ESSAYS

VIRTUAL CIVIL LITIGATION: A VISIT TO JOHN BUNYAN'S CELESTIAL CITY

Paul D. Carrington*

This Essay is a speculation on the future impact on civil procedure of the invention of the computer chip. When that technology is fully deployed, almost nothing we now know about civil procedure will be true. The Man in the White Suit is not a textile engineer,¹ but a judicial law reformer who threatens to disemploy much of his profession.

INTRODUCTION

The law's cost and delay are causes of chronic dissatisfaction with every legal system. The federal Civil Justice Reform Act of 1990² recently exhibited our inability to solve these eternal difficulties; it reflected both the ambition of Congress to reduce cost and delay and its authors' lack of a realistic idea how that might be done. We now have the meager results of that initiative. While some of the innovations in local plans promulgated under the Act yielded modest redemptive benefits, none made a serious dent in cost or delay.³

* Chadwick Professor of Law, Duke University. Reporter, Advisory Committee on Civil Rules of the Judicial Conference of the United States, 1985–1992. This Essay is in part the product of conversations with the late Maurice Rosenberg with whom I would surely have shared authorship were he available. In substance, many of the ideas were presented to a conference on trans-Pacific arbitration conducted by the Private Adjudication Center in 1994, and helpful comments were received from many of those present on that occasion. I am also grateful to Alexander Bruns and Tom Rowe for comments on an earlier draft and to Bruns for help with the references.

1. In Alexander Mackendrick's classic film, *The Man in the White Suit* (Ealing Studios 1951), a scientist, played by Alec Guinness, develops an invulnerable fabric which threatens to eliminate the textile industry. Fortunately for management and labor, and for the personal safety of the scientist, a grievous defect in his fabric is at last discovered. The screenplay was written by Roger MacDougall, who adapted it from his own play by the same name.

2. 28 U.S.C. §§ 471–482 (1994). The Act required all ninety-four federal district courts to implement “civil justice expense and delay reduction plan[s]” that would “facilitate deliberate adjudication of civil cases on the merits, monitor discovery, improve litigation management, and ensure just, speedy, and inexpensive resolutions of civil disputes.” *Id.* § 471.

3. The RAND Corporation's Institute for Civil Justice engaged in a comprehensive study of the Civil Justice Reform Act (CJRA) that determined that the Act had proved less than fruitful in reducing the costs and delays of civil litigation. See James S. Kakalik et al., RAND, *An Evaluation of Judicial Case Management Under the Civil Justice Reform Act 91* (1997) (finding discovery control “the only CJRA management practice that seemed to be effective in reducing costs”). The conclusions drawn from this study figured prominently

The institutions of civil litigation are, however, headed for fundamental change caused by the invention of the computer chip. The digitization of information offers technical solutions to problems that have long defied us. Indeed, technologies deploying digitization undercut many, perhaps most, of the premises of civil procedure as it has been practiced, not merely in America, but everywhere since the beginning of time. The law of unintended consequences decrees that the resolution of current problems will create or reveal new ones; for this reason, unqualified optimism is always inappropriate. But it is now a reasonable hope that radical reform might achieve radical benefits.

It pleases our politicians to speak of the twenty-first century as if it were a different place than the twentieth. For our courts, it just might be. A half century hence, the futility of the Civil Justice Reform Act of 1990 may be recognized as a passage through a Slough of Despond that we pilgrims were doomed to experience on our way to the Celestial City, where *Legality* resides.⁴ This Essay is a speculation on how the Celestial City might appear when at last we leave our present mire and progress to that place.

I. THREE CENTURIES OF JUDICIAL LAW REFORM IN A NUTSHELL

To put the effects of digitization in perspective, one might say that in the history of our Republic, there have been perhaps six ideas about civil procedure that matter. First, there was the idea, brought to us in the eighteenth century by the Enlightenment, that cases should be decided

in the final report on the CJRA issued by the Judicial Conference of the United States in 1997:

Although the judiciary has adopted most of the principles, guidelines and techniques in the Act, the Judicial Conference does not support expansion of the Act's case management principles and guidelines to other courts as a total package. This recommendation is based in large part on the RAND study of the pilot courts. The RAND study found that the pilot program per se did not appear to have significant impact on cost or delay reduction because the courts were already following most of the Act's principles, guidelines, and techniques and more importantly, the cost of litigation was driven by factors other than judicial case management procedures.

Judicial Conf. of the U.S., *The Civil Justice Reform Act of 1990: Final Report*, 175 F.R.D. 62, 67 (1997) (emphasis omitted). For an account of the particular difficulties arising from CJRA implementation in the United States District Court for the Eastern District of Texas, see Paul D. Carrington, *A New Confederacy? Disunionism in the Federal Courts*, 45 Duke L.J. 929 (1996).

4. This metaphor belongs to John Bunyan and is taken from his 1678 magnum opus, *The Pilgrim's Progress From This World to That which is to come: Delivered under the Similitude of a Dream Wherein is Discovered, The Manner of his setting out, His Dangerous Journey; and safe Arrival at the Desired Countrey*. *Legality* is the name given by Bunyan to "a very judicious man (and a man of a very good nature) that has skill to help men off with [the] burdens . . . from their shoulders." John Bunyan, *The Pilgrim's Progress* 20 (Constable & Co. 1926) (1678). On his way to seek the Celestial City in which *Legality* abides, the Pilgrim encounters many travails, the first of which is the Slough of Despond in which many other pilgrims are mired. See *id.* at 15-16.

on the facts and the law, and not as a consequence of the skill or luck of the parties' representatives in jousting or sumo, a sport initially devised as a method of dispute resolution,⁵ or in a word game such as common law pleading. That idea of the Enlightenment has been notably celebrated by Max Weber.⁶

Second, there was the mid-nineteenth century reform denoted as fact pleading and advanced in this country by David Dudley Field and other Jacksonians who hoped to simplify civil procedure by identifying the factual issues quickly, thereby reducing cost and delay.⁷ That reform was soon frustrated by the evasions of lawyers who made fact pleading just another word game and an instrument of cost and delay.⁸ Despite the information gained from an adversary's pleading, many litigants experienced surprise at trial, while others encountered unwarranted difficulty in getting to trial.

Third, there was the twentieth century extension of the discovery devices employed in English equity to investigate and reveal evidence before trial. The movement for that reform was led by Charles Clark and his associates, who drafted the Federal Rules of Civil Procedure promulgated in 1938. Their hope was to reduce cost and delay by revealing the proof in advance of trial, thus encouraging early settlements based on better predictability of the outcomes of trials.⁹ That reform also underesti-

5. See P.L. Cuyler, *Sumo: From Rite to Sport* 22 (1985) ("[I]n early Japan wrestling was commonly viewed as a means of determining the will of the gods.").

6. See, e.g., Max Weber, *Economy and Society* 657 (Guenther Roth & Claus Wittich eds., Ephraim Fischhoff et al. trans., Bedminster Press 1968) (1956); cf. From Max Weber: *Essays in Sociology* 218-20 (H.H. Gerth & C. Wright Mills eds., 1946) (discussing the Roman law origins of modern rational judicial decision-making).

7. See Robert W. Millar, *Civil Procedure in the Trial Court in Historical Perspective* 52-64 (1952); Stephen N. Subrin, *David Dudley Field and the Field Code: A Historical Analysis of an Earlier Procedural Vision*, 6 *Law & Hist. Rev.* 311, 316-23, 327-33, 334-38 (1988).

8. See Charles E. Clark, *Procedure: The Handmaid of Justice*, 23 *Wash. U. L.Q.* 297, 314-17 (1938) (arguing the merits of general pleading as distinguished from special pleading); Roscoe Pound, *The Causes of Popular Dissatisfaction with the Administration of Justice*, 40 *Am. L. Rev.* 729, 738-40 (1906) (criticizing the "sporting theory" of adversarial practice in American law and describing the intricate rules of pleading and procedure then in effect as obstacles to the vindication of substantive law and justice).

9. See Charles E. Clark, *The New Federal Rules of Civil Procedure: The Last Phase—Underlying Philosophy Embodied in Some of the Basic Provisions of the New Procedure*, 23 *A.B.A. J.* 976, 977 (1937) ("Moreover, through the weapons of discovery and summary judgment we have developed new devices, with more appropriate penalties to aid in matters of *proof*, and do not need to force the pleadings to their less appropriate function."); Charles E. Clark, *The Proposed Federal Rules of Civil Procedure*, 22 *A.B.A. J.* 447, 450 (1936) (discussing making "discovery and summary judgment" provisions "in accordance with the general trend" of more freedom in the admission of evidence); Charles E. Clark & James W. Moore, *A New Federal Civil Procedure: I. The Background*, 44 *Yale L.J.* 387, 392-94, 409-14, 418-35 (1935) (explaining the need for a new approach to federal civil procedure); Michael E. Smith, *Judge Charles E. Clark and the Federal Rules of Civil Procedure*, 85 *Yale L.J.* 914, 918 (1976) (noting Clark's support for the new discovery procedures as a part of his general campaign to simplify pretrial practices, and

mated the gamesmanship of lawyers, who found diverse ways to misuse discovery. In 1980, Justice Powell strongly criticized discovery on that account.¹⁰ While his assessment seems overdrawn to me, there is widespread dissatisfaction because some lawyers refuse to play by the rules and others overuse the process to impose needless costs on adversaries.¹¹

Fourth in sequence came the idea of judicial case management emerging since 1970.¹² The idea has been that judges, by involving themselves in pretrial preparation, can restrain the costly and dilatory gamesmanship. The role of the managerial judge more nearly resembles that of judges on the continent of Europe. Management can entail more work for counsel as well as the judge, and may therefore elevate cost. As Judith Resnik has observed, it often seems that our judges are more occupied in managing lawyers than in managing cases.¹³ Like fact pleading and discovery, it works sometimes, but the net benefit is at best modest.

crediting Professor Edson Sutherland as the primary scholar behind these provisions in the new rules of civil procedure).

10. See Amendments to Federal Rules of Civil Procedure, 446 U.S. 995, 997–1001 (1980) (Powell, J., dissenting). Justice Powell was also joined by Justices Stewart and Rehnquist in his dissent. For a discussion of this dispute, see Jack H. Friedenthal, *A Divided Supreme Court Adopts Discovery Amendments to the Federal Rules of Civil Procedure*, 69 Cal. L. Rev. 806 (1981).

11. See Wayne D. Brazil, *The Adversary Character of Civil Discovery: A Critique and Proposals for Change*, 31 Vand. L. Rev. 1295 (1978); Paul D. Carrington, *Renovating Discovery*, 49 Ala. L. Rev. 51, 59–60 (1997); Mark A. Nordenberg, *The Supreme Court and Discovery Reform: The Continuing Need for an Umpire*, 31 Syracuse L. Rev. 543 (1980). But see Judith Resnik, *Managerial Judges*, 96 Harv. L. Rev. 374, 442–43 (1982) (“[M]any believe that pretrial disputes are also relatively uncommon. For example, as far as we know, the absolute number of discovery requests is small in most cases, and the demand for judicial assistance in discovery is likewise small.”) (footnotes omitted) (citing P. Connolly et al., *Judicial Controls and the Civil Litigative Process: Discovery 18–35* (1978)).

12. See Robert F. Peckham, *The Federal Judge as Case Manager: The New Role in Guiding a Case from Filing to Disposition*, 69 Cal. L. Rev. 770 (1981) (describing the improvements wrought by increased judicial management of cases during the 1970s from his experience as Chief Judge of the Northern District of California); Resnik, *supra* note 11, at 378–80 (tracing the origins of modern judicial case management to the creation of pretrial discovery rights with the adoption of the Federal Rules of Civil Procedure in 1938 and noting that increased volume of cases led to widespread enthusiasm for “calendar control” in the 1970s, but finding that “[l]ittle empirical evidence supports the claim that judicial management ‘works’ either to settle cases or to provide cheaper, quicker, or fairer dispositions”). See also Thomas P. Griesa, *Comment: One Court’s Experience with the CJRA*, 49 Ala. L. Rev. 261, 262 (1997) (tracing the origins of the individual calendar system in the 1960s and noting that the Federal Judicial Center has long promoted this reform in its educational programs).

13. See Judith Resnik, *Changing Practices, Changing Rules: Judicial and Congressional Rulemaking on Civil Juries, Civil Justice, and Civil Judging*, 49 Ala. L. Rev. 133, 192–93 (1997) (“Further support for the translation of ‘case management’ into ‘lawyer management’ comes from the specific decision to leave unregulated a group of cases that RAND called ‘minimal management cases’ That these cases are not managed underscores that the goal of management is superintendence of attorneys, not cases.”) (citing Kakalik et al., *supra* note 3, at 7 n.3, 11–12).

Two other ideas having ancient origins recur and are put to use from time to time in the hope of reducing cost and delay. One is privatized case management, requiring parties to engage in preliminary mediation or non-binding arbitration.¹⁴ Such court-annexed ADR may cause some cases to settle earlier, and the overall settlement rate may increase marginally, while some parties may be better prepared for trial. But these benefits come at the cost of introducing an additional step in the process that can itself cause cost and delay.¹⁵ In addition to the added expense of the lawyer time invested in the additional step, someone has to pay the mediator or arbitrator. Again, savings have been achieved in some cases, but the net benefit of mandatory mediation is not easily demonstrated.

Finally, there is the other idea—long employed elsewhere—of cost-shifting to deter wasteful litigation.¹⁶ In simple terms, the concept is to apply market economics to litigants, forcing them to take a harder look at their prospects and to back away from causing unnecessary expense they will themselves have to bear if the costs are not justified by the prospective effect on the outcome. The problem with this strategy is that some litigants are more vulnerable to the deterrent effect than others, and it therefore operates independently of the merits of their claims or defenses. Nevertheless, this idea, too, has had some positive uses. I have recently proposed that it be used on a limited scale to correct the overuse of discovery.¹⁷

Another ancient idea now in vogue is an idea not for improving the judicial process, but for avoiding it altogether by employing alternative forums created by contract. Of course, for parties who freely *choose* arbitration, there may be real savings resulting from their cooperation. That has likely always been true. But a current trend is to compel arbitration by enforcing arbitration clauses in contracts of adhesion that may result in actual increases in cost and delay.¹⁸ Adhesive arbitration clauses are

14. See, e.g., Elizabeth Plapinger & Donna Stienstra, *ADR and Settlement in the Federal District Courts: A Sourcebook for Judges and Lawyers* (1996) (analysis and overview of dispute resolution approaches and all court-managed ADR programs in each of the ninety-four federal district courts).

15. See, e.g., Kakalik et al., *supra* note 3, at 76 (noting that some judges are reluctant to impose ADR because of the added costs it imposes on the parties).

16. See Thomas D. Rowe, Jr., *The Legal Theory of Attorney Fee-Shifting: A Critical Overview*, 1982 *Duke L.J.* 651, 651–52 (offering a principled critique of attorney fee-shifting practices). For a comprehensive treatment of the issues relating to fee-shifting, both in this country and elsewhere, see the numerous articles collected in the 1984 fee-shifting symposium published in 47-1 *Law & Contemp. Probs.* (Thomas D. Rowe, special ed.).

17. See Carrington, *supra* note 11, at 63–67.

18. See Paul D. Carrington & Paul H. Haagen, *Contract and Jurisdiction*, 1996 *Sup. Ct. Rev.* 331, 333 (commenting upon the adverse effects wrought by a series of commercial arbitration cases decided by the Supreme Court in 1994 and 1995 and concluding that “[t]hose who have been prejudiced by the Court’s handiwork include many American consumers, patients, workers, investors, shopkeepers, shippers, and passengers,” while “[t]hose whose interests have been served include all those engaged in interstate or

now widely used to diminish the value of any claims individuals might later make against the "repeat player"¹⁹ who drafted them.

Reviewing these alternatives, one cannot be encouraged about the prospect for materially improving our methods of litigating civil cases by any means in use at the end of the twentieth century. So far, digital technologies have been applied to law chiefly by resourceful publishers and private counsel seeking to enhance the effectiveness of their trial advocacy. There is little reason for the public to cheer the results of these applications. Lawyers and judges have easier access to more legal authorities, and triers of fact are sometimes dazzled by multi-media presentations. But there is no evidence that these achievements have resulted in more accurate discernment of fact, more faithful enforcement of law, or the reduction of cost or delay.

Courts have been properly cautious in making use of electronic communications. Not until 1993 was there a right to videotape a deposition for use in a federal court.²⁰ Occasional use is now made of live testimony transmitted by satellite. A few courts are now experimenting with electronic filing of court papers.²¹ There is, however, still no duty of parties to accept service of papers by facsimile transmission or e-mail. Such caution is necessary because judicial systems must accommodate counsel who

international commerce deploying their economic power to evade enforcement of their contractual duties or the lash of those state or federal commercial laws that are privately enforced"); Jean R. Sternlight, *Panacea or Corporate Tool?: Debunking the Supreme Court's Preference for Binding Arbitration*, 74 *Wash. U. L.Q.* 637, 637 (1996) (commenting on the growing trend in many industries to include "mandatory binding arbitration clauses in the fine print contracts they require all customers, employees, franchisees and other little guys to sign").

19. Marc Galanter, *Why the "Haves" Come Out Ahead: Speculations on the Limits of Legal Change*, 9 *L. & Soc'y Rev.* 95, 97 (1974).

20. See Fed. R. Civ. P. 30(b)(2) (providing that depositions "may be recorded by sound, sound-and-visual, or stenographic means, and the party taking the deposition shall bear the cost of the recording"). This 1993 reform did not, however, fully embrace the benefits of modern recording techniques insofar as written transcripts are still required. As the Advisory Committee explained in its notes on the 1993 amendment, "[a] party choosing to record a deposition only by videotape or audiotape should understand that a transcript will be required by Rule 26(a)(3)(B) and Rule 32(c) if the deposition is later to be offered as evidence at trial or on a dispositive motion under Rule 56." *Id.* For a collection of comments on the 1993 Rules revision, see *Revolutionary Changes in Practice Under the New Federal Rules of Civil Procedure* (Marvin E. Aspen & Jerold S. Solovy eds., 1994) [hereinafter *Revolutionary Changes*].

21. This new innovation was also the result of the 1993 amendment cycle to the Federal Rules of Civil Procedure, which provide that

[a] court may by local rule permit papers to be filed, signed, or verified by electronic means that are consistent with technical standards, if any, that the Judicial Conference of the United States establishes. A paper filed by electronic means in compliance with a local rule constitutes a written paper for the purpose of applying these rules. The clerk shall not refuse to accept for filing any paper presented for that purpose solely because it is not presented in proper form as required by these rules or any local rules or practices.

Fed. R. Civ. P. 5(e).

may not be the most resourceful and must meet expectations of service entrenched in the minds of lawyers and litigants. Also, judicial systems must be administered by judges of mature years who are naturally unreceptive to new technologies and modes of conduct. For these reasons, courts must inevitably be among the last institutions to accommodate new circumstances. Yet there will come a time when the utility of technology is so visible that the natural and proper institutional inertia will have to yield.

II. ASSUMPTIONS REGARDING FUTURE REFORM

In this thought experiment, I assume no fundamental changes in our legal culture other than those wrought by technology. Thus, I assume that a purpose of our civil procedure will continue to be the enforcement of rights. One can now hear expressions of despair about this Enlightenment vision of the function of courts. It is sometimes assumed that the business of courts is merely dispute resolution, by whatever means may be effective to bring repose; that is the premise of many who are promoting ADR,²² or of those who favor mass settlements of mass tort claims without regard for the merits of individual claims.²³ I assume that

22. See John S. Murray et al., *Processes of Dispute Resolution: The Role of Lawyers* 436-99 (2d ed. 1996); *Emerging ADR Issues in State and Federal Courts* (Frank E.A. Sander ed., 1991). But see Harry Edwards, *Alternative Dispute Resolution: Panacea or Anathema?*, 99 Harv. L. Rev. 668 (1986). Edwards argues:

[I]t is sometimes claimed that there are those who subscribe to the ADR movement because they view efficient and inexpensive dispute resolution as an important societal goal, without regard for the substantive results reached. If the ADR movement prominently reflects such thinking then it is unclear whether the movement is a panacea for, or is anathema to, the perceived problems in our traditional court systems.

Id. at 669. He goes on to add:

There are a number of ADR proponents who appear to believe that a good neutral can resolve any issue without regard to substantive expertise. Our experience with arbitrators and mediators in collective bargaining proves the folly of this notion. The best neutrals are those who understand the field in which they work. Yet, the ADR movement often seeks to replace issue-oriented dispute resolution mechanisms with more generic mechanisms without considering the importance of substantive expertise.

Some would respond that judges are generalists and yet we trust our state and federal judiciary to resolve a broad range of disputes. This argument, however, is deceptive because judges *are* specialists in resolving issues of law. Law aims to resolve disputes on the basis of rules, whereas alternative dispute resolution mechanisms turn to nonlegal values. If disputes are to be resolved by rules of law, the legal experts designated by our state and federal constitutions—that is, the judges—should resolve them. If nonlegal values are to resolve disputes, we should recognize the need for substantive expertise.

Id. at 683-84 (citations omitted).

23. See Robert G. Bone, *Statistical Adjudication: Rights, Justice and Utility in a World of Process Scarcity*, 46 Vand. L. Rev. 561, 650-51 (1993) (finding that, in mass tort cases, “[s]ampling is relatively easy to square with an efficiency-based theory under most circumstances” and that “verdicts should be calculated in the same way for all plaintiffs,

this pre-Enlightenment purpose will not become the norm, and that we will continue to expect courts to decide cases by applying law to fact.

I also assume no fundamental change in the roles of parties and counsel. As noted in Part I, those roles have changed at a glacial pace.²⁴ The primitive impulse to make law a tournament is still visible in some current practice, and this ludic element of litigation can probably never be altogether eliminated. But paeans to the adversary tradition notwithstanding, good government dictates the need to continue to reduce—insofar as is feasible—the opportunities of advocates to evade the lash of the law on their clients by obstructing civil justice, and that aim will continue to conflict with the impulses of some lawyers to engage in unrestrained combat like knights in armor or sumo champions.

I also assume that our courts will continue to perform political functions, and that we will continue to insist on their sharing the judicial power with the communities in which they sit by means of trial by jury.

I will not pause to consider the manifest political difficulties with the future radical reform of judicial institutions. Any program to reduce cost

including those in the sample group, and costs should be spread equally over the entire plaintiff population") (footnotes omitted); David Rosenberg, *Class Actions for Mass Torts: Doing Individual Justice by Collective Means*, 62 *Ind. L.J.* 561 (1987). Rosenberg states:

Individual justice critiques of class actions have little power when the primary purpose of tort liability is taken to be the utilitarian objective of maximizing welfare by deterring socially inappropriate risk-taking. The aggregation and averaging techniques of bureaucratic justice are not only consistent with the social welfare justification for tort liability . . . but they also produce the positive benefits of lower administrative costs.

Id. at 566 (footnotes omitted); see also Michael J. Saks & Peter David Blanck, *Justice Improved: The Unrecognized Benefits of Aggregation and Sampling in the Trial of Mass Torts*, 44 *Stan. L. Rev.* 815, 815 (1992) ("[W]e conclude that the perception that aggregation provides inferior adjudication is largely illusory. . . . [T]he procedural innovation of aggregation provides a quality of justice that surpasses what courts have, until now, been capable of in any kind of case."); *id.* at 851 ("While most commentators debate whether aggregated trials preserve enough of the features of procedural due process to be judged constitutional, we have suggested that aggregated trials have the potential to achieve a level of justice that simply is not possible in traditional individual trials."). But see Roger H. Transgrud, *Mass Trials in Mass Tort Cases: A Dissent*, 1989 *U. Ill. L. Rev.* 69, 74 (1989):

The first purpose of our civil justice system is and should be to offer corrective justice in disputes arising between private parties. While today we burden our courts with many claims arising out of government regulatory and entitlement programs and even ask our judges to manage prisons, mental health institutions, and schools, we should not let these cases obscure the original and first purpose for our civil courts—to adjudicate justly disputes between individuals. Among such private disputes, cases involving substantial personal injury or wrongful death claims are as important, or more important, than any other. Regardless of the burden such claims put on the judicial resources of our courts, we ought not compromise in the quality of process we afford these tort plaintiffs.

24. See Mitchell F. Dolin et al., *An Overview of the December 1993 Federal Rules Amendments, in Revolutionary Changes*, *supra* note 20, at 10–12 (noting that 1993 changes to Fed. R. Civ. P. 11 will weaken deterrents to vexatious litigation).

and delay will threaten entrenched interests, both of those within the legal profession having intellectual, emotional, and professional investments in existing practices, and of those outside the law whose interests are sometimes well-served by cost and delay. There will necessarily be compromises fashioned to protect the rotten boroughs of the law.²⁵ I disregard these difficulties to focus on longer term possibilities.

There may also be questions appropriately addressed to social psychologists that I am here neglecting. I have no doubt that the process I am about to depict will appall some, perhaps many, readers; indeed, it rather appalls me, and I take comfort that I personally will not be called upon to participate in virtual litigation such as one might expect to find in the Celestial City. But a future generation more accustomed to digitized transmissions may find some such legal process more congenial, and may even demand that its courts embrace at least some of the changes I forecast.

These assumptions and disclaimers stated, I proceed. But not in what might be described as a chronological order of the stages of virtual litigation. In these matters, the jawbone is ultimately connected to the anklebone, yet the trial is the heart of the process. I therefore first consider how digitization might modify the trial of an issue of fact. I then consider the impact of digitization on the appeal as a means of *preventing* (and not merely *correcting*) errors at trial, on preparation for the virtual trial, and finally on territorial jurisdiction. At each stage, the availability of digitization suggests radical transformation. In a world traveling at the speed of light, trial advocacy will more closely resemble the work of the Hollywood film producer and less that of the Hollywood actor. Among the possible implications are the elimination of (1) the distinction between summary judgment and post-trial judgments as a matter of law, (2) the final decision as a precondition to appeal, (3) physical access to the courthouse as a factor in the determination of jurisdiction over the person of the defendant, and (4) the office of local clerk of court. Also in prospect is a reduction in the sweep of the trial judge's discretion. Trials will be shorter and cheaper. Appeals will be quicker and cheaper. Pre-trial maneuvering will be less extensive and cheaper. Territorial jurisdiction will be contested less frequently.

A. *Virtual Trials*

The traditional trial is becoming obsolete. My wife and I are now equipped to hold video conferences with our grandchildren in four distant cities. The system is far from perfect, but its perfection is plainly within reach inside a decade or so. The hardware needed for the con-

25. "Rotten borough" is an eighteenth century English political term referring to "one of the boroughs which, before the passing of the English Reform Bill in 1832 were found to have so decayed as no longer to have a real constituency." 2 Oxford English Dictionary 416 (J.A. Simpson et al. eds., 1989).

duct of virtual litigation is already partly in place and will soon be completely so, at least in the United States.²⁶ The software is improving rapidly and there appear to be no insurmountable problems to perfecting it without large financial investments by courts or lawyers. What is suggested here will therefore require no substantial expenditure not likely to be made anyway.

Given easy, almost costless, preservation of images in digitized form, and their instantaneous transmission over long distances, there will no longer be sufficient reason to require, expect, or even permit much, if any, evidence to be presented in the form of personal testimony by witnesses in a room in which the judge, jury, and counsel are all present. A trial will normally be a movie presentation.

To be sure, there will be something lost in spontaneity and in the interpersonal contact between witnesses and triers of fact, but those costs will be outweighed by the savings in money, time, and convenience attainable by means of digitized communication of testimony. People will not be willing to travel distances at a particular time to await the presence and availability of others when images can be made at almost any place or time, preserved, and transmitted as and when needed, painlessly, and almost without cost to any place.

Perhaps it will always be desirable to preserve the authority of the court on special occasions to allow a party to appear and testify in a traditional courtroom, or perhaps even to compel a witness to do so. That might be appropriate where two observation witnesses are engaged in a swearing match on a crucial issue in a case involving stakes large enough to warrant the increased cost; on such occasions, demeanor evidence that is conveniently available may arguably be worth the cost.²⁷ But jurors will

26. One state that has recently taken a pioneering role in the digitization of judicial work is Hawaii, where court documents are now electronically scanned upon filing and made available to the public instantaneously. These changes have resulted in dramatic cuts in file storage and administrative costs, and digitizing trial evidence is now also among the court system's planned goals. See Ronald V. Grant, *Law Office Technology*, Haw. B.J., June 1997, at 24, 24-27.

27. See Charles Alan Wright et al., 8A Federal Practice and Procedure § 2115, at 109-12 (2d ed. 1994) (describing the benefits and risks associated with videotaped testimony). In *Rice's Toyota World, Inc. v. Southeast Toyota Distributors, Inc.*, 114 F.R.D. 647 (M.D.N.C. 1987), the court considered the value of videotaped testimony at length and made the following conclusions:

While we often make decisions by written word alone, when it comes to determining facts by comparing the testimonies of one or more persons, we do a better job by being able to employ as many of our senses as possible. Personally observing the witness is preferable. Next in rank would be viewing a video deposition where one directly uses the combined senses of hearing and seeing without the filtering process that occurs when one listens to a deposition being read or reads it himself from the cold record which excludes pitch and intonation of voice, rapidity of speech, and all the other aural and visual clues. Thus, it is not surprising to find in *Sandridge v. Salen Offshore Drilling Co.*, 764 F.2d 252, 259 (5th Cir. 1985), the court listing the "legion of cases" which have extolled the advantages of video depositions and preference for their use in a trial, noting that

always have the opportunity to observe demeanor in the recorded testimony when it is screened. It seems at least possible that what is left out when testimony is observed on the cool screen is the part of demeanor evidence that is positively misleading, for those radiations of the spirit that cause us to be irrationally attracted to a witness or irrationally repelled by him or her may then be less intense. It may actually be harder to lie effectively on a screen than in person.²⁸

On the assumption that testimony in the future will be presented electronically, we can see that trial counsel become co-producers of a multi-media presentation. Testimony will be recorded in advance of trial and reviewed by adversary counsel, much as documentary exhibits presently are. All evidentiary issues not resolved by agreement of the parties will be resolved by the court at a pretrial conference. Because all the proof is unalterably recorded before any of it is presented to a trier of fact, every evidentiary issue can be resolved in limine. This will result in a clean visual recording of all the testimony and arguments of counsel to be presented, with no distractions from bickering lawyers. The bickering will have occurred before trial and will have been recorded, but not as part of the trial tape to be seen by the trier of fact. The possibility of surprise at trial will be completely eliminated, and quickness of wit as a professional trait of trial counsel will be much devalued, being displaced by traits valued in television announcers and theater directors.

The pretrial conference will also afford an occasion to consider whether the material supplied by counsel is, as a whole, worthy of consideration by a trier of fact. The question of whether a genuine issue of fact is presented will be raised by a motion for judgment as a matter of law.

a witness' demeanor reflected in his motions, expressions, voice inflections, etc., give [sic] the fact-finder a unique advantage in evaluating evidence, resulting in appellate courts granting greater deference to such findings. Video depositions can markedly increase accuracy and trustworthiness. In addition, to the extent that a video deposition reduces tedium, the fact-finder's concentration and attention will be enhanced, again to the benefit of the decision process. One court, faced with an entire trial presented through video depositions, agreeably anticipated the greater convenience and freedom in scheduling the trial which it would permit.

Id. at 649 (citing *Lucien v. McLennand*, 95 F.R.D. 525 (N.D. Ill. 1982)).

28. The possibility that we detect falsehood more readily from a transcript than from live testimony is considered in Edward H. Cooper, *Directions for Directed Verdicts: A Compass for Federal Courts*, 55 Minn. L. Rev. 903, 934 (1971). See also Wright, *supra* note 27, § 2115, at 110-11:

[T]he federal courts still adhere to the view that live testimony is best, in large measure on the assumption that it can improve credibility determinations. It should be candidly noted that this assumption can be challenged. Much psychological research suggests that observing the face of the declarant is not helpful in assessing the truth of the story being told, and may actually diminish the accuracy of determinations about truth-telling. At least in the context of using videotapes rather than live testimony, even judges may discount the value of live trial.

Id. (citations omitted).

Granting the motion at this point has the same effect as the "old-fashioned" directed verdict or summary judgment. Given that the entire trial can be previewed with complete confidence that nothing can later be added or subtracted, if a party's factual contentions are legally deficient, there is no reason to summon jurors, schedule a trial, and conduct an actual submission of the proof before aborting the proceeding. Thus, summary judgment, directed verdict, and judgment as a matter of law become one, and the ruling can be most efficiently made at the pretrial stage.

Given the opportunity of counsel to edit the evidence, long trials should seldom be required. There will be no interruptions for objections, exceptions, or sidebar conferences of any kind. A long movie will be interrupted for bathroom and lunch breaks, but will otherwise run from eight to five. It should in most cases be possible to return to the time when almost all jury trials were conducted in a single day, or at most two. Something like a shot clock, but hopefully less rigid and mechanical, could be employed to encourage and even require close editing by counsel. Such rulings are not unknown to present practices.²⁹ Because the value of evidence can be accurately appraised in advance of trial, there is no reason to allow lawyers to use valuable court time with rambling presentations. It will seldom be in the interests of lawyers or their clients to overstay the court's welcome or risk stretching the attention span of jurors.

Given this change in the mode of presenting evidence and the resulting ability of parties to know for certain the contentions of their adversaries, the use of opinion testimony could be reduced. Courts could more readily and more wisely make in limine rulings on the merit and pertinence of scientific or technical proof.³⁰ This would be so in part because the court would not in every instance be required to speculate on what the experts might say at trial, for judges would know this precisely at the time of the in limine ruling. This reality might in turn be expected to lead to more prudent and effective use of independent, disinterested scientists or technicians to advise the court in determining the utility of opinion testimony.

Closer, better scrutiny of expert opinion evidence could have another advantage as well. If attorneys know before trial what the expert evidence will look like, they might be more likely to agree on which opinion evidence is worth acquiring and what the nature and compass of that evidence should be. Adversaries would, of course, still need to consult retained experts to assess the likelihood that scientific or technical evi-

29. The length of trials is sometimes fixed in a pretrial order promulgated pursuant to Fed. R. Civ. P. 16, and Fed. R. Civ. P. 30 explicitly authorizes district courts to limit the length of depositions.

30. See *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 597 (1993) (holding that the district judge is responsible for screening opinion testimony for scientific validity).

dence could be presented that might be useful to the client and persuasive to the trier of fact. Closer pretrial scrutiny of opinion evidence ought to reduce the incentives for parties to align a series of carefully prepared experts presenting divergent and equally unpersuasive opinions, an impulse too often turning the contemporary trial into the spectacle of a barking seal contest.

It also seems likely that, in some cases, the competing experts might be wisely replaced by the single disinterested witness appointed by the court pursuant to Evidence Rule 706.³¹ Such disinterested testimony would be more readily available because the experts would never need to leave their offices or laboratories to testify, and their consultations could be scheduled to fit their reasonable convenience. Use of such disinterested testimony in lieu of a battle of experts could abbreviate and reduce the cost of many trials.

Once the digitized trial has been produced by counsel and all issues between them resolved by the court in limine, the court in a case to be tried by jury would prepare a charge to the jury that would be presented in both written and video form. Opening and closing arguments would also be recorded in video form, diminishing somewhat the influence of the theatrical flamboyance of counsel. The trial would then be a screening of the complete and edited tape for the jury. There would be no particular reason for a judge to be present during that screening. A judge would be needed to preside over the selection of jurors—an event that would likely occur in the courtroom on the eve of trial—and to provide an appropriate ceremony at the start and end of the trial, but it would not need to be the same judge for all the events. Counsel and the parties would likely wish to be present (at least virtually present), if for no other reason than to observe the jurors as they observed the screening of the proof and returned their verdict.

Because few trials would extend over more than two days, jury service would be much less onerous, making it possible for more citizens to participate. Such trials would also be less burdensome to the public fisc. It is not difficult to imagine that the jurors could remain at their home or workplace and become a virtual jury. As Boris Bittker has suggested, “panels of couch potatoes” could quickly announce their verdicts “on everyone’s electronic bulletin board.”³² But if trials are to be as brief as I suggest, this would seem to be unnecessary, as well as impolitic and imprudent. A virtual jury would not provide the same satisfaction to civil litigants that live jurors do, at least to those who seek emotional gratification from the resolution of the dispute. Moreover, the deliberation of the jury would be seriously impeded by the absence of social contact. By retaining the public rendering of a verdict, the virtual trial retains some

31. See Fed. R. Evid. 706(a) (“The court may appoint any expert witnesses agreed upon by the parties, and may appoint expert witnesses of its own selection.”)

32. See Boris I. Bittker, *Interpreting the Constitution: Is the Intent of the Framers Controlling? If Not, What Is?*, 19 Harv. J.L. & Pub. Pol’y 9, 48–49 (1995).

elements of drama and the involvement of real people. Therefore, the courtroom of the future might do without a witness box or a bench, but it would need a live audience in front of the screen.

The virtual non-jury trial would, of course, closely resemble the virtual jury trial. But the formal screening of the prepared tape might almost as efficiently be seen by a judge other than the one who ruled on the pretrial issues. This change of judges would avoid any prejudice that might have been aroused by the pretrial bickering and the judge's familiarity with evidence that was excluded. In lieu of the recorded instructions to the jury and closing arguments, counsel would prepare proposed findings and conclusions.

Whether before a jury or judge, the virtual trial will not only be shorter, but it will greatly facilitate firm scheduling. The precise length of each trial will be known long in advance. And because of the limited function of the presiding judge, the trial will not materially interfere with the scheduling of other necessary conferences with judges. Greatly reduced, if not almost eliminated, will be the time lost by lawyers and witnesses waiting around the courthouse for their turn to be heard.

B. *Virtual Review*

The digitized trial lends itself to expeditious review. Roscoe Pound long ago proposed that post-trial motions be consolidated with the first-level appeal, thereby eliminating a redundant stage in the process.³³ Digital technology allows us to go Pound one better. If there is to be a jury trial, it would be most efficient to conduct the appeal before the jury is summoned. Because almost all the court's rulings will have been made in limine, interlocutory review of the pretrial rulings would be feasible and more efficient.

Pound envisioned that the post-trial review would be conducted by a panel of three lower court judges specialized in the conduct of trials.³⁴ That panel as he envisioned it would review the record of the trial and order a new trial if that seemed warranted for any reason, including the ground that the verdict was against the weight of the evidence.³⁵ In the exercise of that power, the panel might reduce an excessive verdict. Pound's panel would also enter judgment as a matter of law if that was warranted by the record.³⁶ These actions having been taken by three judges rather than one, Pound thought further review of determinations of facts would be unnecessary and unworthy of the expense.³⁷ Further review would be permitted only at the discretion of the court of last resort, which would be the only high court in his system.³⁸

33. See Roscoe Pound, *Appellate Procedure in Civil Cases* 383-90 (1941).

34. See *id.*

35. See *id.* at 387-88.

36. See *id.* at 390.

37. See *id.* at 389-91.

38. See *id.* at 390-91.

With digitized records of the pretrial conference and trial, Pound's vision becomes even more efficient. The review panel can with relative ease achieve the same familiarity with the case as that possessed by the judge who made the pretrial rulings. There is little reason to confer the large discretionary powers of the trial judge on a single individual, with the added hazards of human failings that such confidence entails. The jury could be deployed only after the trial tape had been cleansed of error by the court of usual last resort consisting not of one, but of three judges.

A useful feature of the traditional appeal is that it is heard by judges who are remote from the trial judge. This reduces the possibility of mutual deference among peers, which could be expected to occur if the appellate jurisdiction were regularly conferred on three judges chambered in the same building as the trial judge or otherwise sharing common duties. But digitization eliminates any need for that. The virtual review panel could consist of any three judges in the state or in the federal judicial system. They could be randomly selected and could perform their duties from chambers in three widely separated courthouses.

The only issues concerning the trial that could be raised after a verdict would be possible jury misconduct—a very rare event—or excessive damages. Perhaps even the latter issue might be resolved at a preliminary stage, as will be suggested below.

One advantage in reviewing the pretrial rulings before the jury trial is that it would eliminate many trials. The mistrial would be eliminated entirely, as would those trials conducted for the purpose of delay.³⁹ A second advantage is that the jury trial would become a climactic event in which the citizen-jurors were almost always given the final word, thus giving new meaning in federal courts to the final clause of the Seventh Amendment.⁴⁰

The problem of arguably excessive verdicts is not solved, but is made more prominent, by digitization. Because other traditional grounds for a new trial will have been resolved before the trial is conducted, the need to consider that issue on appeal becomes especially bothersome. There is another way to address the problem of extreme verdicts, and the other reforms suggested by digitization provide an occasion to consider it. In keeping with the aim to make the publicly announced verdict terminal, the parties might be required to bargain over limits on verdicts that assess unliquidated damages. A variation on a technique used in summary jury practice conducted pursuant to agreement of the parties might be adapted for general use. That device requires adversaries to predict the award for unliquidated compensation or the punitive award with the un-

39. A discussion of the streamlining uses to which modern technology could be put to reduce pretrial delays is the subject of the following section.

40. See U.S. Const. amend. VII, cl. 2 ("[A]nd no fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than according to the rules of the common law.").

derstanding that the prediction closest to the number selected by the jury will be the one on which the judgment will be entered.⁴¹ This effectively forecloses outlying verdicts and forces the awards for unliquidated sums into reckonable bounds. It is superior to the motion for new trial or for remittitur⁴² because it leaves the parties in control of their own fates and eliminates the need for any judge to guess at the proper amount.

If no jury were demanded, a single judge could conduct the public event at which the trial tape was screened, but there would be no reason to rely upon that individual to make findings of fact given the deference presently required by the clear error rule.⁴³ The judicial findings could as well be made in the first instance by a panel of three judges, perhaps including one member of the appellate court. All three non-jury-trial panelists might then receive from counsel proposed findings of fact and trial briefs and hear virtual oral argument. They might normally be expected to decide the case from their virtual bench, deliberating openly and rendering their decisions seriatim, in the traditional English manner. If two of the three review panelists regarded the legal questions as doubtful, they could say so and certify the questions to the appropriate higher court. But review by a higher court would otherwise be discretionary to that court and limited to review for errors embedded in the conclusions of law employed by the review panel.

This practice of seriatim opinions would yield few decisions of a court purporting to serve as precedential authority. It would thus reduce the load of “infoglut” burdening the practice of law in the United States. Because three judges would participate in the findings, the role of the appellate court would, as Pound saw,⁴⁴ be substantially reduced. In the federal system, or the larger states, there would still be an intermediate appellate function to perform, but it would be needed in a minor fraction of the cases now heard at the appellate level. The number of courts and judges engaged in performing that function could surely be reduced. On the other hand, to secure stability and “reckonability” in the law made through their interpretative work, it would be useful, as well as feasible, to eliminate the practice of sitting in small panels. A court publishing an *opinion of the court* ought perhaps to consist of at least seven members. Thus, the role and responsibility of the individual member of the appellate judiciary, like that of the judge and counsel at trial, would be diminished.

41. Cf. Murray et al., *supra* note 22, at 739–42 (describing a similar method used in professional baseball arbitration where each side submits a “final offer” and the arbitrator must choose between the two figures submitted).

42. See Fed. R. Civ. P. 59 (governing motions for new trials and amendments to judgments).

43. See Fed. R. Civ. P. 52(a) (“Findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses.”).

44. See *supra* notes 33–38 and accompanying text.

C. Preparation and Production of the Virtual Trial

The virtual trial also makes it possible to place increased responsibility on the parties and counsel to conduct the preparation and production of the trial record. Competent counsel will have less need of a judge before trial to manage their cases.

Attorney case management can be done efficiently in stages. The plaintiff might be allowed a period of discovery in which to assemble her case. The defendant could await a preliminary presentation of the plaintiff's case before commencing preparation of the defense. Viewing the plaintiff's proposed presentation in the privacy and convenience of his office, defense counsel could notify plaintiff of any objections made to the evidence proffered. If persuaded, the plaintiff might voluntarily delete objectionable material. Other objections might be marked for later resolution by the court. Or, in appropriate circumstances, the court might entertain an early motion for judgment as a matter of law.

Assuming no such motion were granted, it would then be the defendant's turn to conduct discovery. The plaintiff's counsel could view the defendant's preliminary presentation of the defense and record objections, perhaps resulting in the withdrawal of some of the defense material, with remaining objections to be marked for resolution by the court. The plaintiff might also move for judgment as a matter of law, or might renew her discovery efforts to record additional material rebutting that offered by the defense. The defense might then again review the material and respond to the rebuttal. The plaintiff might then be given the last word, with the possibility of another round if authorized by the court upon a showing of reasonable need.

In many cases, this staging of the trial preparation might result in very substantial savings of costs. The defendant would need to defend only against the case actually made by the plaintiff and not against all the claims that might be imagined to appear in an unpredictable real trial. The plaintiff would likewise be freed of any need to anticipate defenses and gather evidence to refute those that were never effectively asserted in the form of credible proof.

The interrogation of witnesses for a virtual trial could be managed with incomparably greater efficiency. They would be interrogated under oath by video conference, at a time and place convenient to the witness, generally at the witness's home or workplace. The interrogator could be thousands of miles away. The only person possibly needed to be present would be the designated officer of the court administering an oath and recording the testimony. And even that person could be elsewhere if counsel agreed. The videotaped record of the testimony would itself be the material used at trial. There would be no rehearsal deposition.

Moreover, because of the reduced inconvenience, the interrogation of a witness could be conducted discontinuously. Thus, a defendant might elect to wait until he had seen the plaintiff's tentative presentation at trial before beginning to erect a defense by conducting cross-examina-

tions that might be used in the defense's presentation. A re-direct examination might then follow later, when it was again the adversary's turn to rebuild her case. This discontinuity is feasible because neither the witness nor counsel would need to leave their offices to reopen an interrogation. The earlier testimony of the witness would be readily available for review by the witness as well as by counsel. Discontinuity thus allows all counsel to be better prepared, making the examination of witnesses more effective and more efficient. Furthermore, inconsequential witness examinations could be deleted from the tape presented at trial, so that there was no useless testimony consuming the time of the trier of fact. Counsel would co-produce the trial tape, assembling sequentially that part of the testimony of each witness that either counsel wished to have presented at trial.

The elimination of the rehearsal deposition suggests a reason to enlarge somewhat the duties of counsel to disclose material such as adopted and recorded statements of witnesses. A statement to a lawyer that is recorded or made in writing and signed may, under present law, be viewed as protected trial preparation material.⁴⁵ But such material is non-replicable, and the interest of protecting work product by withholding shared access to that kind of material is outweighed by the efficiency gained in sharing such statements.⁴⁶

Because digitization makes retrieval so easy, parties could have full access to statements made by their adversaries in earlier, similar litigation in order to discover possible evidence, especially prior inconsistent statements.⁴⁷ All examinations of witnesses and examined documents would be filed with the court in digitized form. The problem of storage disappears because all the testimony given in all cases in the United States in a year could be stored in a single computer occupying very little space. A national index of testimony by any citizen in any court could be main-

45. See Fed. R. Civ. P. 26(b)(5) (governing the discovery of trial preparation materials). For notable commentary on the extent of the work product doctrine, see Edward H. Cooper, *Work Product of the Rulesmakers*, 53 Minn. L. Rev. 1269, 1318-28 (1969); Elizabeth G. Thornburg, *Rethinking Work Product*, 77 Va. L. Rev. 1515, 1522 (1991) (documenting the broad reach of material protected under the work product doctrine and noting that "courts have given work product immunity for witness statements, investigators' reports, insurance files, surveillance videotapes, communications other than between attorney and client, photographs of relevant locations or objects, sketches and diagrams, and, less frequently, computerized litigation support systems") (citations omitted).

46. See, e.g., the radical view taken by Thornburg, *supra* note 45, at 1517:

[W]ork product immunity should be eliminated entirely. Neither the traditional utilitarian justifications for work product immunity nor their modern-day law and economics counterparts are theoretically or empirically sound. Work product immunity is not needed to protect the adversary system or the legal profession. Rather, it results in the suppression of relevant information and in the imposition of gigantic transaction costs on the parties and the judicial system.

47. See Fed. R. Evid. 613(b) (governing the admissibility of prior inconsistent statements by witnesses).

tained so that material could be retrieved with modest effort by counsel. The functions of the local clerk of court would thus be substantially reduced, for if all records of all proceedings can be kept in a single digitized file comprehending all actions in the system, there is no need for autonomous local filings and records.

To make this system fully effective and to avoid the taking of useless testimony, parties who are employers would also be obliged to make their employees available for preliminary interviews by adversary counsel. An employee causing a fruitless formal examination by refusing an informal preliminary interview would be liable, and would expose his employer to liability, for the resulting economic waste.

Document searches are today a major cost in big cases. That cost cannot be eliminated, but it will be reduced as categories of documents are produced in digitized form facilitating word searches. By that means, the proverbial needle in the haystack will often be extracted as if by a magnet, by a secretary rather than a paralegal, and in minutes or hours rather than weeks or months. It will be more difficult to hide a "smoking gun."

Finally, counsel would be obliged to participate in a continuing discourse with one another regarding the pretrial investigation of facts at issue. This duty would be performed digitally (e.g., by e-mail) and recorded. This electronic conversation (or is it a bulletin board or a chat room?) would contain or replace formal notices and requests, interrogatories, answers to interrogatories, and case management conferences with the judge. Because the communications would be part of the record in the case, there would be meager opportunity to engage in off-the-record incivilities. As now, timely responses to any questions or requests for information would be required, and either party or counsel could at any time seek sanctions against others for causing unjustified cost or delay. The record on which such a motion rests would be readily available at the movement of a switch in the judge's chambers, but case management could otherwise be conducted by counsel rather than by the court.

A similar form of communication would generally replace the service of a summons as the means of initiating litigation. Every government or public agency—federal, state, or local—and every corporation engaged in commerce or owning property would be required to register its electronic address for the receipt of service of process. Individuals would remain free to register such an address or not, but if they failed to do so, they would be required to bear the cost of service and, if they were familiar with litigation, would be liable for a penalty for delay.

D. *Virtual Jurisdiction*

Much of the law on the limits of territorial jurisdiction was formed around considerations of physical access to the courthouse.⁴⁸ The virtual courthouse is equally accessible everywhere.

Thus, the doctrine of *forum non conveniens* becomes obsolete. Perhaps Judge Oakes was premature twenty years ago when he proclaimed it to be so as a consequence of the relative ease and safety of transport.⁴⁹ But parties will soon be able to participate in litigation in Fairbanks, Alaska, without leaving their offices in Durham, North Carolina. To the extent that convenience of access is a consideration in applying a due process standard to limit "long arm" jurisdiction, that factor is almost eliminated. The right of the defendant conveniently to attend the screening event of trial can be readily observed by digitizing and transmitting it to the defendant anywhere.

Considerations of sovereignty would abide. The fact that a courthouse is conveniently accessible to everyone on the planet does not entitle it to rule the world. Moreover, if physical access and convenience are no longer factors, there is less reason to respect the plaintiff's choice of forum. A plaintiff choosing a forum in a jurisdiction other than the one whose law governs the issues in dispute lacks a justification for his or her choice. Accordingly, the principle of due process limiting the territorial jurisdiction of courts merges with the constitutional limits on the territorial reach of legislation. Courts should have jurisdiction to enforce their own laws if applicable, and should be presumptively disabled from taking jurisdiction to enforce the law of a foreign sovereign. In other words, choice of law would become the issue of judicial jurisdiction, and the conflict of laws disappears as a separate topic.

There would remain a problem with respect to the plaintiff's right to choose among the courts of the jurisdiction whose law is applicable to the events. There is no reason to allow the plaintiff to forum shop among such courts for sympathy or influence. An appropriate response to this problem might be to select the judge presiding over the virtual trial preparation from among the whole roster of judges available in the system, much as might be done to assemble a virtual review panel. This would effectively forestall shopping for that judge. This suggests that the local court as an administrative unit managing judicial personnel is as obsolete as its clerk's office or as the doctrine of *forum non conveniens*.

It might even be proposed that the federal judiciary implement the idea advanced by the American Bar Association in 1909 that there be only

48. See Robert C. Casad, *Jurisdiction in Civil Actions* ¶ 1.02[2] (1983).

49. See *Fitzgerald v. Texaco, Inc.*, 521 F.2d 448, 455-56 (2d Cir. 1975) (Oakes, J., dissenting) (describing *forum non conveniens* in the context of admiralty law as a doctrine filled with "cobwebs [that] need cleaning out" in the modern age of supertankers).

one court in each system,⁵⁰ sitting throughout the jurisdiction and containing its own internal forums for correcting error. But the jury and the judges presiding over the selection of the jury or sitting without a jury need to have reasonable access to the courthouse at which the screenings will be conducted. This indicates a continuing need for some local administration.

Even if judge-shopping were eliminated, digitization suggests no answer for jury-shopping. These considerations suggest the need for more tightly drafted venue requirements designating a place of trial for every kind of case, leaving the plaintiff little room for shopping. Proximity to events in dispute would seem to be the most suitable basis on which to legislate such requirements.

CONCLUSION

I cannot estimate the dimensions of the savings to be achieved by means of virtual litigation, but they might be substantial. One can say with confidence that the benefits would fall directly to those plaintiffs and defendants having the most meritorious claims and defenses. Those asserting hopeless claims or defenses would be diminished in their ability to impose burdens on their adversaries.

The secondary consequences of a dramatic reduction in cost and delay are not easily visualized. One must assume that such reductions would lower the threshold of restraint and result in increased filings. To those presently preoccupied with the alleged litigation explosion,⁵¹ this may be the ultimate horror.

On the other hand, properly deployed, digitization promises to revitalize our appreciation of litigation as an exercise of individual rights and a means of private law enforcement. One might also suppose that the facilitation of discovery will result in closer observation of the law by those with duties whose defaults will be more exposed to public light. Ours will indeed be a city wherein *Legality* resides.

Although more interesting and gratifying for jurors, virtual civil litigation will be relatively undramatic and impersonal for the parties. It will suppress the importance of individual judges and trial counsel, but will elevate the importance of the professional craft of organizing the presentation at trial. Those who value litigation as entertainment and as a means of venting spleen will be less gratified. But virtual litigation will be more civil, more predictable, more in control of the parties and their lawyers, and more likely to result in the application of law to fact.

Virtual litigation is not yet on our doorstep. Neither the profession, nor the courts, nor the litigants—certainly not this author—are ready for

50. See Report of the Special Committee To Suggest Remedies and Formulate Proposed Laws To Prevent Delay and Unnecessary Cost in Litigation, 34 A.B.A. Rep. 578, 589-95 (1909).

51. See, e.g., Walter K. Olson, *The Litigation Explosion* (1991).

it, nor can they be made ready soon. Nevertheless, the prospective benefits appear to be so substantial, and the process so much in step with the rest of social life in the information age, that some of what has been described here will happen in due course. Meanwhile, those who make rules and laws today may make themselves more useful if they have in mind a sense of the direction of change such as I have tried to supply.