (noting this pattern and citing California's form interrogatories as an example).

²³¹ See McNabb, *supra* note 230, at 55-56.

²³² *Id.* at 56.

²³³ *Id.*

²³⁴ See *id.*

²³⁵ *Id.*; see also *Mirmina v. Genpact LLC*, No. 3:16CV00614(AWT), 2017 WL 2559733, at *4 (D. Conn. June 13, 2017) (noting application of protocols in case).

good job of anticipating most parties' needs.²³⁶ A 2015 study found that pilot cases saw less motion activity with about half the average number of discovery motions filed in pilot cases as against the average number in comparison cases.²³⁷

4. Technological Tools

Another area of document discovery reform involves the use of technological tools like predictive coding. Predictive coding is a form of technology-assisted review in which supervised machine-learning software is taught to predict the relevance of collected documents for discovery productions.²³⁸ Surveys of legal practitioners, reviews of discovery opinions, and IT-service providers all show increasing use of predictive coding,²³⁹ which can be a cost-effective way of dealing with voluminous ESI.²⁴⁰ In addition to the cost savings, it also has been shown to lead to more accurate results.²⁴¹

Illustrating how these concerns can play out, in a tax case from 2014, a court ordered the use of predictive coding over the requesting party's objections where an expert witness credibly demonstrated that the use of predictive coding would reduce the ESI discovery costs from about \$500,000 to about \$80,000.²⁴² Going directly to the notions of participation and information-sharing, the tax court noted that its decision was, in part, predicated on the producing party's representations that they would work with the requesting party to craft an acceptable protocol.²⁴³

²³⁶ See, e.g., *Torcasio v. New Canaan Bd. of Ed.*, No. 3:15CV00053(AWT), 2016 WL 299009, at *14 (D. Conn. Jan. 25, 2016), *reconsideration denied*, No. 3:15CV00053(AWT), 2016 WL 1275028 (D. Conn. Apr. 1, 2016) (denying a motion to compel because the plaintiff's requests for production were "largely duplicative of mandated disclosures provided in the initial discovery protocol").

²³⁷ EMERY G. LEE III & JASON A. CANTONE, FED. JUDICIAL CTR., REPORT ON PILOT PROJECT REGARDING INITIAL DISCOVERY PROTOCOLS FOR EMPLOYMENT CASES ALLEGING ADVERSE ACTION 1 (2015), <https://www.fjc.gov/sites/default/files/2016/Discovery%20Protocols%20Employment.pdf>.

²³⁸ Endo, *supra* note 2, at 834.

²³⁹ *Id.* at 837-39 (describing reports).

²⁴⁰ See Brown, *supra* note 147.

²⁴¹ See Maura R. Grossman & Gordon V. Cormack, *Technology-Assisted Review in E-Discovery Can Be More Effective and More Efficient than Exhaustive Manual Review*, 17 RICH. J.L. & TECH. 11, 52 (2011).

²⁴² *Dynamo Holdings Ltd. P'ship v. Comm'r*, 143 T.C. 183, 194 (2014).

²⁴³ *Id.* at 192 (contrasting this display of transparency and cooperation with *Progressive Cas. Ins. v. Delaney*, No. 2:11-cv-00678-LRH-PAL, 2014 WL 3563467, at *10-12 (D. Nev. July 18, 2014), where the court denied a request to use predictive

5. Protective Orders

An additional procedural mechanism that can reduce the costs of discovery while promoting more information sharing is the protective order. Rule 26(c) authorizes a court to issue a protective order to prevent “annoyance, embarrassment, oppression, or undue burden or expense.”²⁴⁴ Protective orders are commonly entered into by stipulation rather than contested motion.²⁴⁵ They can reduce the need for intensive screening because they remove the publicity risk of turning over sensitive documents whose relevance or privilege might otherwise be contested.²⁴⁶ Additionally, protective orders can be crafted to permit information sharing with future litigants, creating a system-wide efficiency.²⁴⁷

C. Cost-Shifting and Information-Scalable

A third set of reforms focuses on judicial reallocation of the costs of document discovery involving ESI. Judges have long had the power to shift costs and there are many examples where courts did so in the face of voluminous ESI, even going back more than a decade.²⁴⁸ In a notable case from the U.S. District Court for the Southern District of New York, plaintiffs in a commercial dispute involving allegations of discrimination and anti-competitive practices were forced to bear the costs of producing emails from back-up tapes and hard drives because requests were extremely broad, the back-ups were not ordinarily accessible to the defendants, the costs were high, and the plaintiffs claimed that they could limit the costs of the discovery.²⁴⁹ And there are many proposals to more systemically introduce cost-shifting, usually involving some initial threshold that, once breached, permits

coding).

²⁴⁴ FED. R. CIV. P. 26(c).

²⁴⁵ See *Chi. Tribune Co. v. Bridgestone/Firestone, Inc.*, 263 F.3d 1304, 1307 (11th Cir. 2001) (noting that stipulated protective orders have become commonplace); see also Richard L. Marcus, *Myth and Reality in Protective Order Litigation*, 69 CORNELL L. REV. 1, 2 (1983) (noting that “most protective orders are entered by stipulation rather than on motion”).

²⁴⁶ See Laurie Kratky Dore, *Secrecy by Consent: The Use of Limits of Confidentiality in the Pursuit of Settlement*, 74 NOTRE DAME L. REV. 283, 332 (1999).

²⁴⁷ See Benham, *supra* note 59, at 2182-85.

²⁴⁸ See, e.g., *Rowe Entm't, Inc. v. William Morris Agency, Inc.*, 205 F.R.D. 421, 432 (S.D.N.Y. 2002), *affd*, 2002 U.S. Dist. LEXIS 8308 (S.D.N.Y. 2002); see also *Oppenheimer Fund, Inc. v. Sanders*, 437 U.S. 340, 358 (1978) (noting that Rule 26(c) permits courts to shift discovery costs).

²⁴⁹ *Rowe Entm't, Inc.*, 205 F.R.D. at 423, 428-32.

shifting discovery costs to the losing party.²⁵⁰ As discussed above in Section III, concerns about cost have been the main driver of recent reforms and, thus, cost-shifting proposals focus simply and directly on how this burden is allocated.

The general presumption of discovery is that the responding party bears the costs of production.²⁵¹ And some argue that there is no need to upset this presumption in cases involving voluminous ESI because “if a party chooses an electronic storage method, the necessity for a retrieval program or method is an ordinary and foreseeable risk.”²⁵² Additionally, placing all of the costs on the requesting party, though, may lead litigants without significant resources to abandon meritorious claims simply because they cannot afford the upfront expense of the necessary discovery.²⁵³

On the other hand, the general presumption may have less force in cases involving ESI because of how it differs from paper records. With ESI, a party may decide to retain data because the retention costs are effectively zero, shifting the question from whether the data is worth retaining to whether it is worth discarding it.²⁵⁴ Additionally, as with backup tapes, the retention might only be a safeguard against a catastrophic destruction of the general operations of the organization’s computer systems, not a system for general use.²⁵⁵ Moreover, when a

²⁵⁰ See Steven Baicker-McKee, *The Award of E-Discovery Costs to the Prevailing Party: An Analog Solution in a Digital World*, 63 CLEV. ST. L. REV. 397, 424-25 (2015); Samantha J. Kwartler, *Postjudgment Cost Shifting: Electronic Discovery and 28 U.S.C. § 1920(4)*, 89 ST. JOHN’S L. REV. 1311, 1312 (2015); Karel Mazanec, *Capping E-Discovery Costs: A Hybrid Solution to E-Discovery Abuse*, 56 WM. & MARY L. REV. 631, 654 (2014); see also Laura E. Ellsworth & Robert Pass, *Cost Shifting in Electronic Discovery*, 5 SEDONA CONF. J. 125, 125 (2004); Brian T. Fitzpatrick, *Twombly and Iqbal Reconsidered*, 87 NOTRE DAME L. REV. 1621, 1644-45 (2012); Richard A. Nagareda, *1938 All Over Again? Pretrial as Trial in Complex Litigation*, 60 DEPAUL L. REV. 647, 684-87 (2011); Martin H. Redish & Colleen McNamara, *Back to the Future: Discovery Cost Allocation and Modern Procedural Theory*, 79 GEO. WASH. L. REV. 773, 780 (2011). See generally Edward Pekarek, *The Shifting Tide of ESI Discovery Cost Allocation*, 1899 PLI/CORP 405 (2011) (proposing that cost-shifting frameworks can effectively help resolve discovery disputes regarding inaccessible ESI).

²⁵¹ See, e.g., *Oppenheimer Fund*, 437 U.S. at 358 (“[T]he presumption is that the responding party must bear the expense of complying with discovery requests”); Edward H. Cooper, *Discovery Cost Allocation: Comment on Cooter and Rubinfeld*, 23 J. LEGAL STUD. 465, 466 (1994).

²⁵² *In re Brand Name Prescription Drugs Antitrust Litig.*, Nos. 94 C 897, 1995 WL 360526, at *2 (N.D. Ill. June 15, 1995).

²⁵³ *Rowe Entm’t, Inc.*, 205 F.R.D. at 429.

²⁵⁴ *Id.*

²⁵⁵ *Id.*; see also Kenneth J. Withers, *Computer-Based Discovery in Federal Civil Litigation*, SF97 ALI-ABA 1079, 1085 (2001).

requesting party bears the costs, the requesting party presumably will only ask for documents that satisfy a reasonable cost-benefit analysis.²⁵⁶ And this approach presumably lets the requesting party scale its information requests.

Given these competing factors, many courts have adopted a balancing approach that considers:

- (1) [T]he specificity of the discovery requests;
- (2) the likelihood of discovering critical information;
- (3) the availability of such information from other sources;
- (4) the purposes for which the responding party maintains the requested data
- (5) the relative benefit to the parties of obtaining the information;
- (6) the total cost associated with production;
- (7) the relative ability of each party to control costs and its incentive to do so; and
- (8) the resources available to each party.²⁵⁷

This balancing, however, still tends to lead to a binary result where one party or the other bears the costs of the production.²⁵⁸ Additionally, its application tends to favor the shifting of costs instead of providing a neutral test.²⁵⁹

Recognizing the problems of a binary approach, particularly in a world in which the expense of ESI discovery can quickly approach the value of a claim, Professor Steven Baicker-McKee suggests that, at their discretion, courts may shift these as taxable costs at the end of adjudications under Federal Rule of Civil Procedure 54(d) and its

²⁵⁶ See, e.g., *Rowe Entm't, Inc.*, 205 F.R.D. at 429; see also Marnie H. Pulver, *Electronic Media Discovery: The Economic Benefit of Pay-Per-View*, 21 CARDOZO L. REV. 1379, 1424 (2000).

²⁵⁷ *Rowe Entm't, Inc.*, 205 F.R.D. at 429.

²⁵⁸ See, e.g., *MariCal, Inc. v. Cooke Aquaculture, Inc.*, No. 1:14-CV-00366-JDL, 2016 WL 9459260, at *3 (D. Me. Aug. 9, 2016) (denying the defendants' request that the plaintiffs be ordered to pay for the costs of the search and production of requested ESI); *Ashmore v. Allied Energy, Inc.*, No. 8:14-CV-00227-JMC, 2016 WL 301169, at *2-4 (D.S.C. Jan. 25, 2016) (denying motion seeking to shift costs of copying requested documents). *But see* *Bailey v. Brookdale U. Hosp. Med. Ctr.*, No. CV162195ADSAKT, 2017 WL 2616957, at *5 (E.D.N.Y. June 16, 2017) (allocating forty percent of the costs of the plaintiff's ESI production to the defendants).

²⁵⁹ See *Zubulake v. UBS Warburg LLC*, 217 F.R.D. 309, 320 (S.D.N.Y. 2003) ("But there is little doubt that the *Rowe* factors will generally favor cost-shifting. Indeed, of the handful of reported opinions that apply *Rowe* or some modification thereof, all of them have ordered the cost of discovery to be shifted to the requesting party."). To better keep the presumption that the producing party assumes the costs of discovery, the *Zubulake* court eliminated the *Rowe* test's specificity-of-request and purposes-kept considerations. *Id.* at 321-22.

companion statute, 28 U.S.C. § 1920(4).²⁶⁰ He grounds this suggestion in a detailed analysis of the history of and rationales for cost-switching in the American litigation system.²⁶¹ Particularly saliently, Baicker-McKee describes how courts already can — and do — use Rule 26(c)(1)(B) to shift costs.²⁶² Baicker-McKee lays out the factors that should guide the judges' discretion, listing the nature of the discovery activities, the actual benefits achieved, the parties' efforts to minimize costs, and the merits of the claims and defenses.²⁶³ And, he explains that the process might include discussions at the Rule 26(f) and Rule 16 conferences.²⁶⁴ An interesting wrinkle to Baicker-McKee's proposal is that the timing of the allocation decision (at the close of a case) means that the court should have the best possible insight into the merits of the case and the probative value of the information transferred through the discovery processes.²⁶⁵

In a more radical approach that discards more than seventy years of history and engages in a revitalized first-principles inquiry, Professor Martin Redish and Colleen McNamara argue that the producing party should be able to recover its reasonable discovery costs under a theory of “quantum meruit.”²⁶⁶ First, they explain how the quantum meruit recovery doctrine — which permitted courts to order compensation when the defendant received a benefit at the plaintiff's expense — illustrates the general principle that it would be unjust for a party to retain a benefit without paying compensation when the service was not gratuitously performed.²⁶⁷ Then, mapping document discovery practices to this doctrine, they identify how the producing party incurs direct financial costs related to finding and sharing the documents while the requesting party receives the benefits of potentially helpful information.²⁶⁸ They further support their suggestion by noting that it should improve the overall efficiency of discovery processes by tying costs to decision-control, which should reduce discovery abuse, and by allocating the costs to the lowest-cost

²⁶⁰ Baicker-McKee, *supra* note 250, at 424-26.

²⁶¹ *Id.* at 418-22.

²⁶² *Id.* at 421 & n.166 (citing *Kirschenman v. Auto-Owners Ins.*, 280 F.R.D. 474, 487 (D.S.D. 2012) as an example).

²⁶³ *Id.* at 425.

²⁶⁴ *Id.*

²⁶⁵ *Id.* at 426.

²⁶⁶ Redish & McNamara, *supra* note 250, at 784-91.

²⁶⁷ *Id.* at 784-85.

²⁶⁸ *Id.* at 788-89.

avoider.²⁶⁹ At least one court has implicitly communicated its support for this position.²⁷⁰

D. Case for Cost-Reducing, Information-Neutral/Information-Positive Innovations

One premise of this Article is that the combination of finite litigation resources and virtually infinite discoverable material means that document discovery rules and doctrines will have to make difficult tradeoffs amongst the procedural justice norms of accuracy, efficiency, and participation. But balancing these norms can, at some point, reduce to a values-preference.²⁷¹ And, in the procedure literature, normative prioritizations often go unarticulated, which leads to a regular and fair critique of many solutions that ask courts to make non-pecuniary procedural tradeoffs.²⁷²

The unspoken normative assumptions also may lead to inconsistencies in practice where the court decisions managing ESI discovery issues can seem especially *ad hoc*.²⁷³ For example, in an

²⁶⁹ *Id.* at 796-98.

²⁷⁰ *Boeynaems v. LA Fitness Int'l, LLC*, 285 F.R.D. 331, 338 n.7 (E.D. Pa. 2012) (citing the article after explaining that “[b]ecause of the asymmetrical discovery in the case, the Court informed the parties that it was likely to impose on the plaintiff at least some portion of the expenses associated with its extensive discovery requests”).

²⁷¹ See Bernadette Bollas Genetin, “Just A Bit Outside!”: *Proportionality in Federal Discovery and the Institutional Capacity of the Federal Courts*, 34 REV. LITIG. 655, 689 (2015).

²⁷² See, e.g., LOUIS KAPLOW & STEVEN SHAVELL, *FAIRNESS VERSUS WELFARE* 228 n.6 (2009) (“[F]ew writers on procedure have attempted to elaborate any detailed theory of fairness, and because most who draw on notions of fairness make their points briefly or leave their ideas about fairness implicit.”); Robert G. Bone, *Agreeing to Fair Process: The Problem with Contractarian Theories of Procedural Fairness*, 83 B.U. L. REV. 485, 488-89 (2003) (“[D]iscussions of fairness in civil procedure are, with only a few exceptions, rather thinly developed.”); Davis & Hershkoff, *supra* note 146, at 532 (noting that “the literature does not clearly state what the appropriate criteria of fairness might be”). Moreover, some commentators have questioned whether courts are the institutional body best situated to make these sorts of difficult normative judgment calls. See, e.g., Genetin, *supra* note 271, at 689-92. Both the definitional ambiguity and the institutional competence question may explain why many notions of fairness turn then just on the economic efficiency issue — if nothing else, it is relatively easy to measure and compare. See Davis & Hershkoff, *supra* note 146, at 532-33.

²⁷³ Recall that Rule 26(b)(1)’s proportionality limitation has a number of factors but does not provide any weighting. And, as one scholar has remarked, “Such open-ended, multi-factor tests breed uncertainty and are subject to manipulation.” Jay Tidmarsh, *The Litigation Budget*, 68 VAND. L. REV. 855, 876 (2015); see also Laporte & Redgrave, *supra* note 222, at 21 (“Moreover, the authors further contend that this

important discovery case, *Zubulake v. UBS Warburg LLC (Zubulake III)*, the value of the employment discrimination claim was estimated to be at least \$15 million by the plaintiff and \$1.2 million by the defendant.²⁷⁴ The challenged ESI discovery costs were \$165,000.²⁷⁵ And, while the court found that this was not significantly disproportionate, it still shifted a quarter of the expense to the plaintiff.²⁷⁶ On the other hand, in an employment case involving the non-payment of wages, a different district court ordered ESI discovery, which the defendants estimated would cost about \$150,000 when the amount in controversy was about \$1 million, without any cost-shifting.²⁷⁷

Judge Laporte's tool for evaluating proportionality in discovery, in part, is designed to bring more uniformity to these sorts of evaluations.²⁷⁸ But one element essential to true consistency in document discovery is explicitly prioritizing the procedural justice norms. As Professor Solum explains:

Accuracy, cost, and participation must all play a role in a theory of procedural justice. But if such a theory is to be sufficiently specific to do actual work as a standard against which a system of procedure can be measured, then the relationship between accuracy, cost, and participation must be ordered and articulated.²⁷⁹

This ordering can be theoretically fraught and contentious.²⁸⁰ Some suggest that the ordering should be drawn from observations of practice.²⁸¹ Another variation asks what institutional actors actually

methodology will leave less room in discovery disputes for extended forays into purely ideological debate while providing much needed consistency for courts in understanding and addressing the disputes.”)

²⁷⁴ *Zubulake v. UBS Warburg LLC*, 216 F.R.D. 280, 281, 288 (S.D.N.Y. 2003).

²⁷⁵ *Id.* at 287-88.

²⁷⁶ *Id.* at 291.

²⁷⁷ *Ball v. Manalto, Inc.*, No. C16-1523 RSM, 2017 WL 1788425, at *4 (W.D. Wash. May 5, 2017) (granting motion to compel). The amount in controversy is found in the complaint, and the discovery costs are in the defendant's opposition to the motion to compel.

²⁷⁸ Laporte & Redgrave, *supra* note 222, at 50-51.

²⁷⁹ Solum, *supra* note 20, at 305.

²⁸⁰ See Richard Marcus, *Confessions of a Federal "Bureaucrat": The Possibilities of Perfecting Procedural Reform*, 35 W. ST. U. L. REV. 103, 105 (2007) (“Unless all can agree on how to resolve those basic value choices, the vision of a perfect procedural system is something of a chimera.”).

²⁸¹ See, e.g., Robert G. Bone, *The Process of Making Process: Court Rulemaking, Democratic Legitimacy, and Procedural Efficacy*, 87 GEO. L.J. 887, 940-41 (1999).

prefer.²⁸² An alternative approach focuses on the vindication of individual rights over economic efficiency.²⁸³

But, when considering how these norms play out in document discovery, accuracy and participation should rarely directly conflict and, instead, likely will be positively correlated. At the theoretical level, processes that do not guarantee a reasonable degree of accuracy are likely to impair notice and participation rights.²⁸⁴ At the tactical level, both should be enhanced by greater information transfers and, accordingly, should favor the second category of cost-reducing, information-neutral/information-positive reforms (“CRIN/IPs”).²⁸⁵ And even without putting a thumb on the scale for the accuracy and participation norms, there are a number of reasons to favor these reforms.

First, the cost-reducing, information-reducing/information-neutral reforms (“CRIR/Ins”) might be a solution in search of a problem. In the FJC’s study prepared for the Duke Conference, about ninety percent of attorneys agreed that discovery in the given case yielded just the right amount or too little information, showing general agreement about proportionality.²⁸⁶ Moreover, the FJC study showed that discovery costs were very small relative to the stakes of the case, reaching only about three percent in half of the cases with reported discovery.²⁸⁷

Second, to the extent that over-discovery is a real issue, it is not obvious that the CRIR/INs will solve it.²⁸⁸ To this, attorneys in Arizona (which has implemented one of the CRIRs in its state system) still believe that litigation is too expensive.²⁸⁹

²⁸² See, e.g., Michalski, *supra* note 134, at 35 (noting conflict in prioritization of procedural justice norms across different groups).

²⁸³ See, e.g., Paul Stancil, *Substantive Equality and Procedural Justice*, 102 IOWA L. REV. 1633, 1634 (2017); Stephen N. Subrin, *How Equity Conquered Common Law: The Federal Rules of Civil Procedure in Historical Perspective*, 135 U. PA. L. REV. 909, 974-75 (1987).

²⁸⁴ See Michael S. Pardo, *The Nature and Purpose of Evidence Theory*, 66 VAND. L. REV. 547, 560-61 (2013).

²⁸⁵ See *supra* Part II.C.

²⁸⁶ Moore, *Anti-Plaintiff Pending Amendments*, *supra* note 99, at 1113.

²⁸⁷ *Id.*

²⁸⁸ See Lee & Willging, *Defining the Problem*, *supra* note 140, 765-66.

²⁸⁹ Quintanilla, *Human-Centered*, *supra* note 166, at 781. See generally Lonny Hoffman, *Examining the Empirical Case for Discovery Reform in Texas*, 58 S. TEX. L. REV. 209 (2016) (describing continued call for cost-focused reforms despite history of efforts and lack of empirical support regarding the scope of the problem).

Third, the CRIN/IPs appear to be self-reinforcing. For example, Judge Grimm explained how phasing discovery promotes increased interactions amongst the attorneys, leading to better cooperation.²⁹⁰ This benefit also follows from the use of sampling and the attendant negotiations.²⁹¹

Fourth, just as the CRIN/IPs might create a virtuous cycle of interparty interactions, promoting these reforms might also promote the other two procedural justice norms. The CRIN/IPs tend to bring in more (or better) information, which should improve the accuracy norm.²⁹² And more accurate processes might, ultimately, be more efficient because they avoid unnecessary disputes and additional efforts such as appeals.²⁹³

These reasons, however, do not suggest that CRIN/IPs are always the right answer. With the potential deluge of ESI, many proposals will need to be tried. And their effectiveness likely will vary based on their specific features and the parameters of the particular case. For example, the Federal Circuit has found that, in patent cases, the main disputes tend to be around the patent itself, the products, prior art, and damages.²⁹⁴ It thus concluded that expansive e-discovery, such as mass email productions, is rarely directly helpful.²⁹⁵ This reasoning for a targeted limitation nicely illustrates the potential distinction between the quantity of documents in discovery and the quantity of material information (at least one important measure of quality). Similarly, sampling is probably not the best strategy in cases where the main cost of producing the data is accessing it from an outdated legacy system or when any key evidence is unlikely to be present in a small sample.²⁹⁶

²⁹⁰ Grimm, *supra* note 107, at 153-54.

²⁹¹ *Id.* at 163.

²⁹² See *supra* Part II.C; see also Bone, *Who Decides?*, *supra* note 24, at 2022; Miller, *Confidentiality*, *supra* note 36, at 428; Sturm, *supra* note 24, at 1392; Sedona Conference, *The Case for Cooperation*, *supra* note 202, at 358-59.

²⁹³ See J. Alexander Tanford, *The Limits of a Scientific Jurisprudence: The Supreme Court and Psychology*, 66 *IND. L.J.* 137, 167 (1990) (noting that efficiency favors avoiding more than one proceeding); see also *United States v. Frady*, 456 U.S. 152, 163 (1982) (explaining how plain error rule “reflects a careful balancing of our need to encourage all trial participants to seek a fair and accurate trial *the first time* around against our insistence that obvious injustice be promptly redressed”) (emphasis added).

²⁹⁴ E-DISCOVERY MODEL ORDER 2 (FED. CIRCUIT ADVISORY COUNCIL 2011), http://www.cafc.uscourts.gov/sites/default/files/announcements/Ediscovery_Model_Order.pdf.

²⁹⁵ *Id.*

²⁹⁶ See Moss, *supra* note 34, at 942.

Finally, another factor that should be considered when evaluating whether to use CRIN/IPs or other types of discovery reforms is the purpose of the underlying statute.²⁹⁷ While discovery processes are generally trans-substantive, privileging cost-efficient discovery processes in a high-value contract case might be much less problematic than one involving important civil rights where the pecuniary damages are likely to be small.²⁹⁸

E. Non-Discovery Structural Reforms

It must be acknowledged that the taxonomy above does not include reforms that fundamentally question any foundational elements of the legal profession or current discovery practices. It also does not look beyond reforms that are intrinsically discovery *qua* discovery efforts. But, as briefly sketched out below, other structural changes have been introduced to address the pressures identified in Section III and more might follow.

Most far-reaching, the heightened pleading standards of *Twombly* and *Iqbal* can be understood as a response to the rising costs associated with ESI discovery.²⁹⁹ While there is debate about whether the decisions really changed anything in practice,³⁰⁰ the tightly interwoven relationship between discovery and pleading has been recognized since the early days of the modern rules.³⁰¹ And the two

²⁹⁷ See Stephen B. Burbank, *Proportionality and the Social Benefits of Discovery: Out of Sight and Out of Mind?*, 34 REV. LITIG. 647, 650-51 (2015); Stancil, *supra* note 283, at 1652-53.

²⁹⁸ See generally Stancil, *supra* note 283 (noting that the application of trans-substantive procedural rule to heterogeneous cases fails to promote substantive equality).

²⁹⁹ See, e.g., Blair-Stanek, *supra* note 21, at 4; Fitzpatrick, *supra* note 250, at 1622; see also Jonah B. Gelbach, Note, *Locking the Doors to Discovery? Assessing the Effects of Twombly and Iqbal on Access to Discovery*, 121 YALE L.J. 2270, 2285-86 (2012); Samuel Issacharoff & Geoffrey Miller, *An Information-Forcing Approach to the Motion to Dismiss*, 5 J. LEGAL ANALYSIS 437, 438 (2013); Endo, *supra* note 2, at 832-33; *supra* note 33 and accompanying text.

³⁰⁰ See Fitzpatrick, *supra* note 250, at 1622 (“First, *Twombly* and *Iqbal* may not be nearly as revolutionary as first meets the eye; as a practical matter, lower federal courts long ago elevated pleading standards in the face of the exponential increases in discovery costs faced by corporate defendants.”); see also Hubbard, *supra* note 165, at 35 (finding that “*Twombly* precipitated no significant change in dismissal rates, even after accounting for selection effects”).

³⁰¹ See Richard A. Michael, *The Supreme Court’s New Notice Pleading Requirements: Revolutionary or Evolutionary*, 52 WILLAMETTE L. REV. 267, 272 & n.24 (2015) (citing CHARLES EDWARD CLARK ET AL., HANDBOOK OF THE LAW OF CODE PLEADING (2d ed. 1947) and Edson R. Sunderland, *Improving the Administration of Civil Justice*, ANNALS

recent Supreme Court decisions have been critiqued along this dimension because, amongst other issues, they create an all-or-nothing method for addressing discovery costs.³⁰²

Evidentiary rules also have been subject to reform efforts directed at dealing with the burdens of voluminous ESI. Most notably, in 2008, Federal Rule of Evidence 502 was adopted to address the rising costs of ESI discovery.³⁰³ The new rule protects against the inadvertent waiver of attorney-client privilege or work product and it permits the claw-back of the inadvertently produced material.³⁰⁴ By reducing the penalty for inadvertent waiver, the rule should incentivize approaches to ESI discovery that reduce the expense of lawyers' pre-production review.³⁰⁵ To give a sense of the amounts that might be at stake, at a public hearing on Rule 502, a corporation represented that it spent \$13.5 million on outside privilege review expenditures in one case.³⁰⁶

Professional practices have adapted in response the pressures of ESI too. For example, some lawyers are exploring public social media — one driver of the growth of ESI — to investigate their cases either before initiating litigation or to supplement traditional discovery.³⁰⁷

AM. ACAD. POL. & SOC. SCI., May 1933, at 74-75); *see also* Subrin, *Fishing Expeditions*, *supra* note 41, at 722.

³⁰² *See, e.g.*, Fitzpatrick, *supra* note 250, at 1643-44 (explaining problems — such as the binary nature of the decision — of using heightened pleading standards to control discovery costs).

³⁰³ *See* Act of Sept. 19, 2008, Pub. L. No. 110-322, 122 Stat. 3537 (2008) (adoption of rule); FED. R. EVID. 502 advisory committee's note ("In drafting the proposed Rule, the Advisory Committee concluded that the current law on waiver of privilege and work product is responsible in large part for the rising costs of discovery, especially discovery of electronic information."); George L. Paul & Jason R. Baron, *Information Inflation: Can the Legal System Adapt?*, 13 RICH. J.L. & TECH. 10, 3 (2007); Richter, *supra* note 194, at 1669.

³⁰⁴ FED. R. EVID. 502; *see also* FED. R. CIV. P. 26(b)(5) (laying out mechanism for claw-back).

³⁰⁵ *See* Zubulake v. UBS Warburg LLC, 216 F.R.D. 280, 290 (S.D.N.Y. 2003) (discussing potential for claw-back agreements as a means of reducing costs of attorneys reviewing voluminous ESI); Richter, *supra* note 194, at 1678 (describing expense of pre-production review, including a study attributing seventy percent of cost of discovery to it). *But see* Tonia Hap Murphy, *Mandating Use of Predictive Coding in Electronic Discovery: An Ill-Advised Judicial Intrusion*, 50 AM. BUS. L.J. 609, 646 (2013) (discussing why benefits of rule might not be sufficient to force the use of technologies like predictive coding over which there is less individualized human attention applied to reviewing each document).

³⁰⁶ Richter, *supra* note 194, at 1678 (citing Hearing of the Advisory Comm. on Evidence Rules 86-88 (Jan. 29 2007), <http://federaledge.com/pdf/2007/WebPDFs/ERcommTranscript01-29-07.pdf> (testimony of Patrick Oot, Dir. of Electronic Discovery & Senior Counsel, Verizon)).

³⁰⁷ *See* John G. Browning, *Digging for the Digital Dirt: Discovery and Use of Evidence*

Given its potential efficacy, several commentators have even suggested that this sort of informal discovery now is ethically required in certain cases.³⁰⁸

CONCLUSION

The growth of ESI has sparked many calls for document discovery reforms, some of which have been implemented and some of which have yet to be applied. But the pressures of ESI, whether now or in the not-too-distant future, means there are no easy answers and difficult normative tradeoffs amongst the accuracy, efficiency, and participation norms will have to be made. Some of these choices — such as those going to broad social aims — might be best made in the legislature. Other choices — such as those that deal with individual rights or case management — are better left to the judiciary. But, regardless of the source, to best serve the fundamental procedural justice norms, the document discovery reforms that attempt to reduce costs while preserving the benefits of the information trove should be encouraged. By reducing costs, these reforms serve efficiency. And by preserving the amount and quality of information transferred, they also promote accuracy and participation. With that said, a familiar caveat to any proposed discovery reform (and to many articles discussing them) is the need for empirical research to better gauge their effectiveness.³⁰⁹

from Social Media Sites, 14 SMU SCI. & TECH. L. REV. 465, 467 (2011) (“A February 2010 study conducted by the American Academy of Matrimonial Lawyers revealed that [eighty-one percent] of the attorneys responding reported finding and using evidence from social networking sites in their cases.”).

³⁰⁸ See, e.g., Stacey Blaustein et al., *Digital Direction for the Analog Attorney — Data Protection, E-Discovery, and the Ethics of Technological Competence in Today’s World of Tomorrow*, 22 RICH. J.L. & TECH. 10, 64 (2016) (discussing N.Y.C. Bar Ass’n Comm. on Prof’l & Jud. Ethics, Formal Op. 2010-2, at 1 (2010), <http://www.nycbar.org/Ethics/eth2010.htm> (asserting that the “potential availability of helpful evidence on these internet-based sources makes them an attractive new weapon in a lawyer’s arsenal of formal and informal discovery devices”)); Agnieszka McPeak, *Social Media Snooping and Its Ethical Bounds*, 46 ARIZ. ST. L.J. 845, 887-88 (2014) (arguing that lawyers still have ethical duties regarding public social media searches); Peter Segrist, *How the Rise of Big Data and Predictive Analytics Are Changing the Attorney’s Duty of Competence*, 16 N.C. J.L. & TECH. 527, 558-59 (2015) (noting “some even persuasively argu[e] that there exists an ethical obligation upon attorneys to investigate an opponent’s social networking information”).

³⁰⁹ See, e.g., Thornburg, *supra* note 97, at 263-64 (noting the importance of knowing the empirical effects of discovery limits); see also Beisner, *supra* note 72, at 578; Stephen B. Burbank, *The Transformation of American Civil Procedure: The Example of Rule 11*, 137 U. PA. L. REV. 1925, 1940 (1989) (“We need fewer mind experiments and more field experiments, procedural rules as well as procedural theories that are

And that goes for the suggestions in this Article too, which hopefully will encourage a continued, robust debate as many reforms are tried.

'based on experience.'"); Erwin Chemerinsky & Barry Friedman, *The Fragmentation of Federal Rules*, 46 MERCER L. REV. 757, 770-71 (1995); Glenn S. Koppel, *Toward a New Federalism in State Civil Justice: Developing a Uniform Code of State Civil Procedure Through a Collaborative Rule-Making Process*, 58 VAND. L. REV. 1167, 1172 (2005) ("There has been widespread scholarly criticism of . . . the paucity of sound empirical research to inform the flurry of discovery reforms . . ."); Richard L. Marcus, *Discovery Containment Redux*, 39 B.C. L. REV. 747, 778 (1998) ("As a general matter, the Federal Rules of Civil Procedure have been drafted without the benefit of detailed empirical input.").